

## CROSSRAIL BOARD

Minutes of the Meeting of the Board of Directors of Crossrail Limited  
held on Thursday 09 October 2014 at 13.30  
28<sup>th</sup> Floor Boardroom, 25 Canada Square, Canary Wharf, E14 5LQ

**Members:**

**In Attendance:**

Terry Morgan (Chairman) <i>Chairman</i>	Martin Buck <i>Commercial Director</i>
Andrew Wolstenholme <i>Chief Executive</i>	Howard Smith <i>Operations Director</i>
David Allen <i>Finance Director</i>	Valerie Todd <i>Talent &amp; Resources Director</i>
Michael Cassidy <i>Non-executive Director</i>	Will Parkes <i>External Affairs Director</i>
Phil Gaffney <i>Non-executive Director</i>	Mark Fell <i>Legal Services Director &amp; Company Secretary</i>
Terry Hill <i>Non-executive Director</i>	Victoria Finney <i>Head of Secretariat</i>
Robert Jennings <i>Non-executive Director</i>	Chris Green (part of meeting) <i>Chair of Operations and Systems Expert Panel</i>
Jayne McGivern <i>Non-executive Director</i>	
Daniel Moylan (part of meeting) <i>Non-executive Director</i>	<b><u>Apologies:</u> None</b>
Simon Wright <i>Programme Director</i>	

The meeting was quorate, and no directors declared conflicts of interest in relation to any matters discussed.

	The Chairman welcomed Board members and attendees,
<b>BD MIN 110914</b>	<b>Minutes of the Meeting of the Board held on 11 September 2014</b> The Board approved the minutes subject to one drafting correction.
<b>BD AC 091014</b>	<b>Actions and Matters Arising</b> The Board noted the updates provided on the outstanding actions.
<b>BD CBR 091014</b>	<b>Crossrail Board Report</b> The Board considered the Crossrail Board Report for Period 6, noting the satisfactory performance in what had been the final period of SACR 12.  <i>Are we safe?</i> Overall safety performance had improved, with the RIDDOR AFR (including 3 day+

lost time cases) reducing to 0.20 from 0.22 in Period 5, achieving the corporate objective of 0.20, a 40% reduction on the 2013/14 rate. HSPI had also improved, increasing from 2.25 to 2.26 in Period 6, with 17 of the 18 contracts registering HSPI scores of 2.00 or above; at 94% of contracts, the corporate objective of 85% had been exceeded for a second successive period.

There had been ten significant incidents during Period 6, compared to twelve in Period 5. These were one RIDDOR 7+ days lost time case, one RIDDOR Dangerous Occurrence and one lost time case. There had also been seven high potential near misses, including a number on BFK contracts. An action plan was being drawn up by BFK to address this.

The Board discussed the significant risk (ID4247) relating to the failure of partners/contractors to manage health and safety performance in accordance with CRL's expectations. While the likelihood of this risk materialising was not high, the potential implications were far-reaching.

A verbal update was provided on the Coroner's inquest into the fatality at Fisher Street in March, including a report on the witness statements released by the HSE. The Board commented on the need to keep Sponsors informed of developments.

The Board noted that the next Stepping Up week would take place in the following week, with events planned across many sites. An update would be provided on the key results of the Have Your Say survey to a future meeting.

**Action: Simon Wright**

Daniel Moylan left the meeting.

*Are we within funding?*

The Project remained within funding. The P50 AFCDC had increased to £11,704m, compared to £11,680m in Period 5, reducing the headroom to Intervention Point 0 (IP0) to £33m from £66m in Period 5. This was partly a result of the six-monthly QRA update which had identified a number of additional interface risks, and a £9m reduction in IP0 as a result of reduced forecast interest income. The headroom to IP1 had also reduced, with the P80 AFCDC now £7m below Intervention Point 1 (IP1), compared to £39m at the end of Period 5. At the end of Period 6, the P50 AFCDC was £36m above EAC (Estimate at Completion) Low, and £269m below EAC High. The extrapolation of contingency drawdown was indicating a projected surplus of £193m at 31 March 2019, compared to a deficit of £55m at the end of period 5; this was a result of changes to programme risk as well as programme contingency increasing.

The cumulative SPI remained unchanged at 0.98; however the Period SPI had improved to 1.02, compared to 0.92 in Period 5, partly as a result of the C610 Systemwide works being rebaselined. The Period CPI had also improved from 0.89 in Period 5 to 0.96, although the cumulative CPI remained stable at 0.95. The key project movements were on C610 where the cumulative SPI had improved as a result of the revised Systemwide Works programme, and at C422 (TCR Station Main Works) where the SPI and CPI had both deteriorated due to delays caused by C300 remedial works.

The return of savings of £90m to Programme Contingency as a result of the extension of the Network Rail interim funding agreement meant that overall Programme Change decreased by £72m in the period, resulting in an increase of £75m in the total of change at the AFCDC level during the SACR12 reporting period.

Excluding these savings, Programme Change increased in the period by £18m, largely due to the approval of change for additional excavated material disposal costs at C305 Eastern Running Tunnels, amounting to £15m. It was noted that if the rate of AFC change for SACR 12 period (of £164m) continued, the remaining free Programme Contingency of £515m would be exhausted over the next 3-4 SACR periods (i.e. before the publication of SACR 16 in autumn 2016).

As a result of the QRA review (undertaken at the end of each SACR period) the P50 risk exposure had reduced by £25m, but the programme risk had increased by £39m. This included a quantification of CRL's commercial risk exposure for the first time. The Board was briefed on the process in place to assess this exposure, and how this was reflected in the reported numbers.

Direct costs were 22% (£26m) less than forecast in the Business Plan, largely due to delays to work, spend not having occurred and reprofiled spend at Canary Wharf. The Board discussed the reasons why continuing underspend had not yet been reflected in overall progress. Indirect costs were again down against the plan, by £3.1m (17%); the causes of this were being examined as part of the Business Plan process.

*Are we on time?*

At the end of Period 6, 57.1% of works were complete, against the early plan of 58.3%, a variance of 1.2%. Forecast completion of Stage 3 remained at December 2018. The SACR12 report would record that confidence in achieving stage 3 opening on time had reduced to 77% (from 81% at the end of SACR11). The Board discussed the reasons for this adjustment, including the reduced levels of SCL productivity and the break in TBM production. It was recognised that the SACR11 score had taken into account schedule benefits expected to be derived from the early access initiative with C610.

SCL remained behind schedule at 9.8km complete versus the plan of 11.7km; the reasons for the slower progress had been scrutinised and action taken to mitigate risks to the programme. TBM tunnelling had resumed at Limmo on the Drive G eastbound tunnel towards Victoria Dock Portal. A key risk to the schedule remained the handover to Systemwide at Farringdon where a potential 8 week delay was currently being forecast. This was due to an increase in the duration for TBM dismantling and cutter head removal which would put secondary lining and platform construction of the eastbound tunnel on the critical path. Various mitigations were being reviewed to address this risk.

Surface works were 30% complete, with the Network Rail AFC standing at £2,012m. This AFC and the headroom to the funding limit of £173m were both unchanged from the previous period. Key achievements included the Schedule 7 approval of Ealing Broadway Station, the substantial completion of the Stockley flyover structure and the commencement of demolition at West Drayton. The plans for the Easter 2015 works had also been approved.

Network Rail had provided a sketch of their proposal for a revised development on their land at Paddington Bomb Gap and still considered that CRL should build their scheme at CRL's cost and risk subject to a contribution from NR. There was no planning consent for the revised proposal. From CRL's perspective, time for resolution of this issue had nearly run out. The Board commented that the public sector's collective failure to come up with an appropriate solution was not good. However, it was recognised that this was a matter for Network Rail to resolve. It was noted that Network Rail's Chief Executive was scheduled to attend the CRL Board

meeting on 6 November 2014. This would provide an opportunity to discuss the issue.

Continuing good progress on Rolling Stock was noted, with improved progress on the Depot Works welcomed following the strengthening of the Bombardier management team. CTOC mobilisation was underway ahead of taking over services in May 2017, with progress made in terms of building its executive team.

The Board noted the recent announcement that the Mayor of London and Transport for London (TfL) had confirmed funding for step free access at four London stations ahead of full opening in 2019, meaning all Crossrail stations within London would be step free. TfL was now working with the DfT to secure funding to provide step-free access at the remaining three stations.

Good progress continued to be made in land and property matters in line with the construction programme. A potential challenge to CRL disposal plans at TCR West was noted.

*Are we world class?*

CRL had continued to exceed its targets for recycling and reuse of waste and excavated material. There had been a further level 2 incident during the Period recorded by Network Rail, relating to works at Stockley being undertaken without a section 61 noise consent. The environmental supplier performance appraisals had been completed and shown an overall increase in performance with three contractors demonstrating world class performance.

The number of apprentices engaged on Crossrail remained at 372 at the end of Period 6, and the Young Crossrail work experience scheme had gained accreditation from the Oxford Cambridge RSA. An internal review of Job Brokerage had been undertaken and three objectives agreed for the second half of the project focused on:

- assisting local and/or unemployed people into work
- supporting a limited number of value-add support initiatives aimed at local young people and other disadvantaged groups
- establishing a legacy for the Brokerage beyond the life of the project.

55% of the contracts awarded at tier 2 and below had been made to SMEs, one percentage point down on Period 5. 77% of contracts had been awarded to UK companies based outside London.

Systemwide contractors Alstom and TSO had committed to join the Innovation Programme which would offer benefits to the Programme as it entered its next phase. CRL's innovation model, including Innovate18, had gained external recognition, and the focus was shifting to ensuring traction beyond the life of the project. Discussions were taking place with TfL regarding the future ownership of TUCA.

External affairs activity during the period had included a number of meetings and site visits, as well as the BBC London live broadcast from Bond Street station. The media coverage KPI for the Period indicated that 52% of articles were scored positive, with just 6% negative. Results from the helpdesk and business/residential opinion surveys had each shown a twelve point improvement in scores.

The Board congratulated the Executive on Crossrail's prize for Programme



	<p>Management at the British Construction Industry Awards which had been held the previous evening, noting the judgement that the project was “genuinely world-class in terms of scale and complexity.”</p> <p>The Board NOTED the report.</p>
<b>40/15</b>	<p><b>CRLB PAPER 18/15 – Project Representative Report</b></p> <p>The Board received the Project Representative's (PRep's) Project Status Report for Period 5.</p> <p>The Report had noted the positive improvement in the safety indices and ongoing work to review how to benchmark CRL's safety statistics with the wider construction industry. In terms of funding, it had highlighted the risks around the AFCDC headroom to IPO, which at £66m (0.5%) was now small, and noted the large draw down of contingency in Periods 4 and 5, with some £180m of unresolved Programme Trends due to be considered by Management during the coming months. On contract administration, PRep continued to have concerns about open aged NCEs but noted that extra resources would be engaged to help deal with the backlog.</p> <p>It recognised the progress being made against the Schedule, and the management focus being given to ameliorating the impact of any specific delays on the completion date. PRep had supported the collaborative approach being taken by CRL to resolving the risks posed by Network Rail's plans to implement ETCS level 2 on the Great Western. Potential risks around the introduction of mini-gate reviews to maintain a just-in-time flow of approved station designs were noted, including the need for careful monitoring to ensure that these did not result in a more fragmented approach. PRep had again highlighted the lack of improvement in Network Rail's written reports.</p> <p>The Chief Executive provided a verbal report on the Period 6 report which had been issued after the Board papers had been circulated. This had noted:</p> <ul style="list-style-type: none"> <li>• the continued focus on safety;</li> <li>• the work done to address schedule issues at Moorgate, Farringdon and Systemwide;</li> <li>• that while SCL rates were improving, PRep questioned whether they were improving sufficiently to address the shortfall;</li> <li>• the large draw-down of £23m from contingency which had been offset by surface area reduction from the Network Rail financing charge.</li> </ul> <p>The PRep had also expressed its view that there was an increased risk that IPO would be exceeded but that IP1 was unlikely to be breached.</p> <p>The Board NOTED the report.</p>
<b>41/15</b>	<p><b>CRLB PAPER 23/15 – Operations and Systems Expert Panel Update</b></p> <p>The Board received a paper from Chris Green reporting on the conclusions of the meeting of the Operations and Systems Expert Panel held on 19 September 2014 which had focussed on a number of issues.</p> <p>The Board discussed the Panel's conclusions and recommendations.</p> <p>In terms of signalling, the Panel's view that there were longer-term benefits to installing Enhanced TPWS on the Great Western as a back-up in the event of failure</p>

	<p>of ETCS beyond 2018 was recognised. The need to obtain separate ORR approval to install Enhanced TPWS on the Heathrow spur was also noted. The recommendation relating to extending the trigger for actioning the TWPS plan from 4 months to 6-12 months was discussed, and it was recognised that this was unlikely to be relevant in view of the currently proposed plan for implementing Enhanced TPWS alongside ETCS level 2. The requirements for systems testing and driver training were also discussed.</p> <p>It was noted that the latest modelling of timetable resilience had hit the required threshold for the first time. Risks posed to Crossrail by freight services were highlighted, and potential customer service benefits of extending the service to Heathrow Terminal 5 were suggested.</p> <p>The Board was updated on discussions with Sponsors about customer communications options for the tunnels, including wi-fi and 4G. This was a decision for TfL which would need to be taken in time to be reflected in specifications for the train and tunnel.</p> <p>The Board NOTED the paper.</p>
42/15	<p><b>CRLB PAPER 24/15 – Crossrail Signalling on the Great Western: Update</b></p> <p>The Board received a paper from Simon Wright which provided an update on the work underway to assess and manage the risks to Crossrail of Network Rail’s plans for implementing ETCS Level 2 on the Great Western, including the development of a fall-back option (Plan B).</p> <p>The Board welcomed the progress made on understanding and managing the risks to the CRL programme of ETCS level 2 implementation on the Great Western.</p> <p>In terms of Plan B, the Board had received assurance from Network Rail’s Managing Director and Infrastructure Projects and Major Programme Director that they were committed to developing, as Plan B, Enhanced TPWS alongside ETCS level 2 subject to approval by the ORR. The Board has also been assured that Network Rail had the resourcing to do so. The further benefits of having Enhanced TPWS as back-up in the event that ETCS failed and to manage the interface transmission risk were recognised.</p> <p>Noting that the issue of who would fund the £10-15m total cost of implementing Enhanced TPWS had still to be resolved, the Board authorised the commitment of the initial £3m required in November on the basis that further discussions would be held with Network Rail about sharing the cost.</p> <p>The Board NOTED the paper.</p>
43/15	<p><b>Crossrail’s 2015/16 Objectives and Performance Metrics</b></p> <p>The Board received a paper from Andrew Wolstenholme proposing a set of objectives and performance metrics that would be used to guide and calibrate Crossrail’s performance through the financial year 2015/16.</p> <p>The Board supported the proposed retention of the existing CRL performance management framework based on the four key performance challenges (Are we safe?, Are we on budget? Are we on time? Are we world class?). It also agreed that the changing nature and complexity of the programme should be reflected in both the objectives and measures. However, there was agreement that the overall number of</p>

	measures should not increase. The Executive was asked to review the proposal and to revert, having limited the number of measures.																					
<b>44/15</b>	<p><b>CRLB PAPER 26/15 - Revised Membership of Board Committees</b></p> <p>The Board received a paper from the Chairman outlining proposed changes to the membership of a number of the Board's Committees to reflect recent changes to membership of the CRL Board.</p> <p>The Board APPROVED the proposed changes, subject to a change to align the memberships of the Remuneration and Nomination Committees. These changes would be reflected in revised terms of reference for the Committees.</p> <p>The Board noted that a wider review of governance arrangements was under way, including of reporting lines.</p>																					
<b>45/15</b>	<p><b>Minutes of Board Committees for Reference</b></p> <p>The Board received the following minutes for reference:</p> <table> <tr> <td>Executive and Investment Committee</td> <td><b>EIC MIN030914</b></td> <td>Andrew Wolstenholme</td> </tr> <tr> <td></td> <td><b>EIC MIN 080914</b></td> <td>Andrew Wolstenholme</td> </tr> <tr> <td>Health and Safety Committee</td> <td><b>HS MIN 020914</b></td> <td>Andrew Wolstenholme</td> </tr> <tr> <td>Sustainability Committee</td> <td><b>SUS MIN 280514</b></td> <td>Andrew Wolstenholme</td> </tr> </table> <p><b>Verbal Updates of Recent Board Committee meetings</b></p> <table> <tr> <td>Executive and Investment Committee</td> <td><b>EIC 011014</b></td> <td>Andrew Wolstenholme</td> </tr> <tr> <td>Health and Safety Committee</td> <td><b>HS 290914</b></td> <td>Andrew Wolstenholme</td> </tr> <tr> <td>Sustainability Committee</td> <td><b>SUS 170914</b></td> <td>Andrew Wolstenholme</td> </tr> </table>	Executive and Investment Committee	<b>EIC MIN030914</b>	Andrew Wolstenholme		<b>EIC MIN 080914</b>	Andrew Wolstenholme	Health and Safety Committee	<b>HS MIN 020914</b>	Andrew Wolstenholme	Sustainability Committee	<b>SUS MIN 280514</b>	Andrew Wolstenholme	Executive and Investment Committee	<b>EIC 011014</b>	Andrew Wolstenholme	Health and Safety Committee	<b>HS 290914</b>	Andrew Wolstenholme	Sustainability Committee	<b>SUS 170914</b>	Andrew Wolstenholme
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<b>46/15</b>	<p><b>AOB</b></p> <p>A verbal update was provided on the meeting of the Audit Committee held earlier in the week.</p> <p>It was agreed that information on the discount rate used in whole life cost calculations would be provided to Robert Jennings offline.</p> <p><b>Action: David Allen</b></p>																					

Signed by:



Terry Morgan  
Non-executive Chairman

**Pre-meeting Board Briefing – Thursday 9 October 2014**

<b><u>Members:</u></b>	<b><u>In Attendance:</u></b>	
Terry Morgan (Chairman) <i>Chairman</i>	Martin Buck <i>Commercial Director</i>	Jeremy Bates (part of meeting) <i>Head of Integration</i>
Andrew Wolstenholme <i>Chief Executive</i>	Will Parkes <i>External Affairs Director</i>	Matt White (part of meeting) <i>Surface Director</i>
David Allen <i>Finance Director</i>	Howard Smith <i>Operations Director</i>	Siv Bhamra (part of meeting) <i>Systemwide Director</i>
Michael Cassidy <i>Non-executive Director</i>	Valerie Todd <i>Talent &amp; Resources Director</i>	Francis Paonessa (part of meeting) <i>Managing Director, Infrastructure Projects, Network Rail</i>
Phil Gaffney <i>Non-executive Director</i>	Mark Fell <i>Legal Services Director &amp; Company Secretary</i>	Robbie Burns (part of meeting) <i>Major Programme Director, Network Rail</i>
Terry Hill <i>Non-executive Director</i>	Victoria Finney <i>Head of Secretariat</i>	Rob Halstead (part of meeting) <i>Head of Risk Management</i>
Robert Jennings <i>Non-executive Director</i>	Lucy Findlay <i>Chief of Staff</i>	David Morrice (part of meeting) <i>Delivery Contracts Director</i>
Jayne McGivern <i>Non-executive Director</i>		
Daniel Moylan <i>Non-executive Director</i>		
Simon Wright <i>Programme Director</i>		

**1. Meeting with representatives of Network Rail**

The Board received a presentation from Francis Paonessa, Managing Director, Infrastructure Projects, and Robbie Burns, Major Programme Director, of Network Rail regarding Network Rail's plans to implement ETCS level 2.

The Board NOTED the presentation, including:

- Overall status of on network works
- ETCS level 2 implementation: progress made in understanding and risks; key uncertainties related to resourcing levels for ETCS, the timing and impact of the Intercity Express Programme (IEP), and gaining access to Heathrow Express route over Christmas 2016.
- Plan B (Enhanced TPWS): Network Rail support for the development of Plan B alongside Plan A, it had the resources to deliver this and was confident in it as a technical solution; the longer-term benefits were also recognised. Funding for this had still to be agreed.

**2. Risk briefing**

The Board received a presentation from Rob Halstead, Head of Risk Management, which briefed the Board on three risk issues: the forecast update following the review for SACR12, commercial risk, and the Quantified Schedule Risk Assessment.

The Board NOTED the presentation.



[REDACTED]

The Board NOTED the presentation.

**4. Handover Strategy**

The presentation from Jeremy Bates, Head of Integration, on the Handover Strategy was postponed to the November meeting.

