



BD MIN 191010

## CROSSRAIL BOARD

Minutes of the Meeting of the Board of Directors of Crossrail Limited  
Held on Thursday 10 October 2019 at 11:00  
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>	
Sarah Atkins <i>Non-executive Director</i>	Susan Beadles <i>Head of Legal Services &amp; Company Secretary</i>	
Phil Gaffney <i>Non-executive Director</i>	Mark Cooper <i>Programme Director</i>	
David Hendry <i>Chief Finance Officer</i>	██████████ (part of the meeting) <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>	██████████ <i>PRep</i>	
Nelson Ogunshakin <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>	Ailie MacAdam (Items 1 – 9 only) <i>Bechtel Limited</i>	
Chris Sexton <i>Deputy CEO</i>	Carole Bardell-Wise (Item 4 only) <i>Health and Safety Director</i>	
Jo Valentine <i>Non-executive Director</i>	Mark Langman (Item 5 only) <i>NR MD, Wales &amp; Western Region</i>	
Mark Wild <i>CEO</i>	Stuart Calvert (Item 5 only) <i>Capital Delivery Director, Wales &amp; Western Region</i>	
	Alex Kaufman (Item 7 only) <i>Communications Director</i>	
	Stuart Westgate (Item 8 only) <i>Head of Project and Programme Assurance</i>	
	Dave Lawson (Item 13 only) <i>Operations and Interface Director</i>	
	Mike Brown (Item 22 only) <i>TfL</i>	
	David Hughes (Item 22 only) <i>TfL</i>	
	Simon Kilonback (Item 22 only) <i>TfL</i>	
	Shashi Verma (Item 22 only) <i>TfL</i>	
	Ruth Hannant (Item 22 only) <i>DfT</i>	
	Alex Luke (Item 22 only) <i>DfT</i>	

The meeting was quorate.

	<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>However, the meeting <b>NOTED</b> that Jo Valentine was the Chair of Heathrow Southern Railway and that this had been considered before her appointment and was not a conflict of interest.</p>
<p><b>BD MIN 190912</b></p>	<p><b>Minutes of the Meetings of the Board held on 12 September 2019</b></p> <p>The Board <b>APPROVED</b> the minutes of the meeting held on 12 September 2019 for signature.</p>
<p><b>BD AC 191010</b></p>	<p><b>Actions</b></p> <p><b>20.074 – Stage 5A Progress Update</b> – it was <b>NOTED</b> that the software required for 9 car trains would not be available until 20 November 2019. 7 car trains would be introduced in integrated mode initially and the focus was now to introduce the 9 car trains as soon as possible afterwards.</p> <p>The Board <b>NOTED</b> the updates to all the other 'due' actions, some of which were covered by the agenda for the day's meeting.</p>
<p><b>Verbal</b></p>	<p><b>Safety Update</b></p> <p>The Board <b>NOTED</b> the updates on the following:</p> <p><i>Farringdon Incident</i></p> <p>The injured operative had been released from hospital. When the incident occurred, a safety alert about scaffolding and working at height was issued. An investigation into the incident was being conducted by Bam Ferrovial Kier (BFK) and it had been identified that the likely root cause was that the scaffolding was not properly erected. The CRL Health and Safety Director was meeting regularly with the person in BFK managing the investigation of the incident, to draw out lessons to be learnt and cascade these across the Crossrail programme.</p> <p>The Board asked what had been done to ensure that this type of incident did not reoccur and <b>NOTED</b> that within 10 working days of identifying the root cause of the incident, all scaffolding erected on the project had been checked to ensure that they had been properly erected. Also, all the 62 advanced scaffolders within the Tier 1 and 2 contractors on the project had been briefed on the accident, reminded of the importance of safe systems of work and the relevant method statements had been reviewed. The Board also <b>NOTED</b> that although BFK's investigation was being conducted under the cloak of legal privilege, this had not thus far prevented the CRL Health and Safety Director from obtaining information in a timely manner.</p> <p><i>Waterloo Fatality</i></p> <p>This was not a Crossrail incident, however, CRL stood down intrusive</p>

	<p>escalator works immediately after the incident and did not recommence works until the relevant safety checks had been carried out. The investigation into the incident was now restricted to travellers and there were none on the Crossrail project.</p> <p><i>Bond Street Station Air Quality Monitoring</i></p> <p>There had been recent media interest concerning dust at Bond Street station, which had included the publication of incorrect facts concerning the number of fatalities of people who had worked on the site. The electricians on the site had stopped work a number of times, citing air quality problems and CRL and Costain Skanska Joint Venture (CSJV) had reassured the workers, using monitoring data, that there was no evidence of air quality issues at the site. CSJV had also appointed a full-time independent resource to carry out air quality checks on a regular basis. The stations across the programme would also be checked to verify the safety of their air quality.</p> <p>The Board <b>REQUESTED</b> that a review of the air quality monitoring data collected over the full period during which the fatalities had occurred should be carried out and that the standard expectations and proactive measures around dust management across the programme should be looked at.</p> <p><b>Action:</b> Carole Bardell-Wise</p> <p>The Board also <b>REQUESTED</b> verification of how CRL was assuring that CSJV had been monitoring dust and air quality.</p> <p><b>Action:</b> Carole Bardell-Wise</p> <p>The Health and Safety Executive (HSE) and the Office of Rail and Road (ORR) had asked for a joint visit to CRL as part of a planned inspection to look at how CRL was managing construction and railway interface. The HSE had also expressed an interest in CRL's dust management strategy including what the contractors were doing in this regard and CRL's monitoring regime. The HSE had requested a programme-wide sample that must include those from Crossrail sites managed by CSJV.</p> <p><i>SHELT</i></p> <p>An update on the recent SHELT meeting at Whitechapel Station was <b>NOTED</b>.</p> <p>The Board also <b>NOTED</b> the proactive improvement plans including the good progress against the actions from the Target Zero Improvement Plan; stepping up of senior leadership safety engagement tours; Stepping Up Week being planned for a week in November 2019; greater focus on the CRL health and safety learning forum; review and update of the business resilience plan; filming of a new health and safety induction video and plans for a staff induction reboot; resilience and mental health training for line managers; consideration of metrics to compliment the HSPI and improve success; and health and safety assurance going into ROGS.</p>
64/20	<p><b>CRLB 64/20 – Network Rail Update</b></p> <p>The Board <b>NOTED</b> the following: TfL Rail's continued good train performance; the positive collaborative relationship between NR and CRL; within NR, the appointment of a new director for the Elizabeth line to manage readiness, delivery and operation of the railway; readiness for the December 2019 timetable on the Wales and Western; Stage 5a infrastructure works progress;</p>

	<p>Crossrail West enhanced works major milestones; Anglia Stations progress; Anglia systems and the decision on the Traction Power System (TPS) that was due by the end of October 2019; Elizabeth line Stage 2, Phase 2 readiness; and infrastructure works cost pressures.</p> <p>The Board highlighted the need to check the earthing and bonding arrangements for the TPS and whether the increased cost of the System Information and Security Systems (SISS) was due to scope changes.</p> <p>The Board <b>NOTED</b> that the emerging infrastructure works costs were now being crystallized in the range of [REDACTED] and included traction power; SISS; snagging works in the close out of the Costain contract from last Autumn; and additional scope at Maidenhead and Slough (unconnected with Crossrail works). Opportunities to mitigate this cost were being considered.</p> <p>The Board <b>REQUESTED</b> that the top 10 agreed risks shared between CRL and NR, including RAG statuses and timelines, should be included in NR's Update slides to the CRL Board going forward.</p> <p><b>Action:</b> Mark Langman/ Stuart Calvert</p>
Verbal	<p><b>Feedback from the Performance Engagement Forum</b></p> <p>The Board <b>NOTED</b> that progress had been made on creating the KPI tree, which was yet to be completed and that there had been shared learning on the potential impact of the PD10/ PD11 software on the train timetable. It was <b>NOTED</b> that at the next Performance Engagement Forum (PEF), sufficient time would be dedicated to reviewing the underpinning data that would assist the Board in understanding performance better.</p> <p>The Board also <b>NOTED</b> the following feedback from the PEF:</p> <ul style="list-style-type: none"> <li>• The need to be mindful of the PEF detracting senior staff from getting on with their jobs;</li> <li>• Consideration should be given to the standardisation/ rationalisation of Board papers and the possibility of alternate Board meetings focusing on performance and then strategy. The four weekly meeting cycle created a relentless machine; and</li> <li>• The PEF should be a short-term measure, to avoid the possibility of duplication of meetings. Board members may not always be able to attend all the PEFs and there was a danger of having Board discussions at the PEFs rather than at Board meetings.</li> </ul>
BD CBR 191010	<p><b>Crossrail Board Report Period 6</b></p> <p>The Board <b>NOTED</b> the Board Report for Period 6.</p> <p>The Board discussed and <b>NOTED</b> the following:</p> <ul style="list-style-type: none"> <li>• Handover not only related to the completion of documentation but also the physical handover of the railway to the Infrastructure Manager;</li> <li>• It would be helpful to have a discussion on reducing the complexity of technical assurance for the routeway as there could be potential benefits for the schedule and opportunities. The Board <b>AGREED</b> that a meeting should be arranged with the chair of the Railway Assurance</li> </ul>

Board (Crossrail) RAB(C) to discuss this and **NOTED** that Phil Gaffney would be happy to attend that meeting;

**Action:** Mark Wild

- A jointly owned risk register for CRL and TfL relating to the top 5 risks on handover would be useful; and
- The [REDACTED] date for the duration and scope of trial running for [REDACTED] required appropriate challenge. There should also be a robust challenge on where scope was not required. It was **AGREED** that a detailed trial running programme should be brought back to the Board;

**Action:** Mark Cooper

With regard to CRL comms, the Board **NOTED** the following:

- a key priority was to bring internal and external communications together under one umbrella;
- the Farringdon staff open day had been a success and a press release and comms on progress had been published;
- plans were ongoing for the provision of regular updates to stakeholders including the media and supplier engagement events were being planned for every 3 months;
- The Board considered that it was important to develop an overarching strategy covering the plans for progressing the programme over the next 6 – 9 months, highlighting key milestones demonstrating progress and setting out how to manage any issues that might arise and a strong message on how the project would be delivered in the long term;
- A key part of the comms strategy should include the management of expectations on delivery internally and externally and covering the staged completion of stations;
- Consideration should be given to the messaging included in the responses to the Project Representative's (PRep's) reports; and
- More should be done to highlight the good work and progress being made on the project.

The Board **AGREED** the following actions:

- i) The productivity plan maintained by the Programme Director should be circulated to Board members via email; and ii) the productivity of CRL's internal processes and assurances should also be considered;

**Action:** Mark Cooper

- i) The comms strategy should be refreshed taking into consideration: key milestones demonstrating progress; messaging on how the project would be delivered in the long term; managing expectations on delivery internally and externally; messaging included in the responses to PRep reports; and highlighting of progress being made; and ii) a clear script/ lines for the Board to take when engaging with stakeholders in public should be provided. The lines should be balanced, fair and consistent.

**Action:** Alex Kaufman

65/20	<p><b>CRLB 65/20 – Periodic Assurance Report Period 5</b></p> <p>The Board <b>NOTED</b> the Periodic Assurance Report (PAR) for Period 5 including the following:</p> <ul style="list-style-type: none"> <li>• The PAR was an element of the Integrated Audit and Assurance Plan (IAAP) and was a report to the CRL Executive Group focused on the second line of defence;</li> <li>• The PAR for Period 5 was considered at the Audit and Assurance Committee (AAC) meeting on 26 September 2019 and it was noted at that meeting that going forward, the AAC would only receive a summary of the PAR;</li> <li>• The PAR was being presented to the Board at the request of the CRL Chair;</li> <li>• Issues highlighted in the PAR included: health and safety culture awareness; overall programme progress and the risk to commencement of trial running; technical assurance and the interface between Siemens and Bombardier Transportation (BT); coherence, management and control of the suite of documents capturing scope across sites; and contracts and systems;</li> <li>• The terms ‘EOP’ and ‘DCS’ were used interchangeably and it was necessary to clarify the use of these terms. Above all, the overall strategy and plan needed refreshing and clarification;</li> <li>• Changes were required to the Project Development Agreement (PDA) following the bedding down of the DCS and these would be compiled and include an organisational development plan;</li> <li>• Clarity was required in identifying the ‘guiding mind’ for handover and assurance activities; and</li> <li>• Work was ongoing to ascertain the critical decision points for the Board including key trade-offs that might affect schedule and cost and the information required by the Board to make well informed decisions.</li> </ul>
66/20	<p><b>CRLB 66/20 – Performance Gaps and Interventions</b></p> <p>The Board received a paper providing an update on performance gaps which had the potential to drive adverse variance to the schedule and cost baseline and the associated interventions that were in hand to address them.</p> <p>The Board <b>NOTED</b> that the following principal performance gaps had been identified as being the need for:</p> <ol style="list-style-type: none"> <li>1. Improving and maintaining productivity across all sites;</li> <li>2. Delivering Bond Street to SC1 to enable Trial Running;</li> <li>3. Receiving and assuring the software for use in Trial Running (PD10/PD11);</li> <li>4. Clarity, definition and resource needed to successfully handover all stations, shafts and portals;</li> </ol>

	<ol style="list-style-type: none"> <li>5. Effective management of scarce Tier 2/3 resource to ensure optimal productivity levels;</li> <li>6. System reliability growth to support the introduction of Stages 3, 4 and 5;</li> <li>7. Defining the optimal scope of works to be completed post ROGS; and</li> <li>8. Clarity as to how stations would be commissioned/ brought into use post ROGS.</li> </ol> <p>The Board <b>NOTED</b> that:</p> <ul style="list-style-type: none"> <li>• With regard to defining the optimal scope of works to be completed post-ROGS, a paper on residual works was planned for submission to the Board on 7 November 2019. [REDACTED]; and</li> <li>• The staged completion time line shared at the meeting provided more clarity as to how stations would be commissioned/ brought into use post-ROGS.</li> </ul> <p>The Board also <b>NOTED</b>:</p> <ul style="list-style-type: none"> <li>• the interventions that were in hand;</li> <li>• that these performance gaps were a principal driver of the “headwinds” outlined in the parallel AFCDC paper that was on the agenda for the Board meeting; and</li> <li>• that a re-forecast of the schedule and cost performance was planned for the 7 November 2019 Board meeting, which would take into account the performance gaps identified here, but also take a view on the impact of the interventions.</li> </ul>
67/20	<p><b>CRLB 67/20 – AFCDC and Risk Update</b></p> <p>The Board received a paper which was to be considered in conjunction with the Period 6 Board Report, which together provided an update on the status of the AFCDC. The paper also presented a summary of emerging ‘headwinds’ and ‘tailwinds’, i.e. issues that could adversely impact performance and the countervailing potential improvement actions and initiatives. The next steps to be taken towards achieving greater certainty for the Board meeting on 7 November 2019, on the programme schedule and funding position compared to the publicly announced dates and Funding Package were also included.</p> <p>The Board <b>NOTED</b> the following:</p> <ul style="list-style-type: none"> <li>• Deep dives into cost and risk management at specific stations were being looked into, currently at Farringdon and Paddington stations;</li> <li>• It was important for CRL to provide clear instructions to the project teams on the assumptions that they should be using e.g. clarity about SC2, SC3, ROGS;</li> <li>• The headwinds and tailwinds appeared to align with P50 and P80;</li> <li>• It was necessary to review the risk register, to determine those risks</li> </ul>

	<p>that were bankable;</p> <ul style="list-style-type: none"> <li>• The latest forecast AFCDC as at Period 6 was the same as the month before and the alignment of the financial position with the DCS was still work in progress; and</li> <li>• The PRep was of the opinion that there were duplicated risks on the risk register with duplicated costs attached and the Board considered that the work the PRep had been doing on this should be taken into account by the Executive team.</li> </ul>
68/20	<p><b>CRLB 68/20 – Planning for Stages 4 and 5b</b></p> <p>The Board received a paper providing an update on the progress made on planning for Stages 4 and 5b since the last Board meeting on 12 September 2019.</p> <p>The Board <b>NOTED</b> the paper and the following:</p> <ul style="list-style-type: none"> <li>• there was uncertainty with regard to extending the DCS in to Stages 4 and 5; the financial issues relating to residual works; how trial running would work out on a day to day basis; what could be done during trial running; and what could be accommodated post ROGS;</li> <li>• there had been progress working with MTR and NR in adjusting the plan for Shenfield; the movement of trains per hour and the length of the trains;</li> <li>• some of the revenue loss to TfL may be captured by the DfT through other train lines e.g. ██████████ ██████████ the Great Western, South Western and South Eastern. Information on these costs would be included in the paper to the Board on 7 November 2019;</li> <li>• it was key for the Board to be provided with certainty on the timetable. For the Board to be comfortable on moving from 12 trains per hour to 24 trains per hour in a short period of time, the Board would require a reliability plan and certainty on whether the number of trains per hour could actually be increased or not; and</li> <li>• the Board commitment dates for Stages 4 and 5 would be considered once the Board had the full analysis on the plans for these.</li> </ul>
69/20	<p><b>CRLB 69/20 – Approval of Certified Information for Funding Drawdown Date of 8 November 2019</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 8 November 2019 funding drawdown.</p> <p>The Board, after consideration of the P50 AFCDC as presented in the Board Report and the supporting paper on 'AFCDC and Risk' reviewed earlier in the meeting; and also, with regard to the sufficiency of funds to complete the project, determined that it was appropriate to and:</p> <ul style="list-style-type: none"> <li>• <b>APPROVED</b> the Certified Information; and</li> </ul>



	<ul style="list-style-type: none"> <li>• <b>AUTHORISED</b> the CFO or other Director to sign the certified information and submit this to the Sponsors on 11 October 2019.</li> </ul>
70/20	<p><b>CRLB 70/20 – Canary Wharf Handover Works</b></p> <p>The Board received a paper presenting an update on the projected programme and forecast cost to complete works at Canary Wharf station, based on current known scope that had been identified and confirmed by the Chief Engineer as being required. The new works identified were either urgent in nature or intrinsic to SC1, SC3 and Handover to RfL, some of which works were required for safety reasons.</p> <p>The introduction of new scope had an impact of the dates included in the DCS. The proposal therefore was to introduce SC1 stage for the station and a SC3 (ROGS) stage.</p> <p>The amount of IA required to fund the works was greater than the authority delegated to the Executive Group and it had not been possible to schedule an out-of-process Investment Committee meeting. As a consequence, with the agreement of the Chair of the Investment Committee, this paper was submitted directly to the Board.</p> <p>Furthermore, neither the Executive Group nor the Investment Committee had delegated authority to grant Commitment Authority (CA) in respect of some of the proposed legal commitments set out in the paper.</p> <p>The Board:</p> <ul style="list-style-type: none"> <li>• <b>GRANTED</b> an increase in IA of ██████████ to fund the additional works required at Canary Wharf station, NOTING that the total forecast cost of the additional works was ██████████, however, an underspend of ██████████ had been made against completed Project 4 works, which would be transferred to the budget for the additional works that had now been identified;</li> <li>• <b>GRANTED</b> CA to enter into each of the legal commitments where modification of an existing contract was permitted, as identified in Appendix A to the paper; and</li> <li>• <b>AGREED</b> that where Appendix A advised further investigation was required to identify a compliant procurement route, CA would need to be sought subsequently in accordance with the Scheme of Authorities.</li> </ul> <p>The Board <b>REQUESTED</b> that once the further work had been carried out to identify compliant procurement routes, the procurement strategy be presented to the Investment Committee.</p> <p><b>Action:</b> Mark Cooper</p>
71/20	<p><b>CRLB 71/20 – C660 Communications and Control Investment Authority</b></p> <p>The Board received a paper requesting approval of increased Investment Authority (IA) in the sum of ██████████ for C660 – Communications &amp; Control Systems works.</p> <p>The Board <b>NOTED</b> that the reasons for the increased IA included slippages to station Installation Release Notes (IRN) handovers, leading to prolonged testing and commissioning resources; and extension of installation resources to complete radio installation.</p>

	<p>Subject to presenting the risks and opportunities relating to this request to the Investment Committee, the Board <b>GRANTED</b> the increase in IA of [REDACTED] for C660.</p> <p><b>Action:</b> Mark Cooper</p>				
72/20	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>				
73/20	<p><b>CRLB 73/20 – Re-appointment of Non-Executive Director</b></p> <p>The Board <b>APPROVED</b> the re-appointment of Phil Gaffney as a director of CRL from 1 January 2020 to 31 December 2020 on the same terms and conditions as before, subject to agreement by the Sponsors.</p>				
74/20	<p><b>CRLB 74/20 – PRep Report Period 5 including CRL’s Response to Sponsors Summary</b></p> <p>The Board <b>NOTED</b> the PRep report for Period 5 including CRL’s response to the Sponsors.</p> <p>The PRep highlighted:</p> <ul style="list-style-type: none"> <li>• the need for the paperwork on handover and assurance to align with the DCS;</li> <li>• necessity for a detailed cost and schedule for the period post ROGS;</li> <li>• compression on dates; and</li> <li>• the continued assurance oversight from external bodies.</li> </ul> <p>The Board <b>NOTED</b> that CRL’s response to the Sponsor’s summary report did not seem to match the PRep’s queries and did not address the points raised in the report. The Board considered that the CRL Executive team should be maintaining a log to check when actions raised by the PRep in their reports had been completed.</p>				
75/20	<p><b>CRLB 75/20 – Board Effectiveness Review 2019</b></p> <p>This item was for information only, however, the Board <b>NOTED</b> the revised timeline for delivering the board effectiveness review services as opposed to that in the paper.</p>				
	<p><b>Minutes of Board Committees for Reference</b></p> <p>The Board received the following minutes for reference:</p> <table border="1"> <tr> <td><b>Audit and Assurance Committee</b></td> <td><b>AAC MIN 190612</b></td> </tr> <tr> <td><b>Investment Committee</b></td> <td><b>IC MIN 190828 &amp; IC MIN 190911</b></td> </tr> </table>	<b>Audit and Assurance Committee</b>	<b>AAC MIN 190612</b>	<b>Investment Committee</b>	<b>IC MIN 190828 &amp; IC MIN 190911</b>
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<b>Investment Committee</b>	<b>IC MIN 190828 &amp; IC MIN 190911</b>				

	<p><b>Verbal Updates on Recent Board Committee meetings</b></p> <p>The Board <b>NOTED</b> the verbal updates by Anne McMeel on the matters discussed at the Audit and Assurance Committee meeting on 26 September 2019 and by Sarah Atkins on the matters discussed at the Investment Committee via conference call on 18 September and at the meeting on 25 September 2019.</p> <p>It was <b>NOTED</b> that it was important to ensure that the Investment Committee meetings were a more strategic forum.</p>
<p><b>AOB</b></p> <p><b>76/20</b></p>	<p><b>CRLB 76/20 – Crossrail Advisory Panel Update</b></p> <p>The Board <b>NOTED</b> the Crossrail Advisory Panel Update.</p> <p>There was no other business.</p>
<p><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 update on health and safety including the incidents at Farringdon and Waterloo stations, dust monitoring at Bond Street station and progress with the Target Zero Improvement Plan; discussion on performance gaps and interventions and the plan to use PD11 software for trial running, leading to a [REDACTED] timeframe for the start of trial running; and the importance of routeway readiness for trial running to commence; the ongoing work with regard to the milestones that did not currently fit within the plan; the establishment of a proper process of internal assurance, the review of the PAR and discussion on identifying the controlling mind for handover and assurance activities; the current cost estimate and the fact that more work was to be done by the November 2019 Board meeting to provide a clearer picture of costs; the slippage of software and the work being done by CRL, Siemens and BT to rectify this; emerging scope leading up to the handover phase and relating to the replacement of fire panels and the task to see how works could be done more efficiently to mitigate these costs; the need to look into reducing the complexity of technical assurance for the routeway as there could be potential benefits for the schedule and opportunities; the need to draw out the opportunities for early handover to TfL after proper assurance and finalisation of documentation; the good working relationship between CRL and NR and CRL and TfL respectively and the need to ensure that joint risk registers were being maintained between CRL and NR and CRL and TfL; successful PPE free day at Farringdon station in the previous week; successful suppliers leadership day with the senior management of the Tier 1, 2 and 3 contractors and the sense of a better commitment to joint working; the high level of challenge that the Executive team were receiving from the Board and how they continued to take this in the right spirit; and the plan to revise the strategy for comms with regard to key programme dates.</p> <p>The Commissioner was thankful for the exemplary leadership of health and safety management by CRL, noting that the speediness of comms with TfL on this had been world class; questioned whether there would be other iterations of the train software and whether a [REDACTED] date would allow more time to test the train and software and the need to get the balance right with the operator taking over the railway; stated that discussions on handover to TfL were ongoing and clarity was needed on the works left to be done and also</p>

	<p>stated that TfL would assist in every way with getting resources off site; expressed concern over NR’s scope and costs; noted the need to ensure that CRL and TfL’s comms were aligned; highlighted the need for the Board to ensure that there was a balance in their involvement with the work of Executive team; noted that the PRep report continued to be pessimistic; and noted continued concerns around the funding position.</p> <p>In addition, the DfT considered that it would be helpful to have more of an understanding of the headwinds and tailwinds and how they fit in with other cost scenario work that had been done, as well as the P50 P80 analysis.</p> <p>Furthermore, the Sponsors noted that: a senior member of the Project Development Partner (PDP) was now attending CRL Board meetings; there was a good working relationship with the PDP; [REDACTED]; [REDACTED]; [REDACTED]; [REDACTED]; and a [REDACTED] plan would be presented to TfL in the near future. The Sponsors also noted that there was no change from the last update relating to the On Board Computer Unit (OBCU) and consideration was still being given to whether it was achievable to go ahead with a single OBCU; there would be more information on Stages 4 and 5b at the 7 November 2019 Board meeting, however, there was still uncertainty as the data on this was insufficient; and it was key to have an open discussion on the funding position at the CRL Board meeting on 7 November 2019.</p>
<p><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

