




**CROSSRAIL BOARD**

**Minutes of the Meeting of the Board of Directors of Crossrail Limited  
Held on Thursday 29 March 2018 at 13:00  
28th Floor Boardroom, 25 Canada Square, Canary Wharf, London E14 5LQ**

<b>Members:</b>	<b>In Attendance:</b>	<b>Apologies:</b>
Terry Morgan <i>Chairman</i>	Sarah Allen <i>Head of External Affairs</i>	Mark Fell <i>Legal Services Director and Company Secretary</i>
Pam Alexander <i>Non-executive Director</i>	Victoria Burnett <i>Head of Secretariat</i>	Lucy Findlay <i>Chief of Staff</i>
Michael Cassidy <i>Non-executive Director</i>	Paul Grammer <i>Commercial Director</i>	
Mathew Duncan <i>Finance Director</i>	Howard Smith <i>Operations Director</i>	
Phil Gaffney <i>Non-executive Director</i>	Chris Sexton <i>Technical Director</i>	
Terry Hill <i>Non-executive Director</i>	Valerie Todd <i>Talent and Resources Director</i>	
Robert Jennings <i>Non-executive Director</i>		
Mark Wild <i>Non-executive Director</i>		
Andrew Wolstenholme <i>Chief Executive</i>		
Simon Wright <i>Programme Director</i>		

The meeting was quorate.

	<p>The Chairman 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>
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	<ul style="list-style-type: none"> <li>• <b>Schedule Overview</b> – progress across the programme including an update on progress in meeting IM requirements for handover; and</li> <li>• <b>RAB-C</b> – an update on progress with approvals.</li> </ul> <p>The Board had <b>REQUESTED</b> that:</p> <ul style="list-style-type: none"> <li>• A chart showing progress against RAB-C approvals should be presented to the Board at each meeting with the periodic schedule update; and</li> </ul> <p><b>Action:</b> Simon Wright</p> <ul style="list-style-type: none"> <li>• The Chairman of RAB-C should present a progress update to the Board every two months starting in May 2018.</li> </ul> <p><b>Action:</b> Chris Sexton/Jeremy Bates</p>
BD MIN 180301	<p><b>Minutes of the Meeting of the Board held on 1 March 2018</b></p> <p>The Board <b>APPROVED</b> the minutes of the meeting held on 1 March 2018 for signature.</p>
BD AC 180329	<p><b>Actions and Matters Arising</b></p> <p><b>18.205</b> – </p> <p><b>Action:</b> Mathew Duncan</p> <p><b>18.213 – Open Day Events</b> – It was <b>NOTED</b> that investigations were underway to ascertain whether more information on the trains could be provided and, if viable, would be included for events planned for May and June.</p> <p><b>18.214 – RAB-C</b> – An update on progress with approvals had been presented at the informal session of the Board held before the meeting.</p> <p><b>18.215 – IM requirements for handover</b> – An update on progress had been presented as part of the schedule update at the informal session of the Board held before the meeting.</p> <p><b>18.216 – Gender Pay Gap Reporting</b> – It was <b>NOTED</b> that an update had been included in the P12 Board Report.</p>
BD CBR 180329	<p><b>Crossrail Board Report Period 12</b></p> <p>Andrew Wolstenholme introduced the Board Report for Period 12 highlighting that:</p> <ul style="list-style-type: none"> <li>• Period 12 had seen the start of dynamic testing in zones 1 and 2 with the first class 345 FLU travelling between Abbey Wood and Connaught Tunnel. The next phase was not without challenges, but the Executive remained focused on completing the remaining work in zones 3 and 4 to enable the full dynamic testing programme to begin in June;</li> </ul>

- A key challenge in respect of Stage 3 remained the on-going development of the TCMS software releases;
- At the end of Period 12, the project was 91.4% complete against a plan of 93%;
- AFCDC in the Period had increased by £3m which represented the difference between the delivery cost increases of £78m and the available risk provision of £75m; and
- The open day event at Canary Wharf station on 28 February 2018 had been well attended – demonstrating continued public interest in the project.

Andrew Wolstenholme also **ADVISED** that the informal meeting held with TfL Board members on 20 March 2018 had been very constructive. CRL had provided a high level overview of delivery risks together with an explanation of costs and the 'bookends'.

### ***Are We Safe?***

It was **NOTED** that:

- The HSPI had decreased slightly to 2.57 (from 2.60 in Period 11) but was still above the target of 2.00. The RIDDOR rate remained at 0.08 and the lost time case rate decreased to 0.16 – both significantly within the targets for the year;
- There had been 6 incidents in the Period – 2 RIDDORs and 4 high potential near misses. There had been 1 lost time case in the rolling stock and depot contract; and
- Although observation reporting had improved since the previous Period, the level of leadership engagement and golden rule engagement was down. Efforts to raise engagement activity would be led by the SHELТ group.

The Board **REQUESTED** that simple messaging be prepared to share the good news of CRL's health and safety performance with stakeholders.

**Action:** Sarah Allen

### ***Are We Within Funding?***

Mathew Duncan presented a summary of financial performance for the Period **NOTING** that:

- The AFCDC in Period 12 was £12,467m which was £44.9m below IP2 at P50 and £42.7m below IP2 at P80. Cost increases in the Period had been mostly covered by risk provision and were predominantly due to:

 However, it was likely that

AFCDC would increase in Period 13 resulting in SACR19 recording negative headroom to IP2;

- Of the £244m QRA total, £214m was currently programme risk not

allocated to projects. If all £291m of URTs were approved, the QRA total would need to increase by at least £47m. The Q4 QRA risk review was scheduled for 9 April 2018 and would include defined cost reviews for C405, C412, C422, C435, C512, C530 and C610. Reviews for C620 and C660 were also due to take place in Period 13;

- In the Period, Crossrail had spent £67.4m above the 2017/18 Business Plan. This was predominantly due to ongoing lower than planned productivity, access delays and prolongation at [REDACTED] and other net overspends (£33.0m); offset by apparent unspent Programme risk due to cost being reported in the Sectors (£10.8m); and
- The overall contingency budget of £271m was sufficient to cover the P50 risk exposure of £244m by £27m.

### AF CDC, IP2 and Funding

In respect of ongoing conversations with Sponsors on costs and funding, it was **NOTED** that:

- The Executive were preparing headlines to explain the cost profile for the past 12 months which would be presented to the Board at the next meeting;

**Action:** Mathew Duncan

- The independent cost review carried out by Jacobs on behalf of Sponsors was being completed. A verbal report had been provided to the Sponsor Board at its March 2018 meeting. A further review (initially undertaken by Joint Sponsor Team) would start shortly to examine CRL's cost profile during the past 12 months; and
- Sponsors had requested a list of unlikely/low-probability events with high impact to take into account when considering the bookends and funding requirements. The Board emphasised the need to ensure that sufficient provision was built in to the top end numbers to achieve adequate funding to complete the project.

### Commercials Update

The Board **NOTED** that:

- The total gap between CRL's and its contractors' views of target had decreased by [REDACTED] and the total forecast gap in forecast defined cost decreased by [REDACTED]. The gap between Programme AFC and CRL's view on forecast defined cost had decreased by [REDACTED] since Period 11, [REDACTED]

The Board **NOTED** the following risk actions over £12.5m:

- the risk drawdown and potential risk increase for [REDACTED] of [REDACTED] respectively;
- potential risk increase for [REDACTED];
- risk drawdown for [REDACTED];

- potential risk increase for [REDACTED];
- risk drawdown and potential risk increase for [REDACTED] respectively;
- potential risk increase for [REDACTED]; and
- potential risk increase for [REDACTED].

Paul Grammer also provided an update on the commercial negotiations with [REDACTED] **NOTING** that [REDACTED] was included in the settlements, the Board **REQUESTED** that a note be circulated to Board members explaining the position regarding 'recoverables'.

**Action:** Paul Grammer

Paul Grammer also **ADVISED** that [REDACTED]

**Action:** Paul Grammer

### **NR ONW and Funding**

The Forecast Final Outturn Cost (FFOC) remained unchanged at £2,396m reflecting the £22m provided via the Additional Funding Agreement between CRL and NR in addition to the £28m and £84m cash funding NR secured via the DfT Grant Funded Agreement.

However, further to the commercial risks identified in previous reports, NR had indicated that these risks were driving additional cost pressures estimated to be between [REDACTED]. NR would therefore be seeking further internal funding and detailed reviews with CRL were planned for Period 13.

### ***Are We on Time?***

Simon Wright had presented an overview of delivery performance during the informal session held earlier in the day. The following current issues were **NOTED** by the Board:

- Progress of 0.8% was achieved in the Period against the plan of 0.8% reflecting good progress across nearly all contracts. Productivity on OHLE and C660 cable pulling had been re-prioritised in the Period to support dynamic testing and installation of GSM-R cabling;
- At Paddington, good progress had been made with the completion of the iconic station roof canopy as well as the successful demolition of the Crossrail Arch. Overall the contractor had completed all three planned milestones in the Period;
- At Bond Street the contractor had completed seven out of seven milestones in the Period. CSJV was still not providing commodity trackers and there remained no agreement yet on works post October 2018, with no programme yet available for testing & commissioning and Phase 3 integration testing;
- Dynamic testing had commenced with a full length unit in 'staff accountable' mode on 25 February 2018. Shortly after testing

commenced, testing was suspended for essential gauge clearance checks and de-greasing of the OHLE. Testing resumed on 10 March 2018 and would now continue as planned;

- Dynamic testing in zones 3 and 4 remained on plan to start on 11 June 2018 which would then extend to zones 1-4 and continue until 5 August 2018. The critical path for meeting this key date remained through the systemwide infrastructure works and the availability of the HV Traction and Non-Traction power supply, all of which was under constant scrutiny by the CRL Executive;
- There remained ongoing pressure on Siemens delivery of C660 communications software. The software was essential to the testing of the SCADA network and continued to show slippage for the next scheduled drop. The CRL team were working with Siemens to recover the plan to avoid a delay to Phase 3 testing in zones 3 and 4;
- The overall production of Installation Release Notes (IRN) (as well as other key documents) to support handover of assets by the Tier 1 contractors remained significantly below the level required for both Stations and Systemwide. However, the pace was improving with project teams placing significant emphasis on personal accountability within the Tier 1s to get this done; and
- The provision of asset data, O&M manuals and training materials by contractors in time to meet the Infrastructure Managers' needs remained challenging, principally because the complete information would only become available after testing and commissioning. All parties were working to accelerate the production of asset data and to make best use of it progressively as it became available

The Board **REQUESTED** that the Executive check and report back on the safety provisions in relation to the handrail at Custom House station to deter passengers climbing up on it and falling

**Action:** Chris Sexton

In addition, the Board **REQUESTED** that an explanation be provided at the next Board meeting as to why the auto-reverse element of the dynamic testing programme would take so long.

**Action:** Simon Wright

### **Operations**

Howard Smith provided an update on key operations matters, highlighting some of the issues relating to Stage 1 (current operations), Stage 2 Operational Readiness, Rolling Stock for Stage 3, Stage 3 Operational Readiness and Stages 4 and 5.

A Transmission-Based Train Control (TBTC) incidents chart had been included in the update on Stage 3 Operational Readiness. The Board **REQUESTED** that data for MTR South Island – Hong Kong be included in the P13 report.

**Action:** Howard Smith

It was also **NOTED** that CRL and LU were working with MTR to establish the

	<p>minimum requirements for functionality, reliability and availability for Stage 3 – details of which would be provided to the Board in April 2018.</p> <p><b>Action:</b> Howard Smith</p> <p>The Board also <b>REQUESTED</b> that a session on readiness to open Stage 3 in December be scheduled for the informal part of Board meetings from April 2018.</p> <p><b>Action:</b> Simon Wright/Howard Smith</p> <p><b>Are we world class?</b></p> <p>It was <b>NOTED</b> that:</p> <ul style="list-style-type: none"> <li>• ‘The Secret Life of a Megaproject’ exhibition had opened at the London Transport Museum on 28 March 2018;</li> <li>• An exhibition of Crossrail art was currently showing at the Whitechapel Gallery; and</li> <li>• CRL had submitted its gender pay gap report on 19 March 2018 alongside TfL. A fuller version of the report had been uploaded to the CRL website.</li> </ul> <p>The Board <b>REQUESTED</b> that the report for the Learning Legacy should focus on the median pay and bonus gap figures.</p> <p><b>Action:</b> Dawn Barker</p> <p>The Board <b>NOTED</b> the Board Report for Period 12.</p>				
<p>48/18</p>	<p><b>CRLB 48/18 – Crossrail’s 2018/19 Objectives and Performance Metrics</b></p> <p>Mathew Duncan presented the 2018/19 objectives and performance metrics. Amendments had been made to the draft document presented at the meeting on 1 March 2018 in response to comments by the Board and Remuneration Committee.</p> <p>The Board <b>APPROVED</b> the objectives and performance metrics for 2018-19 as presented to the meeting subject to:</p> <ul style="list-style-type: none"> <li>• the metrics on funding being redeveloped to present a sliding scale up to IP2 (taking into account any increase in IP2 in the future) to be approved by the CRL Chair; and</li> <li>• providing an explanation of Programme Key Milestone 5: Integration</li> </ul> <p><b>Action:</b> Mathew Duncan</p>				
<p>49/18</p>	<p><b>CRLB 49/18 – [REDACTED]: Increase in Budget and Investment Authority</b></p> <p>The Board <b>NOTED</b> the following approvals by the Commercial and Change Sub-committee for the provision of additional funding to [REDACTED]:</p> <table border="1" data-bbox="395 1839 1353 1912"> <tr> <td data-bbox="395 1839 874 1877">20 February 2018</td> <td data-bbox="874 1839 1353 1877">[REDACTED]</td> </tr> <tr> <td data-bbox="395 1877 874 1912">20 March 2018</td> <td data-bbox="874 1877 1353 1912">[REDACTED]</td> </tr> </table> <p>A full and final account for [REDACTED] would be prepared in Period 1 2018/19 and presented to the Board for approval at the next meeting.</p>	20 February 2018	[REDACTED]	20 March 2018	[REDACTED]
20 February 2018	[REDACTED]				
20 March 2018	[REDACTED]				

Verbal	<p><b>Appointment of Executive Director</b></p> <p>The CRL Board <b>APPOINTED</b> Chris Sexton as a director of Crossrail Ltd to take effect from 1 April 2018.</p>										
50/18	<p><b>CRLB 50/18 – Executive &amp; Investment Committee Terms of Reference</b></p> <p>The CRL Board <b>APPROVED</b> the terms of reference for the Executive &amp; Investment Committee as presented to the meeting which would take effect from 1 April 2018.</p>										
51/18	<p><b>CRLB 51/18 - Increase in the Authorised Share Capital of CRL and Issue and Allotment to Transport Trading Limited</b></p> <p>The Board, in respect of Crossrail Ltd (the Company):</p> <ol style="list-style-type: none"> <li>1. <b>NOTED</b> the shareholder resolution to: <ul style="list-style-type: none"> <li>• increase the authorised share capital of the Company to £8,740 million, divided into 4,370 million A shares of £1 each and 4,370 million B shares of £1 each;</li> <li>• authorise the directors of the Company to issue and allot shares in the Company up to the newly increased amount provided that this authority shall, unless renewed, varied or revoked expire on the date five years from the date of this resolution;</li> <li>• amend the Company’s articles of association to reflect the increase in authorised share capital; and</li> </ul> </li> <li>2. <b>RESOLVED</b> to issue and allot to Transport Trading Ltd, (a wholly owned subsidiary of TfL), 100 million ‘A’ Shares at £1 each and 100 million ‘B’ Shares at £1 each.</li> </ol>										
52/18	<p><b>CRLB 52/18 – Project Representative Report (P-Rep) Period 11</b></p> <p>The Board reviewed and <b>NOTED</b> the P-Rep Report for Period 11.</p> <p>Andrew Wolstenholme provided a verbal summary of the issues that were expected to be raised in the Period 12 report which were <b>NOTED</b> by the Board. These included matters relating to: financials; schedule and progress; Stage 2 Opening; Stage 3 Opening; and assurance documentation.</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 1597 1382 1733"> <tr> <td data-bbox="363 1597 850 1686"><b>Executive and Investment Committee</b></td> <td data-bbox="850 1597 1114 1686"><b>EIC D 180226</b> <b>EIC D 180221</b></td> <td data-bbox="1114 1597 1382 1686">Andrew Wolstenholme</td> </tr> <tr> <td data-bbox="363 1686 850 1733"><b>Audit Committee</b></td> <td data-bbox="850 1686 1114 1733"><b>AUC MIN 171030</b></td> <td data-bbox="1114 1686 1382 1733">Robert Jennings</td> </tr> </table> <p><b>Verbal Updates of Recent Board Committee meetings</b></p> <table border="1" data-bbox="363 1800 1382 2067"> <tr> <td data-bbox="363 1800 850 2067"> <p><b>Executive and Investment Committee 21 March 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>• Corporate Objectives 18/19</li> </ul> </td> <td data-bbox="850 1800 1114 2067"><b>EIC MIN 180321</b></td> <td data-bbox="1114 1800 1382 2067">Andrew Wolstenholme</td> </tr> </table>			<b>Executive and Investment Committee</b>	<b>EIC D 180226</b> <b>EIC D 180221</b>	Andrew Wolstenholme	<b>Audit Committee</b>	<b>AUC MIN 171030</b>	Robert Jennings	<p><b>Executive and Investment Committee 21 March 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>• Corporate Objectives 18/19</li> </ul>	<b>EIC MIN 180321</b>	Andrew Wolstenholme
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	<ul style="list-style-type: none"> <li>• [REDACTED] IA Increase</li> <li>• Share Capital Increase</li> </ul> <p><b>Other items:</b></p> <ul style="list-style-type: none"> <li>• Cost savings schedule update</li> <li>• Art programme governance in transition and close out</li> <li>• Base Pay Increase for 18/19</li> <li>• Protocol for staff working on Crossrail International</li> </ul> <p><b>Audit Committee 12 March 2018</b> Matters covered by the Committee were:</p> <ul style="list-style-type: none"> <li>• Whistleblowing Update</li> <li>• Audit and Assurance Report</li> <li>• Audit Plan 18/19</li> <li>• Conflict of Interest TaCROL</li> <li>• Risk Management Report</li> <li>• External Audit</li> <li>• Future reporting on Audit matters after June to ExCom and the CRL Board</li> </ul>		<p>Robert Jennings</p>
<p><b>AOB</b></p>	<p>Terry Morgan thanked Andrew Wolstenholme on behalf of the Board for his significant contribution to the project and wished him well for the future and his new role at BAE Systems.</p> <p>The Board also thanked Victoria Burnett and Valerie Todd who would also be leaving Crossrail shortly.</p>		
<p><b>NEDs Only Session</b></p>	<p>Non-executive Directors provided feedback on the day's meeting.</p>		

Signed by:

Terry Morgan  
Non-executive Chairman

[REDACTED SIGNATURE]