

**CROSSRAIL BOARD**

**Minutes of the Meeting of the Board of Directors of Crossrail Limited  
Held on Thursday 11 October 2018 at 13:30  
28th Floor Boardroom, 25 Canada Square, Canary Wharf, London E14 5LQ**

<b>Members:</b>	<b>In Attendance:</b>	<b>Apologies:</b>
Phil Gaffney <i>Non-executive Director (Chair)</i>	Funmi Amusu <i>Assistant Company Secretary</i>	Terry Morgan <i>Chair</i>
Mathew Duncan (part of the meeting) <i>Finance Director</i>	Dawn Barker <i>Head of Human Resources</i>	
Robert Jennings <i>Non-executive Director</i>	Susan Beadles <i>Head of Legal Services &amp; Company Secretary</i>	
Anne McMeel <i>Non-executive Director</i>	Lucy Findlay <i>Chief of Staff</i>	
Nelson Ogunshakin (via conference call) <i>Non-executive Director</i>	Paul Grammer <i>Commercial Director</i>	
Andy Pitt <i>Non-executive Director</i>	Stephen Hatch (part of the meeting) <i>Financial Transaction Manager Crossrail</i>	
Chris Sexton <i>Programme Director</i>	Howard Smith (part of the meeting) <i>Operations Director</i>	
Mark Wild <i>Non-executive Director</i>		
Simon Wright <i>Chief Executive</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><b>Informal Session</b></p> <p>It was <b>NOTED</b> that an informal session of the Board had been held earlier in the day.</p> <p>The Board had received detailed briefings on the following topics:</p> <p><b>Programme Overview</b> – progress across the programme including updates on: the Master Operational Handover Schedule (MOHS) refresh; the Programme Delivery Board; progress reporting; systems integration; reliability; one team; strategic risk review; focus on Installation Release Notes (IRNs); and people and organisation.</p>
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	<p>The Board had <b>AGREED</b> the following actions:</p> <ul style="list-style-type: none"> <li>• Stages 3, 4 &amp; 5 prioritisation and the possible trade-offs including the timeline for decisions to be made about this should be considered and reported back to the Board. <b>Action:</b> Simon Wright/ Chris Sexton/ Howard Smith</li> <li>• A meeting should be organised to discuss the establishment of a series of review points for costs and schedule. <b>Action:</b> Simon Wright/ Chris Sexton/ Mathew Duncan</li> <li>• Arrangements should be made for Phil Threlfall to present the findings from his independent review on dynamic testing readiness to the Board. <b>Action:</b> Chris Sexton</li> <li>• Reporting should be reviewed to ensure that the right resources are available. <b>Action:</b> Chris Sexton</li> <li>• The appointment of a senior and experienced person to be responsible for reliability should be considered. <b>Action:</b> Chris Sexton</li> <li>• Strategic risks reporting should continue to be provided in the Board Report going forward. <b>Action:</b> Chris Sexton</li> <li>• There should be further engagement with [REDACTED] and [REDACTED] on potential future scarcities of critical resources. <b>Action:</b> Chris Sexton</li> </ul> <p>The Board <b>AGREED</b> that the Funding Scenarios item would be discussed under the Finance Update during the formal Board meeting.</p> <p><b>RAB(C) Update</b> – an update on progress with approvals.</p> <p>The Board <b>NOTED</b> that [REDACTED] would be prompted to provide their RAB(C) submissions on interface design in a more timely manner.</p>
<p><b>BD MINS 180719, 180829 &amp;180913</b></p>	<p><b>Minutes of the Meetings of the Board held on 19 July, 29 August and 13 September 2018</b></p> <p>The Board <b>APPROVED</b> the minutes of the meetings held on 19 July and 29 August 2018 for signature, subject to minor amendments being made as discussed at the meeting.</p> <p>The Board <b>APPROVED</b> the minutes of the meeting held on 13 September 2018 for signature.</p>
<p><b>BD AC 181011</b></p>	<p><b>Actions and Matters Arising</b></p> <p><b>19.066 – Assurance map of governance meetings and reporting</b> – the Board <b>NOTED</b> the information provided on high level governance and</p>

	<p>reporting and <b>REQUESTED</b> that attendees should be added to the high level governance meetings chart and that consideration should be given to the framework needed for CRL's overall governance.</p> <p><b>Action:</b> Lucy Findlay</p> <p><b>19.070 – Network Rail (NR) Funding –</b> <i>(post meeting note – a reconciliation of NR's funding was circulated to Board members via email on 12 October 2018).</i></p> <p>The Board <b>NOTED</b> that all the other 'due' actions had either been completed or were covered by the agenda for the day's meeting.</p>
<p><b>BD CBR 181011</b></p>	<p><b>Crossrail Board Report Period 6</b></p> <p>Simon Wright introduced the Board Report for Period 6 highlighting that:</p> <ul style="list-style-type: none"> <li>• Following notification to the Sponsors that Crossrail would not be able to meet its Stage 3 commitments by December 2018, CRL was undertaking a comprehensive review of its delivery schedule and at the beginning of Period 7, Sponsors were provided with a Remedial Action Plan (RAP) that outlined the time and cost implications of the delay. Having prepared alternative scenarios for Stage 3 delivery, the RAP was updated to address risk in the schedule and to confirm the plan to manage the schedule and cost to the end of the project. The revised schedule would reflect the conclusion of the independently conducted 5/2 dynamic testing readiness review that took place at the beginning of Period 7, which concluded that CRL would not be ready to commence 5/2 dynamic testing on 22 October 2018;</li> <li>• HSPI improved to 2.57 from 2.55 in the previous Period;</li> <li>• The AFDCD increased by £483m to £13,293m (£780m above IP2). This significant increase was a reflection of the known schedule pressures across the programme and the delayed delivery schedule. In line with discussions with Sponsors, it was expected that further costs would be identified during the review of the RAP. The aim was to ensure that any discussions regarding additional funding were informed by a realistic assessment of the schedule and risks; and</li> <li>• Shortly after the end of Period 6, confirmation was received in writing from the Sponsors of the previously committed £300m of additional funding. CRL have highlighted to the Sponsors the urgency of a commitment to further additional funding which was requested in the updated RAP.</li> </ul> <p><b>Are We Safe?</b></p> <p>It was <b>NOTED</b> that:</p> <ul style="list-style-type: none"> <li>• The RIDDOR rate remained at 0.09 and the Lost Time Case (LTC) rate decreased to 0.15 (from 0.16 in the previous Period), both well below the corporate targets;</li> <li>• In the Period, there were 4 significant incidents – 2 RIDDORs and 2 High Potential Near Misses; and 16 injuries were sustained, the largest category (4 injuries) being manual handling/ lifting; and</li> </ul>

- All 11 key contracts had achieved a HSPI score of 2.20 or above, with 9 of the contracts scoring 2.50 or above.

**Are We Within Funding?**

Mathew Duncan presented a summary of financial performance for the Period. It was **NOTED** that:

- CRL was still awaiting TfL’s annual letter confirming that CRL would remain its subsidiary for the next year and the financial statements and accounts would not be approved by the CRL Board until this annual letter was received;
- The AFCDC was at £13,293m, now exceeding the financial budget (£12,810m). The increase was driven by additional programme risk allowances required due to the impact of Stage 3 Opening being delayed to Autumn 2019;
- Cost of Work Done (COWD) was £246m below the financial budget, however, based on average cost incurred in the year to date and without further budget being approved, the COWD was forecast to exceed the financial budget during Period 8;
- In the Period, CRL had spent £84.8m above the 2018/19 Business Plan (year to date overspend of £300.5m), predominantly at: [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- The overall contingency budget of £84m was not sufficient to cover the risk exposure of £574m;
- [REDACTED]  
[REDACTED]  
[REDACTED] and
- With the additional £300m funding provided by the Sponsors, the forecast showed that an additional £253m (totalling £553m) was expected to be drawn down by the end of 2018/19.

**Funding Scenarios Update**

The Board **NOTED** [REDACTED]  
[REDACTED]  
[REDACTED]

The Board **REQUESTED** that a letter to the Sponsors on funding and schedule matters should be prepared.

**Action:** Mathew Duncan

### Commercials Update

Paul Grammer updated the Board on commercial performance in the Period. The Board **NOTED** that:

- The total gap between CRL's and its contractors' views of target had [REDACTED] and the total forecast gap in forecast defined cost decreased by [REDACTED] and
- [REDACTED]  
[REDACTED]  
[REDACTED]

### Network Rail On Network Works (ONW) and Funding

- The Forecast Final Outturn Cost (FFOC) remained at £2,430m. CRL assessed the grand total cost mid-point sensitivity to be +£115m which now included an allowance for the Enhanced Stations (West) tender returns cost risks;
- Procurement activity for the Enhanced Stations (West) packages had progressed in the Period. Tenders had been returned for Southall, Hayes and West Drayton and a contract award was expected in [REDACTED]  
[REDACTED] NR's Executive Committee was due to review this in Period 7. In the meantime, plans for commencing the package of enabling works over the Christmas period were advancing well, ahead of the main works contractors starting on site. For the Enhanced Stations at Ilford and Romford, the final contract award was still anticipated for [REDACTED]
- The ONW remained 91% complete. In the Period, NR had received the APIS from the Office of Rail and Road (ORR) for ETCS for the Heathrow Spur, which meant that they could now operate passenger trains using the system infrastructure developed. For Stage 5, NR and their consultants (Sotera) continued to develop the basis for a new exemption. This was planned to be submitted by the NR Route to the ORR by April 2019; and
- The Anglia works contract with Keltbray was formalised [REDACTED]  
[REDACTED] Some necessary assurance documentation due under the contract from Costain remained outstanding.

### Are We on Time?

Chris Sexton had presented an overview of delivery performance during the informal session held earlier in the day.

The Board also **NOTED** the following current matters:

- A review of the MOHS was underway to build a schedule for the Programme which took into account risk as well as the known schedule pressures. Late completion of physical works, delays to the production of testing certificates and delays to the essential Communications & Controls Phase 3 integration testing had all contributed to the revision of the completion strategy;

- In the Period, 5 anchor milestones were achieved. Amongst other achievements, the fire main was now ready for integration in Zones 3 & 4; Eleanor Street shaft has completed their external works; the train GSM-R radio was now available to support the next phase of testing; and transition testing has begun on the Great Western Main Line;
- In previous periods, the schedule delays across all stations had been visible via the limited number of milestones that had been achieved. In Period 6, this continued to be the case. In line with the revised MOHS schedule that had informed the new Stage 3 strategy, a full rebaseline of the stations contracts was underway. In future, progress would be measured against physical milestones, but would also take into account the assurance evidence required for successful Stage Completion and Handover;
- Test windows 9, 10 and 11 were completed in the Period. Of the signalling tests, 34 tests passed out of a total of 70 conducted. There were an additional 277 tests that were required to be passed in order to complete the signalling testing. The readiness of infrastructure and the stability of the train remained concerns as these were restricting the scope, efficiency and success rates. The number of complete non-signalling tests remained at 58 out of a total of 308 test units;
- The critical testing of the signalling system across the NR fringes remained ongoing in the Period;
- The challenge of recruiting sufficient radio testing resources to meet the requirements of the schedule continued. These staff would need to have been recruited and trained in advance of October 2018 in order to meet the commissioning of radio systems by the deadline. Another area of concern was the continued slippage in handover of Tier 1 Station IRNs to C660 which was compressing their Testing and Commissioning window;
- The overall production of IRNs (as well as other key documents) to support handover of assets by the Tier 1 contractors remained critical. There was an improved performance in the Period although this needed to be accelerated in advance of the next testing phase. A review of IRN completion was being undertaken;
- The rate of production of asset data and O&M manuals continued to evidence the delays in completion of the physical infrastructure. The Infrastructure Managers (IMs) faced a new risk of how to manage the delay and the impact on trained staff that had to wait much longer before they could start their work in the Trial Operations phase. All parties continued to work to accelerate the production of asset data and to make best use of it progressively as it became available. With the rebaseline of the delivery schedule, a new baseline would also be set for the testing & commissioning and handover deliverables, in line with the new MOHS; and
- The Lloyds Register (LRQA) 3 yearly certification visit took place at the end of the Period. Following the visit, the LRQA recommended Crossrail for ISO 9001:2015 Certification.

The Board discussed the performance of contractors, in particular [REDACTED] and **NOTED** the difficulty the Executives had faced in motivating them to perform better. The Board **AGREED** that consideration should be given to how to escalate contractor issues and push them for a more reliable output, including

the possibility of bringing them before the Mayor of London.

**Action:** Simon Wright

The Board **NOTED** that in the future, the style of monitoring the progress of the project would be changed and reporting in the Board Report would reflect 'going forward'.

The Board questioned the software functionality being tested during the test windows and whether these tests were bankable and **AGREED** that a review should be carried out to determine whether there was benefit in continuing to pursue test blocks prior to the trains being completely ready and the start of dynamic testing.

**Action:** Chris Sexton

### **Operations**

Howard Smith provided an update on key operations matters, highlighting current operations; software and integration; operational readiness and staged opening.

The Board **NOTED** the following:

- The Siemens CBTC "29 test" test program completed at Melton on 24 September 2018 with 12 tests passed, 15 failed and 2 still under review. The test failure triage sessions between BT and Siemens concluded with agreement on each party's defect list which would be addressed in updated TCMS and CBTC releases. BT and Siemens were currently evaluating the defect categories in order to confirm likely dates for software upgrade and release. Although only 41% of the tests passed, the view from BT and Siemens was that the number of root cause defects had reduced significantly. The reliability of the Class 345 trains, measured by the mean time between incidents (MTIN) improved in the Period; and
- 40 Full Length Units (FLUs) had been built (in addition to 15 Reduced Length Units (RLUs)). 18 FLUs had been accepted. Further acceptance had been [REDACTED] delivery of software upgrades and increased reliability of the existing fleet.

### ***Are We Ready for Closeout?***

- Having so far transitioned back office and ancillary activities from CRL to TfL, future transition arrangements were dependent on the results of current re-programming activity (MOHS) and the associated resource plan. These could substantially change the current timescales for the transition of activities from CRL to TfL; and
- The next significant transition due to take place in 2018 would be the transfer of CRL IT infrastructure and services to TfL. The IT transition was aligned to the accommodation move from 25 Canada Square with a deadline of 14 December 2018. The CRL IT migration to TfL would require change management support to ensure all users, including RfL, were managed through the process of transition effectively in order to minimise potential impacts to the programme.

The Board **NOTED** the Board Report for Period 6.

26/19	<p><b>CRLB 26/19 – MOHS Update</b></p> <p>This item had already been considered under the Programme Update in the Informal Board session.</p>							
27/19	<p><b>CRLB 27/19 – Transfer of Board Contingency</b></p> <p>The Board <b>APPROVED</b> the request for transfer of £23.2m from Board Contingency to Programme Contingency.</p> <p>It was <b>NOTED</b> that once this transfer was made, Board Contingency would be exhausted.</p>							
28/19	<p><b>CRLB 28/19 – Crossrail Central Operating Section (CCOS) – Structure of Legal Interests in the CCOS Infrastructure</b></p> <p>The Board received a paper asking the meeting to note the requirement from TfL for CRL to enter into three agreements for lease in relation to the CCOS.</p> <p>The Board <b>NOTED</b>:</p> <ul style="list-style-type: none"> <li>• the requirement for CRL to enter into these three agreements for lease;</li> <li>• that the DfT and TfL needed to discuss this further and agree before CRL could enter into these leases; and</li> <li>• that once the DfT and TfL were in agreement, the Board would be informed, however, there was no need for this to be brought back to the Board as a formal agenda item.</li> </ul>							
29/19	<p><b>CRLB 29/19 – Revision to the Scheme of Authorities</b></p> <p>This paper was withdrawn.</p>							
30/19	<p><b>CRLB 30/19 – Project Representative Report (P-Rep) Period 5</b></p> <p>The Board reviewed and <b>NOTED</b> the P-Rep Report for Period 5.</p> <p>Simon Wright provided a verbal summary of the issues that were expected to be raised in the Period 6 report which were <b>NOTED</b> by the Board. These included matters relating to: health and safety; financials; Stage 2 Opening; Stage 3 Opening (Infrastructure &amp; Systems and Handover &amp; Operational Readiness); and Stages 4 and 5 Openings.</p>							
<p><b>Minutes of Board Committees for Reference</b></p> <p>The Board received the following minutes for reference:</p> <table border="1" data-bbox="363 1496 1385 1597"> <tr> <td data-bbox="363 1496 850 1597"><b>Executive and Investment Committee</b></td> <td data-bbox="850 1496 1121 1597"><b>EIC D 180905</b> <b>EIC D 180910</b></td> <td data-bbox="1121 1496 1385 1597">Simon Wright</td> </tr> </table> <p><b>Verbal Updates of Recent Board Committee meetings</b></p> <table border="1" data-bbox="363 1664 1385 2098"> <tr> <td data-bbox="363 1664 850 2098"> <p><b>Executive and Investment Committee 3 October 2018</b></p> <p>Matters covered by the Committee were:</p> <p><b>Board agenda items:</b></p> <ul style="list-style-type: none"> <li>• MOHS Update</li> <li>• Crossrail Central Operating Section (CCOS) – Structure of Legal Interests in the CCOS Infrastructure</li> </ul> </td> <td data-bbox="850 1664 1121 2098"></td> <td data-bbox="1121 1664 1385 2098">Simon Wright</td> </tr> </table>			<b>Executive and Investment Committee</b>	<b>EIC D 180905</b> <b>EIC D 180910</b>	Simon Wright	<p><b>Executive and Investment Committee 3 October 2018</b></p> <p>Matters covered by the Committee were:</p> <p><b>Board agenda items:</b></p> <ul style="list-style-type: none"> <li>• MOHS Update</li> <li>• Crossrail Central Operating Section (CCOS) – Structure of Legal Interests in the CCOS Infrastructure</li> </ul>		Simon Wright
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	<ul style="list-style-type: none"> <li>• Transfer of Board Contingency</li> <li>• Revision to the Scheme of Authorities</li> </ul> <p><b>Other items:</b></p> <ul style="list-style-type: none"> <li>• Accommodation Update</li> <li>• Update on Cost Savings Initiative</li> <li>• Gifts &amp; Hospitality Returns and Expenses for Executive Committee members for publication on Transparency website</li> </ul>		
AOB	<p>The following matters were raised:</p> <ul style="list-style-type: none"> <li>• As part of the planned demobilisation, Mathew Duncan, the Finance Director, would leave CRL on 9 November 2018 to take up a new role. It was proposed that David Hendry, who had worked with TfL in the past, be appointed to the role of Chief Finance Officer (CFO). A paper would be submitted to the next Board meeting in November 2018, requesting for David to be appointed an Executive Director of CRL. The Board <b>AGREED</b> the appointment of David Hendry as CFO from 29 October 2018. (<i>Post meeting note – this appointment was subsequently made as a secondment from TfL</i>);</li> <li>• (Mark Wild was excused from the meeting for this item). Also in line with the planned demobilisation, Simon Wright would leave CRL at the end of December 2018. It was proposed that Mark Wild be appointed to the role of CEO. Mark's role as CEO would be on secondment from TfL. The Board <b>AGREED</b> the appointment of Mark Wild as CEO from 3 December 2018, <b>NOTING</b> that approval of the CEO appointment would need to be ratified by TfL and the DfT in writing;</li> <li>• A Remuneration Committee meeting would be held as soon as possible to discuss David Hendry and Mark Wild's appointments. Members of the Remuneration Committee would be Anne McMeel and Andy Pitt, along with the Chair, Phil Gaffney; and</li> <li>• The meeting <b>AGREED</b> that the recommendations from the independent reviews carried out by John Boss and Ian Rannachan should be tracked and presented to the Board.</li> </ul> <p><b>Action:</b> Chris Sexton</p> <p>There was no other business.</p>		
NEDs Only Session	Non-executive Directors discussed the day's meeting.		

Signed by: \_\_\_\_\_

**Phil Gaffney**  
Chair