



BD MIN 170720

CROSSRAIL BOARD

**Minutes of the Meeting of the Board of Directors of Crossrail Limited
Held on Thursday 20 July 2017 at 13.00
28th Floor Boardroom, 25 Canada Square, Canary Wharf, London E14 5LQ**

Members:

In Attendance:

Apologies:

Terry Morgan <i>Chairman</i>	Funmi Amusu <i>Company Secretarial Assistant</i>	Victoria Burnett <i>Head of Secretariat</i>
Pam Alexander <i>Non-executive Director</i>	Mark Fell <i>Legal Services Director and Company Secretary</i>	
Michael Cassidy <i>Non-executive Director</i>	Lucy Findlay <i>Chief of Staff</i>	
Mathew Duncan <i>Finance Director</i>	Paul Grammer <i>Commercial Director</i>	
Phil Gaffney <i>Non-executive Director</i>	James Gray (Part of meeting) <i>Head of Public Affairs</i>	
Terry Hill <i>Non-executive Director</i>	Chris Green (Part of meeting) <i>Chair Operations and Systems Expert Panel</i>	
Robert Jennings <i>Non-executive Director</i>	Will Parkes <i>External Affairs Director</i>	
Mark Wild <i>Non-executive Director</i>	Howard Smith <i>Operations Director</i>	
Andrew Wolstenholme <i>Chief Executive</i>	Valerie Todd <i>Talent and Resources Director</i>	
Simon Wright <i>Programme Director</i>		

The meeting was quorate.

	<p>The Chairman welcomed Board members and attendees.</p> <p>Directors' Interests</p> <p>Members were reminded that any interests in a matter under discussion must be declared at the start of the meeting, or at the commencement of the item of business. The Chairman mentioned his role as chair of Ricardo plc prior to the discussion of regulatory approvals. Otherwise, there were no interests declared in relation to the business of the meeting.</p> <p>It was NOTED that Pam Alexander had recently been appointed to the Mayor of London's Cultural Leadership Board.</p> <p>Informal Session of the Board 20 July 2017</p> <p>It was NOTED that, at an informal session of the Board held earlier in the day:</p> <ul style="list-style-type: none"> • Ian Lindsay and Sam Richards had provided an update on progress with
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	<p>the Over-Site Development and Urban Realm. The Board REQUESTED that Val Shawcross, the Deputy Mayor for Transport, should be briefed on CRL's Urban Realm schemes and how this ties in with the draft Mayor's Transport Strategy promoting healthy streets;</p> <p>Action: Ian Lindsay/ Sam Richards</p> <p>The Board NOTED that the updated report by GVA on the effect of Crossrail on land values was scheduled to be presented at the September 2017 Informal session;</p> <ul style="list-style-type: none"> Chris Sexton had provided an update on progress with regulatory approvals. The Board had REQUESTED that another update be provided at the informal session in November 2017 with (a) the weighting of the milestones for each stage updated to reflect not just the schedule but also the level of significance; and (b) some leading indicators of assurance performance identified; <p>Action: Chris Sexton</p> <ul style="list-style-type: none"> The Board had discussed a piece of work being led by Robert Jennings, with support from Simon Bennett, looking at the economies of experience from Crossrail and how that learning might be applied to other projects.
<p>BD MIN 170525 170622</p>	<p>Minutes of the Meetings of the Board held on 25 May and 22 June 2017</p> <p>The Board APPROVED the minutes of the meetings held on 25 May and 22 June 2017 for signature.</p> <p>The Board also NOTED the notes and actions from the Board Away Day held on 22 June 2017.</p>
<p>BD AC 170720</p>	<p>Actions and Matters Arising</p> <p>The Board NOTED the completed actions due.</p> <p>With respect to action 18.034 – Expected Passenger numbers for each of the Opening Stages – the Board REQUESTED for a more detailed assessment of the expected state of each station (particularly the surface stations in the West) at each opening Stage having regard to the number of passengers estimated to use them.</p> <p>Action: Howard Smith</p> <p>Simon Wright updated the Board on the fire safety status of the project, following the Grenfell fire incident. It was NOTED that CRL was in the process of a three-stage review of its procedures for fire safety. The review was mostly complete with no issues having been raised but the final stage would provide documentation assurance. The Board REQUESTED an update on the results of this review at the next meeting in September 2017.</p> <p>Action: Simon Wright</p> <p>Otherwise, there were no other actions due that were not closed or not covered by the agenda for the meeting.</p>

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Crossrail Board Report Period 3

Andrew Wolstenholme introduced the Board Report for Period 3 highlighting that:

- Two important milestones had been achieved in the Period. Stage One Opening saw the first Class 345 train enter passenger service between Liverpool Street and Shenfield stations on 22 June 2017 and the concreting train completed its final journey. Stage One Opening had taken place some weeks later than planned and CRL had commissioned an independent review by John Boss to identify the lessons to be learned in advance of Stage Two opening;

The Board **REQUESTED** a briefing at its meeting in September 2017 on the outcome of the independent review.

Action: Simon Wright

- Health and Safety performance in Period 3 had remained strong with HSPI maintaining its score of 2.39, the RIDDOR rate reducing to 0.08 (down by 0.01 from Period 2) and the lost time case rate reducing to 0.18 (down by 0.02 from Period 2);
- In accordance with recommendations made in the Independent Commercial and Cost Review commissioned by the Board earlier in the year, provision had been made for known 'simmering' risks as part of the QRA review of SACR 17 (although no risk allowance had been made for the current signalling software issues and the Ilford exit line speed issue). The resulting effect was that the AFCDC (P50) had risen in the period by £153m; and
- The executive had carried out a detailed review of the current status of software development for the new Class 345 trains and signalling systems which were essential for Stage Two Opening and the commencement of dynamic testing in November 2017. The conclusions from the review would be presented later in the meeting.

Andrew Wolstenholme also advised that the issue of funding for ONW and the station re-builds, particularly in the western section, had been the subject of numerous briefings and meetings to plot the way forward. A meeting was due to take place on Friday 21 July 2017 with the Deputy Mayor, Mark Carne of Network Rail, TfL and Simon Wright to further discuss this topic.

Are We Safe?

It was **NOTED** that:

- Performance in Period 3 had been positive overall, with 12 out of 13 contracts achieving a HSPI score of 2.20 or above (92%). However, there had been one RIDDOR 7+ Days incident, three lost time incidents and four high potential near misses – all of which were being fully investigated;
- Four contractors remained with over 1 million hours without a lost time incident and Paddington station had exceeded 1.5 million hours; and
- Cycle 8 of Gateway had begun.

Are We Within Funding?

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

- The increase in AFCDC of £153m to £12,288m in the Period mostly comprised additional risk provision for issues such as schedule uncertainty around Zones 3 and 4 dynamic testing, [REDACTED]

- The 'Cost To Go' risk allowance excluded the costs of risks associated with Bombardier's software delivery and Ilford Yard exit line speeds. It was **NOTED** that a provision for the cost for Ilford Yard exit line speeds of £7m was being held but recent studies indicated costs of circa £20m and that Sponsor support would be sought on sharing the costs with other stakeholders;

The Board expressed disappointment with the size of the increase in the AFCDC and **REQUESTED** a discussion between the Chair and the Executives to review the authorities which should in future be exercised by the Board;

Action: Terry Morgan/ Andrew Wolstenholme/ Simon Wright/ Mathew Duncan

- The P50 AFCDC was now £374m above IP1 and the P80 AFCDC was £402m above IP1. The Board **REQUESTED** that the movement of P80 should be more clearly reported in the Period 4 Board Report;

Action: Mathew Duncan

- The QRA total was now £590m of which £206m represented programme risk not allocated to projects;
- The overall contingency budget of £472m was inadequate to cover the P50 risk exposure of £590m by £118 although this was a £64m improvement on Period 2;
- In the Period, Crossrail had spent £2.9m above the 2017/18 Business Plan. [REDACTED]

[REDACTED] offset by apparent unspent Programme risk due to cost being reported in the Sectors (£10.8m).

The Board **NOTED** the need for more consistency in the information used by the TfL Board including explanations on AFCDC and cost.

Commercials Update

It was **NOTED** that the total gap between CRL's and its contractors' views of target had decreased by [REDACTED] and the total forecast gap in defined cost had decreased by [REDACTED]

Paul Grammer provided an update on progress with the following contracts: C405 Paddington; C412 Bond Street; C422 Tottenham Court Road; C435 Farringdon; C502 Liverpool Street; C510/512 Whitechapel; C610

Systemwide; C828 Ilford Yard; C530 Woolwich; C620 Signalling; C660 Communications; and C360 Portals and Shafts.

Are We on Time?

Simon Wright presented an overview of delivery performance highlighting some of the key issues for the Period. It was **NOTED** that:

- Installation of screen doors was ongoing at Bond Street eastbound and Paddington eastbound, as well as the installation setting out at Woolwich. Schedule remained a key concern, with Knorr-Bremse manufacturing output only just meeting installation demand. However, discussions were ongoing between senior executives of Knorr-Bremse and CRL and a new organisation structure had been agreed and management co-location at Liverpool Street offices had now been arranged;
- Following the approval of the supplemental agreement for C530, Balfour Beatty and CRL had continued to demonstrate significant improvements in the delivery of the works at Woolwich station. Having addressed commercial and schedule concerns, the principal challenge remaining was the installation of the panels being undertaken by the subcontractor SORBA. Senior management discussions were scheduled for 11 July 2017; and
- The first Final Design Overview (FDO) certificate (for Mile End Park Shaft) was signed off in July 2017.

Operations

Howard Smith provided an update on key operations matters highlighting the introduction of the Class 345s into service on 22 June 2017. There were currently 2 round trips a day and 4 units at Ilford, with a target of 11 units in service by September 2017. The remaining derogations on the DOO CCTV were expected to be signed off in August 2017.

It was **NOTED** that the major issue with BT remained the development of the TCMS R.6.0 (Core ETCS functions) software. Testing had commenced on the Signalling Integration Rig with BT software but with slower than forecast progress. The full R6/R7 TCMS programme forecast for Stage 2 and Stage 3 was being subjected to an independent expert review and a QSRA to determine percentage confidence and compatibility with the integrated Crossrail Staged Opening programme.

It was **NOTED** that in terms of rolling stock production, the 113th bodyshell was completed in Derby but the overall SPI for production had fallen to 0.88 due to material shortages. CRL Operations were maintaining a close watch as BT were also starting to ramp up production of the Class 710 Aventura units for London Overground.

	<p>Are we world class?</p> <p>It was NOTED that:</p> <ul style="list-style-type: none"> • The Chairman had hosted Lord Montague on a site visit to Tottenham Court Road; Baron Hill of Oareford on a site visit to Paddington; and addressed delegates at the National Infrastructure Summit; • The CEO had given a presentation to a group from KPMG Global Infrastructure followed by a site visit to Canary Wharf; and hosted the Ward of Cordwainer Club, including a number of senior members from the City of London Corporation, on a site visit to Liverpool Street; • Episode two of The Fifteen Billion Pound Railway documentary was broadcast on BBC Two on 29 May 2017 featuring the installation of the brick slips and the development of artwork at Paddington, construction progress at TCR and the manufacture and testing of the new Class 345 trains. BBC had confirmed the commissioning of a third series of the documentary to be broadcast in the second half of 2018; • Terms of Reference for the joint TfL/CRL Elizabeth Line Communications Board had been drafted and the first meeting was held in July 2017; and • The 'Transportation Infrastructure Skills Strategy: One Year On' report had been published by the Strategic Transport Apprenticeship Taskforce. <p>The Board REQUESTED more clarity on the Headcount vs Budget information provided in the Board Report.</p> <p>Action: Valerie Todd</p> <p>The Board NOTED the Board Report for Period 3.</p>
13/18	<p>CRLB 13/18 – Train Signalling Programme Strategy for Stages 2 & 3</p> <p>It was NOTED that an Adverse Event Notice had been submitted to Sponsors on 7 July 2017 relating to the timing, availability and assurance of the train signalling software and on-board train control management software required for Staged Opening.</p> <p>The Executive had carried out a piece of work in collaboration with RfL to formulate a strategy to address the issues raised in the Adverse Event Notice. That strategy was presented to the Board and discussed in detail. The recommended option was to continue to work to the existing timetable, sequence of activities and Staged Openings. However, a number of risk mitigation actions had been identified and decisions could be taken at various points in the process to put these in place.</p> <p>The Board supported the strategy and NOTED that there may be a need for the Board and Sponsors to take significant decisions later this year in the event of continuing delays.</p> <p>The Board NOTED that a Sponsor Board meeting (Sponsors only) was scheduled for early August 2017 and that the Executive would provide Sponsors with an update on the proposed strategy for dealing with the issues raised by the Adverse Event Notice.</p>

	<p>Action: Lucy Findlay</p> <p>The Board commented that serving an Adverse Event Notice was appropriate in these circumstances.</p> <p>(Chris Green attended for this item.)</p>
14/18	<p>CRLB 14/18 – Operations and Systems Expert Panel Update</p> <p>Chris Green presented an update from the Operations and Systems Expert Panel which had focused on a review of train software readiness carried out by Dr Alan Rumsey.</p> <p>There were some other areas that were brought to the attention of the Board. They included: dynamic testing readiness; performance modelling and operational training.</p> <p>The Board NOTED the update from the Operations and Systems Expert Panel.</p>
15/18	<p>CRLB 15/18 – [REDACTED]</p> <p>[REDACTED]</p> <p>Paul Grammer presented a paper seeking Board approval for an allocation of increased Investment Authority of [REDACTED]</p> <p>[REDACTED]</p>
16/18	<p>CRLB 16/18 – Amendment to Scheme of Authorities</p> <p>The Board APPROVED the revised Scheme of Authorities as presented to the meeting, which had been amended to reflect changes made at the beginning of the year to the risk management process.</p>
17/18	<p>CRLB 17/18 – Project Representative (PRep) Reports Periods 2 & 3 (2017/18)</p> <p>The PRep report for Period 2 had been included in the Board Pack and was taken as read.</p> <p>Andrew Wolstenholme outlined the issues that would be raised in the Period 3 Report. These related to: health and safety performance, finance and costs; schedule and progress; Stage Two opening; assurance; rolling stock and depot; stations; Systemwide and other issues specific to each of the staged openings.</p> <p>The Board NOTED the PRep Reports.</p>
18/18	<p>CRLB 18/18 – Legal Report</p> <p>Mark Fell presented the Legal Report which was NOTED by the Board.</p>

<p>Minutes of Board Committees for Reference The Board received the following minutes for reference:</p>		
<p>Executive and Investment Committee Health and Safety Committee</p>	<p>EIC MIN 170517 EIC MIN 170614 HS MIN 170515 HS MIN 170612 AUC MIN 170313</p>	<p>Andrew Wolstenholme Robert Jennings</p>
<p>Verbal Updates of Recent Board Committee meetings</p>		
<p>Executive and Investment Committee 12 July and 17 July 2017 Matters covered by the Committee were:</p> <ul style="list-style-type: none"> • Signalling Strategy Stages 2/3; • IA Request for C610; • OSD and UR Update; and • Newham Trackside Wall Artwork solution. <p>Health and Safety Committee 10 July 2017 Matters covered by the Committee were:</p> <ul style="list-style-type: none"> • Period 3 Health and Safety Report; • Occupational Health Update; • Fatigue Update; and • C650 Health and Safety Update <p>Audit Committee 16 June 2017 Matters covered by the Committee were:</p> <ul style="list-style-type: none"> • Annual Report and Accounts 2016/17 and Auditor's Report; • Annual Internal Audit Report; • Audit and Assurance Report including CARS; • Risk Management Report; • Transfer of assets to TfL; and • Completion of CARS actions. 	<p>EIC MIN 170712 170717</p> <p>HS MIN 170710</p> <p>AUC MIN 170616</p>	<p>Andrew Wolstenholme</p>
AOB	<p>James Gray provided a summary of progress with Crossrail International which was NOTED by the Board.</p> <p>It was NOTED that approval of the re-appointments of Pam Alexander, Michael Cassidy and Terry Hill had been confirmed by Sponsors.</p>	
NEDs Only Session	<p>Michael Cassidy updated the Board on the recent activities of the CRL Remuneration Committee and Terry Morgan provided feedback from the TfL Board and Remuneration Committee meetings held on 19 July 2017.</p>	

Signed by:

Terry Morgan
Non-executive Chairman