

## CROSSRAIL SPONSOR BOARD MINUTES NO.99B

### MINUTES OF MEETING HELD ON

Thursday 15 November, 13.00-14.30

Venue: DfT, Great Minster House, 33 Horseferry Road, Room 3/23

#### Present:

Ruth Hannant*	Chair, DfT Director General for Rail
Simon Kilonback*	TfL, Chief Financial Officer
David Hughes*	TfL, Director of Strategy & Network Development
Matt Lodge*	DfT, Director for Major Rail Projects

Simon Adams	Head of Joint Sponsor Team (JST)
██████████	JST, Secretariat

#### By invitation

Graham Stockbridge	DfT, Crossrail Project Director
██████████	DfT, Crossrail Deputy Project Director
David Bennett	Project Representative
Robin Wilkin	Project Representative
██████████	JST
Richard Zavitz	JST
██████████	JST
Simon Wright	Crossrail Limited (CRL), Chief Executive
Mark Wild	CRL, Chief Executive Designate
David Hendry	CRL, Chief Finance Officer
Paul Grammer	CRL, Commercial Director
Chris Sexton	CRL, Programme Director
Howard Smith	CRL, Operations Director
Lucy Findlay	CRL, Chief of Staff

(\* Voting Members)

### **1. Minutes and Actions of Meeting 98b**

The minutes of the last meeting, held on the 15<sup>th</sup> October were agreed.

██████████ said all actions have been completed or progressed, as summarised below:

**98b/01:** DfT provided the following clarification on whether it would continue to specify the off-peak residual GWR services: "The Department has carefully considered the evidence provided by NR regarding the Relief Line capacity utilisation and performance, and it does not consider that there is sufficient compelling evidence to take a decision to remove the GWR "residual" relief line services from the current or future Great Western franchise specification at this time."

97b/02



97b/03

The JST and CRL Chief of Staff met to review the CRL / Sponsor and Sponsor organisation meetings and JST determined that these meetings could not be reduced by Sponsors at this point. This is because either they are political meetings or meetings which Sponsors believe are important for oversight of the programme, such as the CRL / Sponsor (30mins) weekly call, Elizabeth Line Readiness Board and Sponsor Boards.

97b/04

RfL confirmed on 18 October that it “could agree the continued use of Maidenhead until the end of January 2019 as a contingency against GWR being unable to access Cocklebury (sidings).”

97b/05

JST provided a post-meeting update on the arrangements for the Independent Complaints Commissioner. Contributions have been sought by TfL from NR and CRL and options for the future role (beyond March 2019) of the Complaints Commissioner are being considered with a likely solution being employed on a call-off arrangement.

## 2. Semi Annual Construction Report (SACR) 20

Simon Wright presented on SACR20. He explained that CRL had forecasted the SACR20 Anticipated Final Crossrail Direct Costs (AFCDC) based on the Remedial Action Plan update (RAP2) upper end cost forecast (£1,319m above Intervention Point 2 (IP2), as Sponsors had requested to provide the most accurate view of the likely cost outturn. Simon noted that both the ‘Put’ and ‘Call’ options are exercisable to Sponsors as it is the second consecutive SACR in which IP2 has been breached. Sponsors noted that they would respond formally to CRL (**Action 99B/01**).

## 3. Revised Master Operational Handover Schedule (MOHS) and Stage opening

Chris Sexton presented on the ongoing work being taken to update the MOHS. Chris noted that the plan remained to finalise the MOHS on 30 November and present it to the CRL Board for approval on 5 December. CRL acknowledged this was later than planned and apologised but said this was important to ensure it is accurate. It was noted that even after 30 November further work may be needed to finalise the stage opening dates.

Chris Sexton noted that health and safety metrics continue to be positive on the programme but that CRL is looking closely at issues to identify any necessary actions.

Chris Sexton said that there were three critical paths CRL were looking at in detail for the MOHS:

- Completion of routeway works
- Relationship between Bombardier Transportation (BT) and Siemens and the assurance needed (particularly by BT) following a software drop by Siemens

- Stations, shafts and portals (SSPs)

On the 2<sup>nd</sup> area Mark Wild noted that the current aim of 18 weeks for dynamic testing would be a world class achievement. For it to be achieved CRL needed to reduce the assurance time BT needs following a Siemens software drop. Mark noted this was currently 4 weeks and there could be up to 20 drops over the dynamic testing period. Sponsors asked CRL what levers it had to improve this. CRL noted it was creating a new integration directorate which would ensure there was someone overseeing the process and ensuring it was appropriate.

David Bennett asked CRL about the stability of the train software and what evidence is available to support this. Howard Smith said the software for the reduced lengths units (RLUs) on the Greater Eastern was sufficiently stable. CRL's aim was to get the 9 car full length units (FLUs) out on the Great Western to test and build the reliability.

On the third area (SSPs) CRL were doing intensive work looking at the period between the Tier One Substantial Demobilisation (TOSD) dates and Staged Completion in three areas:

- C660 (Communications and Control Systems) testing and commissioning, particularly SCADA (Supervisory Control And Data Acquisition) and radio
- Phase 3 integration testing (which follows static testing to test all systems together)
- Safety critical assurance documentation needed to bring an element into use

CRL is aiming to complete a detailed review of Tottenham Court Road and use this to extrapolate on the work required at other stations. CRL will then aim to do the same exercise across all stations.

Howard Smith noted that work is being undertaken with the operators to see what systems are critical for Stage 3 opening. Mark Wild noted that CRL would be reviewing what is required for Stage 3 and any non-critical systems which can be deferred, without impacting upon Stages 4 and 5. Mark noted that a clear plan would be needed on when the (non-critical) works would be undertaken, if required.

CRL presented its plan for Interim Dynamic Testing (four testing blocks of 48 hours testing and two test windows) with Main Dynamic Testing to start in mid January (as approved at the CRL Board). CRL noted that the benefit of conducting some testing ahead of Main Dynamic Testing was to identify issues to get further ahead of the fix cycle. *Post-meeting note: Interim Dynamic Testing was subsequently reduced, but with the two test windows continuing and Main Dynamic Testing still planned for 13/14 January.*

CRL noted that there were some conflicts in the possessions and that it would notify Sponsors if it needed support with these or if there were any potential implications for other Sponsor programmes, such as HS2 (**Action 99b/02**).

CRL explained its proposal for weekly performance reporting which would respond to Sponsors' request for enhanced / flash reporting. The intention was for this to be one dashboard for all the different audiences, including CRL, Sponsors and politicians. A draft would be shared with Mark Wild, then the JST and then would be brought to Sponsor Board (**Action 99b/03**).

Howard Smith presented on the Stage opening. CRL said it expects Stage 4 to follow six months after Stage 3 and Stage 5 to follow 12 months after Stage 3.

On Stage 2:2 Howard Smith noted that the programme needs to be finalised as currently the schedule shows authorisation of the train software in the second half of 2019. Howard said

there were two issues to be discussed offline with DfT: the fitment of ETCS on the Great Western Railway (GWR) 387s and whether there were any alternative trains which could be fitted with ETCS.

Howard Smith said all parties were supportive of Stage 5A (TfL Rail running Crossrail 345 trains between Paddington (high-level) and Reading) happening in December 2019 but two things need to be resolved:

- [REDACTED]
- Resolution of the potential conflict between the TfL rail 4tph services to Reading and the GWR 2tph relief line ('residual') services. Howard noted that DfT has said there is not sufficient evidence to take these services out and a meeting has been scheduled for next Wednesday including Network Rail (NR), MTR and GWR.

Howard Smith said he believed the issue could be greater in December 2020 when the Elizabeth line runs 6tph to Heathrow and there are additional freight paths. Howard agreed to articulate the passenger benefits and disbenefits if needed to support these discussions.

David Hughes noted that Stage 5A is a critical factor for TfL for the Crossrail funding and financing discussions.

#### **4. Resourcing**

CRL noted that as part of the PA Consulting Systems Integration review CRL would be establishing an Integration Director with Systems Integration and Programme Integration leads. CRL also noted that a new Head of Commercial was being appointed who would report into the Programme Director. CRL noted that the finance function would continue to have a role in challenging and reviewing the commercial agreements.

CRL noted that it was preparing its business plan (based on the RAP2 cost forecasts) and would be submitting this to the January CRL Board. This would be presented to Sponsors in early 2019 (**Action: 99b/04**). David Hendry noted that CRL would be holding the business to the P50 forecast of c£13.5bn (c.£1bn above IP2) but Mark Wild noted that further work was needed to determine the upper end cost estimate once the MOHS had been finalised.

Ruth Hannant said that Sponsors were keen to share the KPMG independent governance and financial / commercial review recommendations. Sponsors & CRL agreed it would be helpful to have a workshop with KPMG, CRL and Sponsor representatives to discuss KPMG's emerging findings (**Action: 99b/05**).

#### **5. Financial and commercial update**

David Hendry presented on the financial position with the RAP2 upper end forecast (£1,319m above IP2) remaining the upper end forecast and the Period 7 Board report forecasting an AFCDC of c.£1bn above IP2. David said that the most recent run rate suggested sufficient cash until the end of financial year (if the £350m of financing is included). CRL expected to run out of investment authority at the end of December and David noted that the CRL Board on 5 December would need to sign off the accounts.

CRL presented on its proposal to agree 'fixed price' agreements. David Hendry noted that all commercial agreements were approved at the Commercial and Change Sub-Committee (a CRL Executive Committee). Paul Grammer explained that CRL intend to negotiate 'fixed price' agreements where appropriate with Tier 1 contractors in order to:

- Incentivise delivery of the TOSD dates
- Ensure full collaboration during testing and commissioning
- Avoid contractor compensation claims and
- Ensure contractor commitment to the MOHS

Paul noted that the fixed price lump sum payment would be paid in cash based on deliverables and would only be adjusted for significant scope changes, rather than every day compensation events. The lump sum was calculated based on the CRL project manager's view of the cost forecast adjusted to account for contractual matters. Mark Wild noted that contractors might use any changes during dynamic testing to make claims for disruption or compensation events and these agreements would help to prevent this.

Sponsors agreed that CRL should circulate a paper on this issue and the JST should organise a CRL / Sponsor representative meeting to discuss the issue. *Post meeting note: A commercially sensitive CRL paper was circulated on 16 November and the meeting was held on 19 November. (Actions: 99b/06 & 07). Following this the head of the JST wrote to CRL on 21 November (see Appendix A), noting that Sponsors have no objection to CRL entering into the appropriate fixed price / settlement agreements.*

CRL noted the ongoing NR On Network Works funding issue and the challenge CRL is facing in getting NR to resolve this. *Post meeting note: NR has submitted three papers to the 5 December NR / DfT Portfolio Board seeking Control Period 5 and 6 funding.*

## 6. AOB

Ruth Hannant thanked Simon Wright on behalf of both Sponsors for his dedication and commitment to the Project.

**Action Tracker:**

No.	Action	Responsible	Target
99b/01	JST to write to Sponsors to formally respond to SACR20.	Andrew Wallace	In progress
99b/02	CRL to notify Sponsors if it needs any support with any conflicts with possessions or if there were any potential implications for other Sponsor programmes.	Jason Lacey	Ongoing
99b/03	CRL to send the draft enhanced / flash reporting to JST once it has been approved by CRL Executive and present at the next Sponsor Board	Chris Sexton & David Hendry	December
99b/04	CRL to present its business plan to Sponsors in early 2019.	Mark Wild & David Hendry	January / February 2019
99b/05	Workshop to be scheduled for KPMG to present its emerging recommendations to CRL.	██████████	Complete
99b/06	CRL to produce a paper on the proposed commercial agreements.	Paul Grammer	Complete
99b/07	Meeting scheduled to discuss the proposed commercial agreements	██████████	Complete

**Appendix A: Sponsors' confirmation of no objection to CRL entering into these fixed price agreements.**

**From:** Adams Simon [REDACTED] <[\[REDACTED\]@tfl.gov.uk](mailto:[REDACTED]@tfl.gov.uk)>

**Sent:** 21 November 2018 16:28

**To:** Findlay Lucy

**Cc:** [REDACTED] Findlay Lucy; Hughes David (Director of Strategy and Network Development); Kilonback Simon; Hannant-Payne; Matthew Lodge; Graham Stockbridge; [REDACTED] Wallace Andrew (London Rail)

**Subject:** RE: Commercially sensitive: Station contractor [REDACTED] paper

Lucy,

I can confirm that Sponsors have no objection to CRL entering into [REDACTED] as described in the attached paper.

We ask that you keep Sponsors apprised, through normal reporting processes, should you propose a similar approach for [REDACTED] or [REDACTED]

Regards,

Simon Adams  
Joint Sponsor Team

## CROSSRAIL SPONSOR BOARD MINUTES NO.98B

### MINUTES OF MEETING HELD ON

Monday 15<sup>th</sup> October, 9.00-12.00

Venue: TfL, 55 Broadway, 7th floor, South Wing, Manor Park Room

#### Present:

Polly Payne*	Chair, DfT Director General for Rail
Simon Kilonback*	TfL, Chief Financial Officer
David Hughes*	TfL, Director of Strategy & Network Development
Matt Lodge*	DfT, Director for Major Rail Projects

Simon Adams	Head of Joint Sponsor Team (JST)
██████████	JST, Secretariat

#### By invitation

Graham Stockbridge	DfT, Crossrail Project Director
██████████	DfT, Crossrail Deputy Project Director
Robin Wilkin	Project Representative
Barry Long	Project Representative
██████████	JST
Simon Wright	Crossrail Limited (CRL), Chief Executive
Chris Sexton	CRL, Programme Director
Howard Smith	CRL, Operations Director
Mathew Duncan	CRL, Finance Director
Lucy Findlay	CRL, Chief of Staff

(\* Voting Members)

### **1. Minutes and Actions of Meeting 97b**

The minutes of the last meeting, held on the 20<sup>th</sup> September, were agreed. Crossrail Limited (CRL) noted that the ATC joint venture would be applying for an exemption from the ORR rather than CRL. This was referred to on page 2 of the minutes: *"It was highlighted that a critical issue from the delay will be for CRL to apply to the Office of Rail and Road (ORR) for a new exemption from ROGS (the Railways and Other Guided Transport Systems (Safety) Regulations 2006). The current exemption runs out at the end of April 2019. The ORR has indicated that this would be acceptable."*

██████████ said all actions from the last meeting were complete with the exception of action 97b/01 (on funding for the On Network Works (ONW) enhanced stations), for which an update was expected from Network Rail (NR) this week (week commencing 15 October). Below is a summary of progress against the actions:

**97b/01:** An update on funding for the ONW enhanced stations is due from NR. JST will feed back to Sponsors and to Matt White, CRL Surface Director, when there is more certainty.

**97b/02** Sponsors continue to exert pressure on the leadership teams of key



- contractors (BT, Siemens and Alstom) on the importance of delivering against schedule. This has been added to agendas of senior meetings.
- 97b/03** DfT has raised the availability of testers and radio signalling engineers with NR.
- 97b/04** CRL presented on Stage 5 in Item 2.
- 97b/05** CRL have provided a risk assessment of the programme as part of the updated Remedial Action Plan, circulated to Sponsors on 2 October.
- 97b/06&07** Sponsors provided the additional £300m into the Sponsors funding account.

Simon Wright thanked Sponsors for the receipt of the £300m of additional Sponsors funding.

## **2. Revised Master Operational Handover Schedule (MOHS)**

Simon Wright introduced the revised MOHS noting that the principles of MOHS had been agreed but the detail was still being finalised with contractors.

Chris Sexton explained the process for finalising the MOHS, noting that extra time was being taken to consult Tier 3 and 4 contractors. Chris noted that the early date for 'interim dynamic testing' (50 hours per week; 10 hours per day, five days a week) was 10 December. The entry criteria for dynamic testing was being finalised and an independent chair would review readiness for dynamic testing on 9 November. The late date for full dynamic testing (80 hours per week; 2 x 8 hour shifts per day, five days a week) was 22 January 2019. Under the late dates there was no change in the dynamic testing duration but a six week risk allowance had been added. The late date schedule would see Stage 3 open in December 2019.

Chris Sexton explained that CRL had also estimated the probability and impact of high-impact lower probability events in the 'additional quantified risk analysis (QRA)' (included in the updated Remedial Action Plan). CRL explained that these events had not been included in the schedule because they would inaccurately influence the stage completion estimates but the estimated cost risk allowance required to cover these (of £154m) had been indicated to Sponsors.

Chris Sexton explained on station completion that the Tier One Substantial Demobilisation (TOSD) dates were not contractual dates but were the dates at which CRL expected nearly all the physical works to be substantially complete and principal contractors to have demobilised most of their staff. Simon Kilonback asked what CRL's expectation of achieving these dates was if they were not contractualised dates. Simon Wright said the intention was to agree challenging but achievable dates with the contractors. Simon Kilonback asked if CRL had sufficient commercial incentives to encourage contractors to appropriately demobilise. CRL said they were considering agreeing lump sum payments with contractors to incentivise them to deliver and demobilise. Two agreements had already been achieved at Farringdon and Woolwich stations, but stations such as [REDACTED]. Polly Payne asked how CRL would characterise the risk of costs exceeding the Remedial Action Plan forecasts. Simon Wright said that CRL had tried to provide a range of forecasts [REDACTED]. He noted that the methodology assumes that the 'run rates' continue in full up [REDACTED].

Howard Smith then presented on Stages 4 and 5. He explained that the principal constraint for Stages 4 and 5 were demonstrating readiness in line with the NR timetabling process.

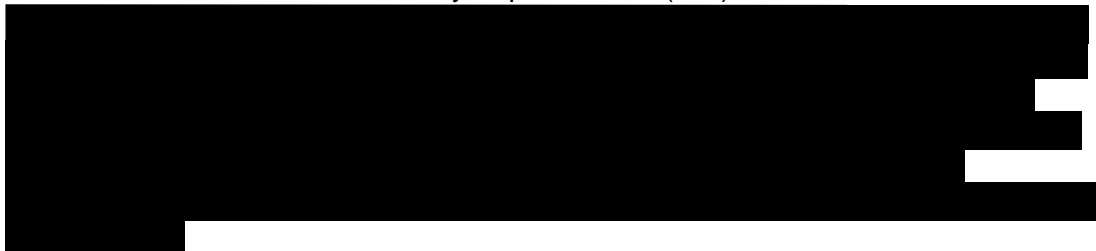
Howard noted that current schedule for Stage 2:2 was opening in May 2019. However, Bombardier Transportation's (BT) latest schedule suggests a software enabled train will not

be fully ready until June 2019. Howard noted this schedule had not been reviewed and mitigations might be possible. However, a further 10-14 weeks of driver training would be needed. This would risk Stage 2:2 operational readiness clashing with preparations for Stage 3. Howard noted that Stage 3 would be unaffected as it would be prioritised but that Stage 2:2 would need to be delivered in advance of the Heathrow Express depot at Old Oak Common being decommissioned (as the class 360s could no longer be stabled there). *(Post-meeting note: There is a requirement for the Heathrow Express service to be transitioned to GWR by September 2019. Following that Heathrow would be contractually obligated to fully vacate the Old Oak Common depot by December 2019, including the 360s, and the timing of this would be a decision for Heathrow.)*

On Stage 4 and 5 Howard said several options had been considered (as summarised in the CRL slides) but the only viable option currently was to delay Stages 4 and 5 by 12 months to May 2020 and December 2020 respectively.

Howard noted that Stage 5A (TfL Rail running Crossrail 345 trains between Paddington (high-level) and Reading) would help to de-risk the schedule. He noted there were two outstanding questions which would help himself and Mark Hopwood (Great, Western Railway, GWR) develop this option:

- Would DfT be specifying for the off-peak residual GWR services to remain? **(Action 98b/01: DfT to clarify)** *(Post-meeting note from DfT: "The Department has carefully considered the evidence provided by NR regarding the Relief Line capacity utilisation and performance, and it does not consider that there is sufficient compelling evidence to take a decision to remove the GWR "residual" relief line services from the current or future Great Western franchise specification at this time.)*
- When would the enhanced Intercity Express Train (IEP) timetable be introduced?



### **3. Cost**

Mathew Duncan provided an update on the cash forecasts. He noted that under both the [redacted] Remedial Action Plan cost forecasts the additional Sponsors funding of £300m will cover CRL cash payments until the end of December 2018. However, Mathew noted that CRL's investment authority would run out at the end of October (in other words beyond that date it would be promising to pay money to contractors which it did not currently have). An emergency CRL Board meeting had been convened on 26 October to consider this.

Graham Stockbridge asked how much investment authority CRL would require to get it to the end of November. Mathew Duncan advised that CRL is averaging £125m of expenditure every 4 week period and therefore CRL would need an additional £125m-£150m of additional investment authority at the start of November to cover until the end of November.

CRL noted the three protective options (set out in a letter dated 12 October 2018 from Mathew Duncan to the Chair of the Sponsor Board) which the CRL Board considered in the event that further funding cannot be provided. It was noted that deferring payments was not

considered practical given the time available and number of Tier 1 contractors. Mathew Duncan also noted that under the NEC contracts CRL has a contractual obligation to pay costs which they incur within 20 days of receipt, unless there are grounds for review or challenge these costs. CRL noted options 2 and 3 (standing down contractors/suspending works and stopping contractors/right to terminate) but said that these would bring considerable costs in terms of site security and remobilisation of contractors (advised in the letter to be in the excess of £500m).

Mathew Duncan advised that CRL's in-year cash requirement forecast range between:

- £630m (above Intervention Point 2, IP2) based on the [REDACTED] forecasts
- £650m above IP2 based on the [REDACTED] forecasts
- C£720m above IP2 based on the [REDACTED] P95 forecast (accounting for the 'additional QRA')

Simon Kilonback asked what the cost impact would be if the routeway and Systemwide works were delayed. Mathew Duncan said prolongation of the Systemwide contract (C610) would have a significant cost impact because it has a high run rate, but the communications contract (C660) has a much lower run rate. There would unlikely to be a knock-on impact on the stations works.

Sponsors asked about the costs after Stage 3. CRL said it estimated the CRL costs to be c.£60m-£70m after Stage 3 and all stations were complete, but that this does not include third party and delivery partner costs and indirect costs.

#### **4. AOB**

Simon Wright noted that the Sponsor and political meetings were taking up a lot of the CRL Executive time. Matt Lodge offered to meet Simon Wright to discuss whether any meetings could be removed (**Action 98b/03**).

Matt Lodge noted his concerns over the amount of work which was required for the Stage 4 timetable. Howard Smith said that the timetable bid for May 2020 would be in August 2019, requiring work to commence from May / June 2019. Howard's view was that by June there should be sufficient progress made on dynamic testing to consider readiness for Stage 4.

[REDACTED] noted that GWR had formally requested to continue using 5 of the 6 Maidenhead sidings until the end of January 2019 to mitigate the risk of insufficient stabling caused by electrification delays. [REDACTED] noted that [REDACTED] (DfT) and Paul Richardson (RfL) were in discussions and Howard Smith agreed to respond formally to DfT (**Action 98b/04**). *(Post-meeting note: RfL confirmed on 18 October that it "could agree the continued use of Maidenhead until the end of January 2019 as a contingency against GWR being unable to access Cocklebury" (sidings).)*

[REDACTED] noted that the Independent Complaints Commissioner's role was budgeted to the end of March 2019 but that TfL had not received contributions from NR and CRL towards his costs. JST would update Sponsors on the future arrangements (**Action 98b/05**). *(Post-meeting note: Contributions have been sought by TfL from NR and CRL and options for the future role of the Complaints Commissioner will need to be considered with a likely solution being employed on a call-off arrangement).*

██████████ noted that the independent schedule reviews (Boss and Rannachan) had been finalised. Lucy Findlay noted that CRL were considering what aspects might need to be redacted for TfL.

**Action Tracker:**

No.	Action	Responsible	Target
98b/01	DfT to clarify whether it would be specifying for the off-peak residual GWR services to remain.	Graham Stockbridge / ██████████	Complete (see post-note above)
98b/02	DfT to clarify when the enhanced Intercity Express Train (IEP) timetable would be introduced	Graham Stockbridge / ██████████	Ongoing (see post-note above)
98b/03	Matt Lodge to support Simon Wright in reviewing the Sponsor and political meetings.	██████████ and Lucy Findlay	Initial review completed by ██████████ & Lucy ; Matt & Simon to discuss in next 1-2-1.
98b/04	Howard Smith to respond formally to GWR's ongoing use of Maidenhead sidings until the end of January 2019.	Howard Smith / Paul Richardson	Complete (see post-note above)
98b/05	JST would update Sponsors and CRL on the future arrangements of the Independent Complaints Commissioner.	Andrew Wallace	Ongoing (see post-note above)

## CROSSRAIL SPONSOR BOARD MINUTES NO.97b

### DRAFT MINUTES OF MEETING HELD ON

Thursday 20<sup>th</sup> September 2018, 15.30-17.00

Venue: Department for Transport, Great Minster House, Floor 3, Room 3/23

#### Sponsor Board Members

Ruth Hannant*	Chair, DfT Director General of Rail
David Hughes*	TfL, Director of Strategy & Network Development
Matthew Lodge*	DfT, Director for Major Rail Projects
Simon Kilonback*	TfL, Chief Finance Officer

#### In attendance

Graham Stockbridge	DfT, Project Director
[REDACTED]	DfT, Crossrail Deputy Project Director
Simon Adams	Head of Joint Sponsor Team (JST)
[REDACTED]	JST, Secretariat

#### By invitation:

Barry Long	Project Representative
Chris Sexton	Crossrail Limited (CRL), Technical Director
Howard Smith	CRL, Operations Director
Mathew Duncan	CRL, Finance Director
Lucy Findlay	CRL, Chief of Staff

#### Apologies:

Simon Wright	CRL, Chief Executive and Programme Director
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(\* Voting Members)

### **1. Minutes and Actions of Meeting 96b**

The minutes of the last meeting, held on 3<sup>rd</sup> September, were agreed without alteration. The actions were covered as follows:

- 96b/01:** [REDACTED]
- 96b/02:** The contents of the Remedial Action Plan have been agreed with the Joint Sponsor Team prior to its circulation to Sponsors.
- 96b/03:** Once a proposed date for Stage 3 opening has been agreed, CRL will issue a Change Notice. This action remains open.
- 96b/04:** Additional detail on the cost estimates and cash forecasts has been provided by CRL in the Remedial Action Plan.
- 96b/05:** Simon Adams met with Paul Grammer following the 3<sup>rd</sup> September Sponsor Board to run through the data and assumptions underpinning the cost estimates previously reported.
- 96b/06:** A paper on On Network Works Enhanced Stations was presented at Portfolio Board on 13 September 2018. Matthew Lodge noted that a key output from

Portfolio Board was for the paper to be presented at the Network Rail ExComm. Matthew Lodge noted that an update from ExComm's discussion should be provided at the next Sponsor Board (**Action 97b/01**).

## **2. Update on Stage 2 Phase 2**

Howard Smith provided an update on Stage 2 Phase 2 Readiness, noting that Bombardier Transportation (BT) remains committed to February 2019 for public authorisation of software. However, given BT's priority on Stage 3 software and the risks in securing authorisation for driver training, the central case for Stage 2 Phase 2 remains May 2019.

Howard Smith confirmed that the date for Stage 2 Phase 2 will become clearer through October and November 2018 as further progress is made on Stage 3.

## **3. Remedial Action Plan**

Chris Sexton introduced the Remedial Action Plan, noting that it contains four sections; development of a revised Master Operational Handover Schedule (MOHS); cost and commercial; business plan and management structure; and handover. These sections were taken in turn:

### **Development of a revised Master Operational Handover Schedule**

Chris Sexton noted that the Remedial Action Plan sets out the plan for preparing the revised MOHS. An update to the revised MOHS will be taken to the CRL Board on 11 October and then to the October Sponsor Board.

David Hughes commented that providing the revised MOHS, on which the revised cost forecast would depend, for the October Sponsor Board would allow limited time for Sponsors to understand and agree how the additional cost would be funded.

It was highlighted that a critical issue from the delay will be for ATC Joint Venture to apply to the Office of Rail and Road (ORR) for a new exemption from ROGS (the Railways and Other Guided Transport Systems (Safety) Regulations 2006). The current exemption runs out at the end of April 2019. The ORR has indicated that this would be acceptable.

Chris Sexton summarised that a series of entry criteria has been established in order to optimise the start date for the 5/2 dynamic testing period (consisting of 5 days of testing and 2 days of maintenance and completion of outstanding works). CRL has set up a readiness review for 21 September 2018 to assess the project against the entry criteria and to determine whether 5/2 dynamic testing could start on 22 October 2018 as planned. The review will have an independent chair to avoid optimism bias. Chris Sexton highlighted that CRL is not expecting the readiness review to conclude that dynamic testing would be able to start on 22 October but, based on the current rate of progress from suppliers, is more likely to start towards the second half of November. Chris Sexton added that CRL will be better informed after the review tomorrow.

Chris Sexton provided an overview of station dates for Tier One Substantial Demobilisation (TOSD), staged completion (when stations can be brought into service) and handover (when all works are essentially complete and assured). Graham Stockbridge noted that staged completion at Bond Street has been delayed from December 2018 to April 2019 and that such trends should be avoided. It was agreed that Sponsors could support CRL by continuing to collectively exerting pressure on the leadership teams of key contractors

(including BT, Siemens and Alstom) on the importance of maintaining schedule (**Action 97b/02**).

Chris Sexton added that further pressures exist on the availability of testers for SCADA and radio systems. Siemens, with support from CRL, are undertaking a global recruitment campaign for additional testers. Ruth Hannant asked whether there is anything Sponsors can do to support such as speaking to Network Rail to see if they have any resource that could be drawn upon. It was agreed that DfT would discuss this with Network Rail (**Action 97b/03**).

Chris Sexton noted that whilst four passes of software cycles have been assumed for dynamic testing, the time covered by these cycles will be the critical factor, notably the amount of 'fixing' rather than 'testing' time and the suppliers' capability of doing this. It was noted that four passes for the Copenhagen system took a year whereas CRL has five months for dynamic testing. Howard Smith highlighted that there are differences between CRL and the Copenhagen system, e.g. whilst CRL has to deal with three signalling systems, Copenhagen suffered delays from regulatory approvals.

Matthew Lodge noted that it will be important to understand the implications of delays to Stage 3 on Stages 4 and 5. Sponsors will also need to understand the potential implications of the Stage 5a option (Elizabeth line services taking over Paddington to Reading services from Paddington High Level) including on platform capacity and Great Western Railway. Ruth Hannant asked CRL to provide a proposal on Stage 5a by mid-October (**Action 97b/04**). It was highlighted that flexing away from the normal timetable change process to accommodate alternative options would not be possible.

Ruth Hannant concluded that whilst Sponsors [REDACTED], a realistic programme is needed for Sponsors. Simon Kilonback added that this information is vital for business planning and budgeting purposes, particularly in the context of the current funding position. It was agreed that CRL would complete a strategic risk assessment of the schedule, including the potential financial implications (**Action 97b/05**).

### **Costs and commercial**

Mathew Duncan introduced the costs section of the Remedial Action Plan, noting that the reported costs were the same as those presented by Paul Grammer at Sponsor Board on 3 September 2018. Mathew Duncan noted that CRL has assumed that the additional £300m committed by Sponsors (in the letter dated 9 July 2018 from Ruth Hannant and Polly Payne) would be available. However, it was highlighted that the £300m had been committed over a 2 year period and to a different set of assumptions than those currently being presented and so could not be relied upon to be provided. [REDACTED] confirmed that DfT had made its first payment (of £60m) and would make its second payment of £65m by the end of October as per the payment profile agreed with TfL (making £125m of additional funding this financial year). [REDACTED] confirmed to check whether there is scope to bring the second payment forward (**Action 97b/06**). Sponsors agreed to discuss the provision of the additional £300m further outside of the meeting (**Action 97b/07**).

Mathew Duncan noted that it is difficult to know exactly when the available funding would be depleted given the commitments that CRL has entered into. However, in broad terms and assuming provision of the additional £300m, funds are likely to be depleted towards the end of the calendar year.

Mathew Duncan summarised the cost position noting that £823m (at P95) of additional funding would be required above Intervention Point 2 and this would assume a September 2019 opening date for Stage 3. It was further clarified that incorporating recommendations from the Ian Rannachan report would add an additional £125m to this (at P95) figure. David Hughes highlighted that these figures do not incorporate revenue losses from the delay to services.

It was agreed that these figures represent a serious situation for CRL and Sponsors. Simon Kilonback requested that the strategic risk assessment referred to under the MOHS section of the Remedial Action Plan should include a clear articulation of the pessimistic view of costs (**Action 97b/05**). This will allow Sponsors to understand the risks and potential financial impacts of specific events.

Simon Adams noted that KPMG are due to start on the cost and commercial and governance reviews commissioned by Sponsors.

### **Business plan**

Chris Sexton introduced the business plan section of the Remedial Action Plan. Ruth Hannant questioned whether the business plan appropriately reflects where the project currently is given the delays, particularly in terms of the finance function. Chris Sexton responded that CRL is not proposing significant changes to the current structure in terms of the programme, engineering, assurance, safety system and quality teams. For the Finance team, Mathew Duncan is leaving on 9 November 2018 and CRL are identifying the person to fill that role in addition to the support they will need. The Commercial team is a key area of importance and Paul Grammer is due to stay until the end of 2018. Simon Kilonback noted that it will be important to ensure that the remaining commercial managers have a suitable QS background to support contract close-out.

### **Handover**

Chris Sexton summarised that there were no significant changes proposed to the safety case and handover process.

### **4. AOB**

No other business was raised by attendees.

### **Action Tracker:**

<b>No.</b>	<b>Action</b>	<b>Responsible</b>	<b>Target and Update</b>
97b/01	Update to be provided from ExComm's discussion on the On Network Works Enhanced Stations.	Matthew Lodge	October Sponsor Board
97b/02	Sponsors to collectively exert pressure on the leadership teams of key contractors on the importance of delivering against schedule.	Sponsors	Ongoing; messages are being reiterated at relevant meetings
97b/03	DfT to speak to Network Rail about the availability of testers to support Siemens' resourcing situation.	DfT	Ongoing; messages are being



No.	Action	Responsible	Target and Update
			reiterated at relevant meetings
97b/04	CRL to provide a proposal on Stage 5a by mid October.	CRL	Mid-October
97b/05	CRL to complete a strategic risk assessment of the programme. This is to include a clear articulation of the pessimistic view of costs.	CRL	Complete – Remedial Action Plan update (2 October)
97b/06	DfT to check whether the second instalment of £65m can be brought forward from the end of October.	[REDACTED]	Complete – payment has been made
97b/06	Sponsors to discuss provision of the additional £300m of funding to CRL.	Sponsors	Complete – additional £300m has been provided

## CROSSRAIL SPONSOR BOARD MINUTES NO.96B

### DRAFT MINUTES OF MEETING HELD ON

Monday 3<sup>rd</sup> September 2018, 13.30-15.30

Venue: St James' Room, 11<sup>th</sup> Floor (11B2), TfL - Palestra Office

#### Sponsor Board Members

Ruth Hannant*	Chair, DfT Director General of Rail
David Hughes*	TfL, Director of Strategy & Network Development
Matthew Lodge*	DfT, Director for Major Rail Projects
Simon Kilonback*	TfL, Chief Finance Officer

#### In attendance

Graham Stockbridge	DfT, Project Director
[REDACTED]	DfT, Crossrail Deputy Project Director
Simon Adams	Head of Joint Sponsor Team (JST)
[REDACTED]	JST, Secretariat

#### By invitation

Robin Wilkin	Project Representative
[REDACTED]	JST
Simon Wright	Crossrail Limited (CRL), Chief Executive and Programme Director
Chris Sexton	CRL, Technical Director
Howard Smith	CRL, Operations Director
Jeremy Bates	CRL, Head of Integration
Matthew White	CRL, Surface Director
Paul Grammer	CRL, Commercial Director
Lucy Findlay	CRL, Chief of Staff

#### Apologies

Mathew Duncan	CRL, Finance Director
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(\* Voting Members)

#### 1. Minutes and Actions of Meeting 95b

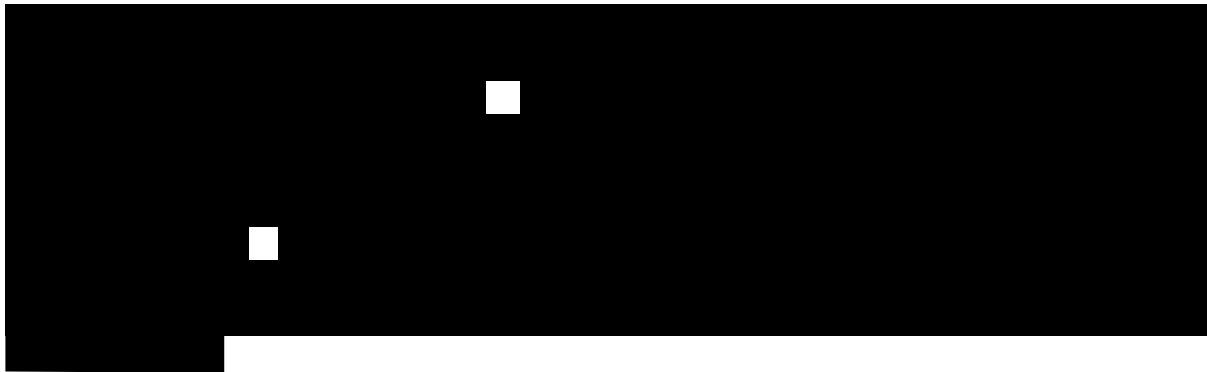
The minutes of the last meeting, held on 26<sup>th</sup> July, were agreed without alteration.

The actions were covered as follows:

- 95b/01:** An update on Stage 2 Phase 2 was provided in Item 2.
- 95b/02:** Sponsor Board was moved from 29<sup>th</sup> August to 3<sup>rd</sup> September to follow after the CRL Board.

## **2. Readiness for Stage 2 Phase 2**

Howard Smith provided an update on Stage 2 Phase 2 Readiness, noting that Bombardier Transportation (BT) had re-submitted a programme indicating public authorisation of software by 13<sup>th</sup> February 2018. A key risk associated with this programme was around securing the authorisation for driver training towards the end of this year. In addition, BT's priority is on Stage 3 software which may impact on the delivery of the Stage 2 Phase 2 programme. Howard Smith suggested that the central case for Stage 2 Phase 2 is now May 2019.



## **3. Checkpoint 2/Schedule Review for Stage 3**

Simon Wright noted that CRL issued an Adverse Event Notice on 30<sup>th</sup> August 2018 notifying Sponsors that Stage 3 services would not be introduced in December 2018 as planned. Sponsors reflected on this and expressed their disappointment. Simon Wright added that CRL were preparing a Remedial Action Plan in response to the Adverse Event Notice. It was agreed that the JST would liaise with Lucy Findlay on the contents of the Remedial Action Plan and for it to be provided in advance of Sponsor Board on 20<sup>th</sup> September 2018 (**Action 96b/02**).

Jeremy Bates ran through the Checkpoint 2 slides noting that this information was presented to the CRL Board on 29<sup>th</sup> August. It was highlighted that two critical paths exist; finishing routeway construction to optimise Dynamic Testing and station handover process to complete periods of Trial Running and Trial Operations.

**Routeway construction:** In terms of the critical systems for the routeway, Jeremy Bates noted that CRL is still targeting 22<sup>nd</sup> October, although highlighted that this could slip to 5<sup>th</sup> November (especially for lighting, low-voltage and drainage contracts). Whilst CRL remain positive about the achievability of this date, it was highlighted that the situation is dynamic and risks remain, particularly around completing Installation Release Notes (IRNs) and associated paperwork.

Jeremy Bates summarised that the entry criteria for the 5/2 Dynamic Testing period (consisting of 5 days of Testing and 2 days of maintenance and completion of outstanding works) will include a review of Siemens and BT readiness. David Hughes asked whether the entry criteria for Dynamic Testing in the CRL scenarios were the same as those considered in the first stage of the Independent Schedule Review. Simon Wright confirmed that they were the same criteria but that the Independent Review delayed the start of Dynamic Testing to de-risk the four Dynamic Test passes. This reduces the likelihood of the need for a fifth Dynamic Test pass (although time is also allowed for this eventuality in the Independent Schedule Review).

Simon Wright clarified that T-minus countdown meetings will be held where a decision is taken to start Dynamic Testing one month in advance.

Simon Wright also noted that a new target date of 15<sup>th</sup> April has been set to commence Trial Running. Chris Sexton highlighted that CRL has emphasised the urgency that still applies to the programme in communications to routeway contractors and this has been understood with senior contractor leaders.

Simon Wright highlighted that a further Great Eastern and Great Western transition window will be required as part of the proposed Dynamic Testing critical path. Whilst this has not yet been secured, CRL is within industry timeframes to apply for these and constructive conversations have begun with stakeholders.

**Station handover:** Jeremy Bates highlighted that the objectives for station handover are to substantially demobilise Tier 1 contractors as soon as works are complete; to transfer stations to the Infrastructure Managers to enable them to start their familiarisation process; and to complete final handover once all assurance activities have been undertaken. Simon Adams questioned how contractors are being incentivised to demobilise and Simon Wright noted that the final account would be based on a lump sum which means it is in the contractors' interest to finish as quickly as possible.

Simon Wright updated on the software challenges, noting that a new version is being tested at Melton to get through 29 tests.

Ruth Hannant questioned CRL of their view of the first stage of the Independent Schedule Review. Simon Wright responded that it is a prudent view that considers a conservative range of dates. Whilst CRL's recommended schedule for Stage 3 opening is autumn 2019, it was noted that Sponsors and CRL will need to agree an exact date and that it was right not to commit to a date until there is sufficient reliability and confidence around its deliverability. Ruth Hannant emphasised that once the date is agreed, a Change Notice will need to be issued by CRL to Sponsors (**Action 96b/03**).

#### **4. Implications for remaining Stages (Stages 4 and 5)**

Howard Smith noted that further work needs to be done to clarify the programme for Stages 4 and 5 opening in light of the recommended schedule to open Stage 3 in autumn 2019. Howard Smith added that he has spoken to Mark Hopwood at Great Western Rail who indicated that he would need notice to recruit drivers if Stage 5 is delayed beyond December 2019.

Howard Smith added that MTR is keen to protect the blockade at Liverpool Street planned for August 2019. This blockade aims to convert platforms 16-18 at Liverpool Street into two platforms that are capable of taking longer trains to provide resilience for potential issues or disruption to services.

#### **5. Cost implications**

Paul Grammer summarised the cost implications of the delays to Stage 3 opening. It was emphasised that the costs presented are indicative at this stage and require review and assurance. Following this further work, the costs will be formalised in Period 6.

It was noted that there is an increase in the cash requirement for this financial year (with an estimated increase of £307 million) with the additional funding running out in Period 10. Simon Kilonback asked for the reasons behind this and Paul Grammer responded that it was in part due to station and system works extending. Sponsors highlighted that a more detailed evidence base should be provided by CRL on the cost estimates and CRL agreed to come back to Sponsors with a detailed explanation on cash forecasts (**Action 96b/04**).

Graham Stockbridge asked about the major risks associated with the cost estimates. Simon Wright noted that CRL could participate in a workshop with Sponsors to look at the cost risks, opportunities and challenges. Simon Adams agreed to liaise with Paul Grammer and run through the data and assumptions as a priority and then consider next steps (**Action 96b/05**).

Ruth Hannant noted Sponsors' disappointment in the progress that has been made on enhanced reporting and the need for CRL to give Sponsors earlier visibility of potential cost pressures.

## **6. On Network Works Enhanced Stations**

Matthew White introduced the Surface West Stations paper and summarised the two delivery options for the six enhanced western stations. [REDACTED]

Matthew White highlighted that Option A, which would deliver the full scope of works and identifies potential sources of additional funding, would be the most cost-effective solution. Option B prioritises specific works (based on criteria including capacity, revenue protection and step-free benefits) in line with the current budget while additional funding is secured for the remaining works.

Howard Smith noted that some of the stations would need to be re-built for capacity purposes and others to provide step-free access. David Hughes highlighted that a set of requirements has been agreed for the stations which needs to be delivered. Simon Kilonback added that given the commitment that's been made to provide step-free access, it would be difficult to open the railway without it. Ruth Hannant agreed that safety and access requirements should be priorities and questioned whether all works are needed in light of the wider funding pressures on the project overall.

Chris Sexton highlighted that the current designs are consented schemes and so material changes would require new consents from local authorities. Seeking planning consent for revised schemes could import reputational risks and delay to the programme. There would also be risk that planning consent wouldn't be granted given the process that has already been gone through for some of the station plans.

Matthew White added that the cost increase is due to a condensed schedule, higher access costs and different market appetite than that that was assumed, rather than the design driving costs.

Ruth Hannant noted that the paper which sets out potential sources of funding to cover the shortfall has not yet gone to Network Rail's Portfolio Board. It was agreed that that should be the next step (**Action 96b/06**).

## 7. AOB

No other business was raised by attendees.

### Action Tracker:

No.	Action	Responsible	Target and Update
96b/01	The note setting out the remaining issues to be agreed between DfT, TfL and HAL on the Tripartite Agreement to be updated and circulated to Sponsors before the next Sponsor Board.	██████████	20 September 2018
96b/02	The JST to liaise with Lucy Findlay on the contents of the Remedial Action Plan and for it to be provided in advance of the next Sponsor Board.	Simon Adams	Complete
96b/03	CRL to issue a Change Notice to Sponsors once the proposed date for Stage 3 opening has been agreed.	CRL	To be determined
96b/04	CRL to provide an evidence base for the cost estimates and cash forecasts.	CRL	20 September 2018
96b/05	Simon Adams to liaise with Paul Grammer to understand the data and assumptions underpinning the cost estimates and cash forecasts.	Simon Adams	Complete
96b/06	The paper on On Network Works Enhanced Stations to be presented at Portfolio Board on 13 September 2018.	Matthew White and Colin Prime	Complete

## CROSSRAIL SPONSOR BOARD MINUTES NO.95b

### DRAFT MINUTES OF MEETING HELD ON

Thursday 26<sup>th</sup> July, 2018, 10.15-12.00

Venue: Department for Transport, Great Minster House, Floor 3, Room 3/23

#### Sponsor Board Members

Ruth Hannant*	Chair, DfT Director General of Rail
David Hughes*	TfL, Director of Strategy & Network Development
Matt Lodge*	DfT, Director for Major Rail Projects
Emanuela Cernoia-Russo**	TfL, Finance Director

#### In attendance

[REDACTED]	DfT, Crossrail Deputy Project Director
Simon Adams	Head of Joint Sponsor Team (JST)
[REDACTED]	JST, Secretariat

#### By invitation:

Robin Wilkin	Project Representative
Simon Wright	Crossrail Limited (CRL), Chief Executive and Programme Director
Howard Smith	CRL, Operations Director
Mathew Duncan	CRL, Finance Director
Jeremy Bates	CRL, Head of Integration
Lucy Findlay	CRL, Chief of Staff
[REDACTED]	DfT Sponsorship Team
Richard Zavitz	JST

#### Apologies:

Simon Kilonback*	TfL, Chief Financial Officer
Graham Stockbridge	DfT, Project Director
Chris Sexton	CRL, Technical Director

(\* Voting Members)

(\*\* Alternate Voting Member)

### **1. Minutes and Actions of Meeting 94b**

The minutes of the last meeting, held on 25<sup>th</sup> June, were agreed without alteration.

The actions were covered as follows:

- 94b/01:** The Chair of the Crossrail Sponsor Board has written to CRL to confirm the provision of additional funding.
- 94b/02:** Mathew Duncan and Emanuela Cernoia-Russo have met to discuss how cash forecasting would be provided by CRL.

- 94b/03:** The Chair of the Crossrail Sponsor Board has written to CRL confirming the receipt of SACR19. The letter included JST's commentary against possible areas of Sponsor support for CRL.
- 94b/04:** JST has presented an updated method for undertaking a lessons learned cost review in Part A of Sponsor Board (Item 3). This sets out an approach for joint working between the JST, CRL and P-Rep. Ruth Hannant emphasised to CRL that a collegiate approach between all organisations should be followed
- 94b/05:** CRL will present in the July Sponsor Board on the schedule and options under consideration.
- 94b/06:** 'Resourcing' will be discussed in Item 4 of Part B of Sponsor Board.

## **2. Stage 3 Readiness and Pre-Checkpoint 2 discussion**

Simon Wright summarised a number of challenges CRL are experiencing that are impacting on schedule, including an alert that's recently been received from Schneider related to faults in their equipment (which could delay energisation of low-voltage systems in stations); modelling of some attenuators on the ventilation system which predict oscillation; and specific challenges on stations. Simon highlighted that some of the production quality issues have only emerged recently and the focus needs to be on rectifying these issues.

██████████ asked whether CRL will be ready for the Great Western Main Line (GWML) transition testing as it's flagged as red in their Readiness Slides. Simon Wright noted that they are ready for the August transition testing on the Great Eastern Main Line (GEML) and are preparing for the tests on the GWML in September. It was also highlighted that the Great Eastern tests are important in their own right but they will also serve as a rehearsal for the tests on the Great Western. Simon Wright added that Test Windows 7-9 in July and August will focus on preparing for transition activities to ensure they are as successful as possible.

Jeremy Bates explained that the schedule was being reviewed for Stage 3 opening and that options were being considered. It was emphasised that this work is indicative at this stage.

Sponsors raised a number of points for CRL to consider in relation to a revised schedule and options under consideration.

David Hughes noted that station completions are key to containing potential cost increases. Matthew Lodge asked what impact any revised schedule would have on other operators. Simon Wright responded that CRL are mindful of this and are considering their options. Ruth Hannant questioned whether any schedule changes would impact on rail timetabling including the train paths that are being bid for. Ruth also highlighted the need for any review to be based on realistic assumptions.

Jeremy Bates noted that the current assumption is that Stage 2 Phase 2 opens in February 2019. However, this is dependent on CRL receiving a timetable from Bombardier Transportation which is due in the next week. CRL to update Sponsors at the next Weekly call on the feasibility of delivering Stage 2 Phase 2 in February 2019 (**Action 95b/01**).

Simon Wright advised that further work is required to understand in more detail the feasibility of the options and their potential implications. This will be discussed at the next CRL Board on 29<sup>th</sup> August 2018 and will be formally presented at the next Sponsor Board. Ruth



Hannant noted that the next Sponsor Board is being rescheduled for 7<sup>th</sup> September 2018 although the Board Secretariat is looking to bring this Board earlier (**Action 95b/02**). **Post-meeting note:** the next Sponsor Board has been arranged for 3<sup>rd</sup> September 2018.

### **3. Cost and cash forecasting**

Mathew Duncan presented on the Period 3 cost forecast. The Anticipated Final Crossrail Direct Costs (AFCDC) had increased by £87m in the period and the overall risk allowance had increased by £71m to £249m. CRL noted that the AFCDC included £162m of potential unresolved trends drawdown. Mathew highlighted that schedule prolongation, particularly across key stations, and cost pressures on major contracts has contributed to the increase in risk allowance in Period 3.

Mathew Duncan also presented on the Period 3 cash forecasts. He noted that money will need to be transferred to the Sponsor Funding Account (SFA) in October. Emanuela Cernoia-Russo confirmed that funding will be provided in time. Mathew highlighted that the CRL forecast closing cash balance showed a need for a further £230m by the end of the 2018/2019 financial year (compared to £167m that was reported in Period 2).

Mathew updated Sponsors that CRL have undertaken a review into the £28m variance in CRL's forecast cash requirement between CRL's reported Intervention Point (IP) 2 breach and the SFA forecast in Crossrail's Investment Model (CIM). This review supports the view that the IP2 breach figure is correct and the SFA forecast should be adjusted. This means that there is not a variance and the cash requirement of £230m by the end of 2018/2019 financial year is not affected. **Post-meeting note:** A note will be sent by CRL to the JST to agree to update the model.

Mathew updated Sponsors that Network Rail remain within their allocated funding. Tender responses have been received by Network Rail for the Package 3 enhanced station works and Network Rail are currently evaluating responses. CRL have been finalising pedestrian flows and Mathew noted that some elements of the existing Network Rail stations will become critical if not completed by Stage 5 opening. Matthew Lodge commented that Sponsors may need to consider which elements to prioritise.

### **4. Resourcing**

Simon Wright highlighted that there is a need to review the CRL resource plan based on the schedule review of Stage 3 opening. It was noted at the June Sponsor Board that the Integration Team has been extended to remain in place to manage stage opening up to the start of Stage 5. Simon Wright noted the need to supplement the testing and commissioning side for longer. However, the intention to move the focus of the organisation from construction to close-out from October 2018 remains.

### **5. AOB**

No other business was raised by attendees.

**Action Tracker:**

No.	Action	Responsible	Target and Update
95b/01	CRL to update Sponsors at the next Weekly call on the feasibility of delivering Stage 2 Phase 2 in February 2019.	CRL	September Sponsor Board
95b/02	August Sponsor Board to be rescheduled to follow as closely as possible to the CRL Board on 29 <sup>th</sup> August.	[REDACTED]	Complete

## CROSSRAIL SPONSOR BOARD MINUTES No.94b

### MINUTES OF MEETING HELD ON

Monday 25<sup>th</sup> June 2018, 12.00-13.30

Venue: CRL, 25 Canada Square, Floor 28

#### Present

Polly Payne*	Chair, DfT Director General of Rail
David Hughes*	TfL, Director of Strategy & Network Development
Matt Lodge*	DfT, Director for Major Rail Projects
Emanuela Cernoia-Russo**	TfL, Finance Director

Simon Adams	Head of Joint Sponsor Team (JST)
[REDACTED]	JST, Secretariat

#### By invitation:

Graham Stockbridge	DfT, Crossrail Project Director
[REDACTED]	DfT, Crossrail Deputy Project Director
Robin Wilkin	Project Representative
Tom Wilne	Jacobs, Head of independent cost review
[REDACTED]	JST
[REDACTED]	JST
Simon Wright	Crossrail Limited (CRL), Chief Executive and Programme Director
Chris Sexton	CRL, Technical Director
Howard Smith	CRL, Operations Director
Mathew Duncan	CRL, Finance Director
Lucy Findlay	CRL, Chief of Staff

#### Apologies

Simon Kilonback*	TfL, Chief Finance Officer
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(\* Voting Members)

(\*\* Alternate Voting Member)

### 1. Minutes and Actions of Meeting 93b

The minutes of the last meeting, held on the 18<sup>th</sup> May, were agreed without alteration.

The actions were covered as follows:

**93b/01:** TfL have written to CRL to confirm that in its view the existing letter of comfort was sufficient. The issue was further discussed in Item 2.

**93b/02:** CRL and Sponsors continue to liaise on the critical transition/fringe testing needed in advance of Trial Running. On the Great Western possessions Howard Smith said that an industry call was occurring on 25<sup>th</sup> June between CRL, DfT, Network Rail (NR) Route, NR System Operator and Great Western

Railway (GWR). On the Great Eastern possessions Howard believed the operators and route were content but engagement was needed with the NR System Operator. *Post-meeting note: Following the industry call the following solution has been proposed for the Great Western: a reduced scope of testing in Weeks 20-25 (11 August – 21 September) which would be managed through a Control to Control procedure in addition to a further possession in November which would be planned through the normal rail planning process.*

Polly Payne noted that the Secretary of State had emphasised the importance of key events like Reading Festival being unaffected. Howard Smith agreed to notify Polly. *Post-meeting note: Howard Smith raised the issue with Mark Hopwood, GWR who confirmed there shouldn't be an issue as most attendees travel on the Bank Holiday Monday*

**93b/03:** CRL circulated a list of the activities extending beyond completion and the low probability events to the JST. The JST provided comments on the low probability events.

**93b/04:** Information was provided by CRL, NR and TfL on the Transition Date proposal. [REDACTED]

**93b/05:** The JST met CRL to review the processes and planned evidence for Substantial Completion certificates. It was agreed that the existing documentation could be used for all evidence for Elements being presented by CRL for Stage 3. Timescales for Stage 1 and 2 Elements were being reviewed.

**93b/06:** Simon Wright presented in Item 6 on the schedule changes to Trial Running and Trial Operations and the revised Checkpoints.

## **2. Funding update and agreement**

Sponsors noted the funding deal which would provide an additional £300m of further funding. Sponsors intended to allocate an additional £211m to CRL in accordance with the Semi-Annual Construction Report's (SACR) 19 cost forecast, (the Anticipated Final Crossrail Direct Costs, AFDCDC). The intention was to publicly announce the additional £300m in the annual Crossrail Written Ministerial Statement (WMS). Sponsors and CRL agreed on the need for all organisations to be aligned in their press responses and noted the collective work of the communications teams in this area.

Mathew Duncan asked about the Tail scenarios and what would happen if the cost outturn increased and required additional funding in excess of £300m. Sponsors said they had agreed how funding above £300m would be addressed, but emphasised that CRL must do all it can to manage costs within the current forecast (£211m above Intervention Point (IP) 2). Sponsors noted that their intention, in providing additional funding, was not to amend IP2 and for the TfL 'Put' and DfT 'Call' options to remain (although neither Sponsor currently intended to exercise their respective option). Sponsors noted that the JST would write to CRL confirming the provision of additional funding and setting the expectations of Sponsors, including cost and cash-management reporting (**Action 94b/01**).

Mathew Duncan asked whether 'scope change' had been considered in the rationale for increased costs. Sponsors reiterated their view that this had been fully considered and it would not have helped solve the funding issue.

Simon Wright asked how the additional funding would be provided to CRL. Simon Adams said that the additional funding would be held in a TfL bank account and released to CRL

based on cash forecasts which it would be asked to provide regularly to TfL and DfT. **Action 94b/02:** CRL & JST to discuss how cash forecasting would be provided by CRL, noting that Sponsors will need early visibility of any changes (particularly any in-year changes) in CRL's cash requirements.

Mathew Duncan noted that CRL's accounts had been approved subject to clarification of its financial position. At the request of its Board CRL [REDACTED]

[REDACTED] David Hughes confirmed this would follow the funding agreement. Mathew Duncan said the CRL Board had asked for confirmation that CRL remained a subsidiary of TfL through the issue of a comfort letter and an acknowledgement from DfT that they were comfortable with TfL issuing that letter. Sponsors said they would aim to provide this in the JST funding letter (Action 94b/01).

### **3. Cost update**

Mathew Duncan presented on the Period 2 costs forecast. The AFDCD had increased by £0.2m in the period but a series of trends had been agreed which had been converted into cost to go, increasing the cost to go to £402m. Following the conversion of these trends the overall risk allowance had reduced to £178m. CRL was aware of a further £106m of unresolved trends, which could further increase the cost to go, once CRL had finished reviewing these.

Mathew presented on the Period 2 cash forecasts. CRL were forecasting to need additional cash funding by the end of September, ahead of Period 8. Their forecast closing cash balance showed a need for a further £167m by the end of the 2018/2019 financial year.

### **4. Semi Annual Construction Report (SACR) 19**

Simon Wright presented on SACR19 and noted the items CRL had requested Sponsor support (set-out in the Part A paper; SB-05). David Hughes noted that TfL would not be exercising the TfL 'Put' option. The JST would write to CRL and confirm this and address the areas of Sponsor support (**Action 94b/03**).

Polly Payne noted that there had been cost increases of c.£845m in last three SACRs and that, whilst Sponsors did not want to distract CRL from delivering the programme, it would be important to consider the reasons for these increases and the lessons for future programmes. David Hughes agreed and Matt Lodge noted this review might consider whether the programme's governance was effective for managing these cost increases especially when they had emerged near completion of the project. Simon Wright said that, whilst he appreciated Sponsors' commitment to avoiding impacting upon CRL's delivery, it would be important to address this work before CRL fully demobilises. Sponsors agreed for the JST to work with P-Rep and CRL to develop a proposal for a lessons learned cost review which did not distract from delivering the remainder of the project (**Action 94b/04**).

## **5. Stage 2**

Howard Smith noted that since Stage 2 Phase 1 commenced in May 2018, the public performance measure<sup>1</sup> (PPM) had been 93% (with the exception of the interterminal shuttle which had been out of service for some days because only 4 of the 5 of the Heathrow connect trains (the class 360s) trains were provided).

On Phase 2, Bombardier Transportation (BT) was holding its dates for the release of European Control Train System (ETCS) enabled train software for driver training in October and authorisation for it to be placed into passenger service in November 2018. However, there had been pressure on those dates from software developments in the central section. Mass Transit Railway Crossrail (MTRC) had developed a driver training plan showing that Phase 2 could commence on 3<sup>rd</sup> March 2019 if driver training started in January. Howard was going to challenge them to bring this programme forward.

Polly Payne asked about CRL's confidence in February 2019. Howard Smith said his confidence was quite high as BT had held their dates. Graham Stockbridge noted that confirmation of the [REDACTED] is needed by the end of the financial year and said the Department would check what it needed to accrue the payment. Howard Smith noted that he had started discussions with Heathrow Airport Limited on extending the class 360s beyond December 2018.

## **6. Stage 3**

Simon Wright updated Sponsors on progress for Stage 3 readiness. CRL were 93% complete versus a plan of 94.7% (for the whole of the Crossrail programme). Nearly all of the cabling installation was complete and the overhead lines were complete and energised. There had been great work between CRL, LU and NR to complete the short-circuit testing in order to energise (with traction power) and start dynamic testing across the whole central section on 11<sup>th</sup> June.

Simon Wright presented on the revised schedule which had been amended in order to provide more test windows. The test window approach was more efficient but the results from test window 4 were still mixed with work planned to take learnings into test window 5.

CRL had created three key milestones in the revised schedule. The first interim milestone was the start of pre-trial running under CRL construction rules on 12<sup>th</sup> September, with some construction activities continuing. On 1<sup>st</sup> October combined trials would start (the second interim milestone). Simon Wright noted that this period had been reduced by one month in duration (compared with the Master Operational Handover Schedule, MOHS 18). The third milestone was readiness for Elizabeth line services ahead of 9<sup>th</sup> December 2018.

Despite the increased testing windows (created by the schedule changes), there was (at the time of the meeting) insufficient test time for the amount of testing required. CRL was working with Siemens to identify whether reduced signalling scope could reduce the testing requirement. This work had so far determined that even if the scope was reduced the testing requirement would not be significantly reduced. Howard Smith noted that if the signalling scope was reduced for Stage 3, the full scope would need to be completed and tested when the railway was live ahead of Stages 4 and 5. CRL was reviewing how it could find sufficient testing time to deliver a reliable railway in December. Simon Wright said they

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<sup>1</sup> The measure of punctuality, based on the percentage of trains which arrive at their terminating station within 5 minutes (for London and South East services).

were considering whether to amend the testing windows to create more time. He emphasised that maximising time for construction was important for ensuring all construction was complete by 1<sup>st</sup> October to enable testing of it. This was the most cost-efficient approach as the majority of the expenditure was in the civils/construction and installation contracts.

The second 'checkpoint' or review point had been brought forward to July. This would involve a peer review session with some CRL Non-Executive Directors on 10<sup>th</sup> July, the CRL Board on 19<sup>th</sup> July and the Sponsor Board on 26<sup>th</sup> July. Sponsors asked CRL to provide information for this checkpoint on: confidence in December delivery, alternative options to December, including a delayed opening or a reduced frequency or partial opening (**Action 94b/05**). Simon Wright agreed and said CRL would first define what reliability was needed for Stage opening and then consider the probability of meeting this at different dates. He emphasised this was not an exact science but a forecast, which would include all programme aspects as far as possible within the time constraints.

Matt Lodge asked if CRL and Sponsors could consider the idea of alternative opening options such as opening the railway on weekdays and closing at weekends, opening only during off-peak times, or opening on the 9<sup>th</sup> December and then closing for further testing over the Christmas period. CRL confirmed that the railway was planned to be open over Christmas except for some public holiday days. Howard Smith noted that the challenges with partial opening options were that the most tested sections of the railway (i.e. between Abbey Wood and Canary Wharf) were furthest from the depot at Old Oak Common, meaning that getting trains to these sections to run the railway would be challenging. He also noted that it was important to ensure nothing was opened prematurely. Sponsors agreed but emphasised the importance of all alternative options being considered. Simon Wright noted that whilst CRL would consider all options, it could not pursue multiple options at the same time due to resource constraints. Chris Sexton emphasised that any change would impact upon the complex safety case adding complication and risk.

Polly Payne emphasised that after the July checkpoint Sponsors would need to consider how they inform the Secretary of State and Mayor, which might involve a meeting with Simon Wright and Sir Terry Morgan.

Finally, Polly Payne asked if CRL could confirm: i) that the Elizabeth line operator had everything they required from NR to run the Stage 3 Elizabeth line timetable, and; ii) that a delay to Stage 3 would not impact upon the wider network and national timetable.

*Post-meeting note: Howard Smith confirmed that: i) the December 2018 timetable offer is sufficient for the planned weekday service, and; ii) a delay to Stage 3 does not affect the national timetable (as the same paths are used whether the operator is testing, trialling or running passenger operations). However, if the operator tried to change to something completely different (such as opening Canary Wharf to Abbey Wood first for instance) that might not be the case as different paths might be needed.*

## **7. Stage 4 and 5 Readiness**

Howard Smith explained that the power supply upgrade remained the highest risk to Stage 4 opening. NR currently were not able to complete all the works in time and were currently modelling what power supply would be needed for Crossrail Stage 4 opening. If the power upgrades are needed for Stage 4 NR would need to expedite the works.

Howard noted that the delivery of ETCS between Heathrow and Paddington remains a risk to Stage 5 opening. He understood that NR were now talking to the Office of Rail and Road about not switching immediately to ETCS on the first day of Stage 5 to de-risk the stage opening.

Simon Wright updated Sponsors on the NR station upgrades in the West. Tender documents had been reissued by NR to the bidders of package 3 with a 4-week turnaround. Package 2 would follow this. Value engineering was being undertaken by NR and CRL and NR were considering how to transfer work to the enabling contractor Amey in order to achieve the critical December 2018 possessions. Simon noted CRL's concerns that the planned procurement of items in September was very close to December. He noted that Matt White (CRL Surface Director) was working closely with NR. Paul Grammar (CRL Commercial Director) had also been talking to NR about possible innovative procurement options. There had been no traction to date. Chris Sexton noted that there was insufficient time ahead of December 2019 to make any changes if they affect planning permission.

Simon Wright said CRL was still on track for delivering Plumstead depot as planned.

## **8. AOB**

Sponsors asked CRL if it had sufficient resource and the demobilisation resource remained appropriate given the schedule challenges. Simon Wright said CRL would be taking its Board through the close-out structure in July, which Chris Sexton had presented to the Sponsor Board in May. CRL continued to review its resource based on schedule changes but also had to consider this against its available accommodation and IT services. Simon said that if dynamic testing was changed CRL would review the resourcing arrangements. CRL noted that Matt White had been extended from the end of September to end of February 2019.

Polly Payne asked whether the integration team were still planning to demobilise at the end of August. CRL clarified that it had now extended the integration team so that it would remain in place to manage stage opening up to the start of Stage 5. Polly Payne also asked if CRL were holding a CRL Board meeting in August. Simon Wright said there was no planned meeting but one could be held if required.

Sponsors asked for resourcing to be added to the next Sponsor Board agenda (**Action 94b/06**).



**Action Tracker:**

No.	Action	Responsible	Target and Update
94b/01	JST would write to CRL confirming the provision of additional funding and setting the expectations of Sponsors, including cost and cash-management reporting.	[REDACTED]	Complete
94b/02	JST & CRL to discuss how cash forecasting would be provided by CRL, noting that Sponsors will need early visibility of any (particularly any in-year) changes in CRL's cash requirements.	Simon Adams & Mathew Duncan	July
94b/03	The JST would write to CRL and confirm receipt of SACR 19, that TfL would not be exercising the 'Put' option, and to address the areas of Sponsor support.	Andy Wallace	Complete
94b/04	JST would work with P-Rep and CRL to develop a proposal for a lessons learned cost review.	[REDACTED] and [REDACTED]	July
94b/05	CRL to provide information for the July checkpoint on confidence in December, alternative options to December, including a delayed opening or a reduced frequency or partial opening.	Simon Wright	July
94b/06	'Resourcing' to be added to the July Sponsor Board agenda.	[REDACTED]	Complete

## CROSSRAIL SPONSOR BOARD MINUTES NO.93b

### MINUTES OF MEETING HELD ON

Friday 18<sup>th</sup> May 2018 16:00-17:30

Venue: DfT, Great Minster House, 3<sup>rd</sup> Floor, 3/23

#### Present:

Polly Payne*	Chair, DfT Director General for Rail
Simon Kilonback*	TfL, Chief Financial Officer
David Hughes*	TfL, Director of Strategy & Network Development
Matt Lodge*	DfT Director for Major Rail Projects

Simon Adams	Head of Joint Sponsor Team (JST)
[REDACTED]	JST, Secretariat

#### By invitation

Graham Stockbridge	DfT, Crossrail Project Director
[REDACTED]	DfT Crossrail Deputy Project Director
Robin Wilkin	Project Representative
Tom Wilne	Jacobs, Head of independent cost review
[REDACTED]	JST
Simon Wright	CRL, Chief Executive and Programme Director
Chris Sexton	CRL, Technical Director
Howard Smith	CRL, Operations Director
Mathew Duncan	CRL, Finance Director
Lucy Findlay	CRL, Chief of Staff

(\* Voting Members)

### **1. Minutes and Actions of Meeting 92b**

The minutes of the last meeting, held on the 19<sup>th</sup> April, were agreed without alteration.

The actions were covered as follows:

**92b/01:** CRL presented in Item 2 on how the cost forecasts would be updated for future periodic and SACR reporting, on the revised cost scenarios and agreed with Sponsors for the high-impact and low probability events to be circulated via correspondence.

**92b/02:** Jacobs, as part of their cost review, worked with CRL to consider the revised upper end scenario to reflect the potential 'tail' of activities following December 2018. This was presented by CRL in Item 2.

**92b/03:** CRL wrote to Sponsors with a draft 'comfort statement' which would provide assurance to the CRL Board for Sponsors to consider. TfL Sponsors said that CRL's existing 'comfort letter' was sufficient and they would write to CRL to confirm this (**Action 93b/01**).

**92b/04:** TfL determined that discussions with contractors over the deferral of payments were **not** going to be pursued.

**92b/05:** CRL wrote to DfT on the challenges in securing access for transition/fringe testing.

DfT escalated this within NR and to GWR. This remained an ongoing issue and CRL agreed to keep Sponsors apprised on progress and the required support through the weekly calls (**Action 93b/02**).

## 2. Cost Update

Mathew Duncan presented on the Period 1 forecasts (the Anticipated Final Crossrail Direct Costs, AFCDC). The Period 1 cost forecast had not changed from the Period 13 forecast. The cash profile based on Period 1 and the scenario analysis showed CRL drawing down on the final £156m of the TfL contingency in Period 6 (end of August) and a cash deficit by Period 8 (October). The updated Period 1 cash profile showed a cash deficit of £180m-£250m by Period 13 (March 2019). Mathew Duncan flagged the uncertainty over whether £28m switched over from Cross London Rail Links (CLRL) to Crossrail Limited (CRL) at the start of the Crossrail programme. This would be discussed further by Mathew and Simon Adams outside the Sponsor Board.

Simon Kilonback noted that in agreeing the funding package Sponsors would provide the cash funding when it was required. This would require rolling cash forecasts by CRL and cash transfers from Sponsors.

David Hughes noted that the A3 scenario assumed CRL had to spend additional cash to hold the Master Operational Handover Schedule (MOHS) and asked to what extent all elements were included in the A3 scenario and P1 forecasts. Simon Wright said that the two approaches were different with the scenario-based analysis designed to inform Sponsors on the possible range of cost outturns whereas the forecasts provide CRL's assessment of the most likely outturn.

Mathew Duncan presented on the 'Tail' scenarios and CRL's proposed approach to future cost forecasting. CRL would forecast the AFCDC going forward only at a P50 level and measure this against the A2, A3, B3 and Tail scenarios. CRL proposed that the scenarios would not be updated in the future but used as measures against which to compare the forecasts.

The Tail scenarios, had been developed by CRL, and peer reviewed by Jacobs, to estimate the cost impact of activities extending beyond December 2018 with two ranges:

- Tail Scenario Range 1: c.£315m above IP2 (Intervention Point 2, the limit of current funding). This assumes that some activities are not completed by Trial Operations. This was most directly comparable with scenario A3 but with some additional factors to reflect these extended activities.
- Tail Scenario Range 2: c.£370m above IP2. Similar to Range 1 but with delayed completion leading to some activities extending into the live operations.

CRL agreed to circulate the list of activities extending beyond completion to the JST and to share the low probability events via correspondence (**Action 93b/03**). The items included the replacement of the temporary tunnel ventilation, delays to permanent power, delays to asset documentation and possible delays to urban realm works.

Sponsors asked what the most likely outturn was and noted that Terry Morgan had told the TfL Board that CRL would only request a further £211m of funding. CRL noted that although the current AFCDC remains their most likely forecast it would be prudent to fund to a higher forecast. Sponsors summarised the discussion by agreeing they would assume that it is

unlikely the cost outturn will be less than £211m (above IP2), it is likely to be between £211m and £315m (the Tail 1 scenario), and if there are significant schedule challenges it could be up to c£370m (the Tail 2 scenario) (Note: this does not include the uncertainty of the £28m pre-Sponsors Funding Account funding). Sponsors agreed with CRL that no further scenario analysis would be undertaken.

Graham Stockbridge asked about the Network Rail costs. Simon Wright said the Period 1 numbers had not changed. NR's negotiation with Costain (for works on the Great Eastern) was not yet resolved but was improving.

David Hughes noted that Sponsors had discussed CRL's proposal to change the Crossrail NR Protocol

### **3. Final Completion**

Chris Sexton presented on CRL's proposed approach to Final Completion of the Crossrail Programme which aligns with the Project Development Agreement (PDA) and had been discussed with the JST. The approach does not reproduce evidence but signposts existing evidence to ensure Sponsors have confidence that the PDA Criteria have been met.

Chris explained that the infrastructure was divided into 36 'Elements' and CRL would progressively demonstrate Substantial Completion for each Element. Final Completion would then occur after the final Element and when CRL had demonstrated that all remaining obligations under the PDA were met, which were essentially agreements and the close-out of all commercial contracts.

Chris noted that in the event that an Element was not Substantially Complete for Stage opening the operator can agree with Sponsors that it is safe to commence passenger services. The operator had written to the JST seeking agreement to commence Stage 2 Phase 1 and the JST (as agreed at the May Sponsor Board) had agreed to this subject to the operators having satisfied themselves that the railway is safe and reliable.

David Hughes noted the need to ensure the final completion process added value and did not become a bureaucratic exercise. Chris Sexton noted that it was fine from CRL's perspective as it was signposting existing evidence. Sponsors agreed that the JST would work with CRL to review the process and ensure there was nothing overly onerous which was not adding value. **(Action 93b/05).**

Graham Stockbridge asked CRL about Substantial Completion of Stage 1 Elements which had not yet been received. Chris Sexton noted that some of these Elements were not yet Substantially Complete but this has not affected the operation of the railway. As soon as each Element is Substantially Complete CRL will provide the JST with the certificates.

Chris Sexton presented on the close-out organisation. CRL continue to review the size of the organisation based on the activities remaining including the works CRL are doing and assuring. Some functions have already transitioned across to TfL (including parts of External Affairs, Audit and Land and Property) and this is monitored through the Integration

Steering Group, chaired by Howard Smith. All of the close-out organisation's staff have been notified and this organisation includes the:

- Chief Engineer
- Delivery organisation (covering On Network Works and the central section stations and systems)
- Commercial branch
- Finance branch

Graham Stockbridge asked if CRL had enough resource. Simon Wright said that there was a small handful of people who CRL were recruiting and they continue to review this on a regular basis.

Sponsors **agreed** to the process for Final Completion, as per paper SB93B-01.

#### 4. Stage 2

Phase 1: Howard Smith said everything was ready to commence Phase 1 on the 20<sup>th</sup> and 21<sup>st</sup> May. *Post-meeting note: The launch of Phase 1 occurred successfully and Howard Smith notified Sponsors accordingly.*

Phase 2: Howard noted Sponsors' request for a February start date to ensure DfT secure the [REDACTED]. The BT software date (for the release of an ETCS tested train) remained the same (mid-November). MTRC initially said it was too difficult to complete driver training and preparations by February but RfL were reviewing this with MTRC.

#### 5. Stage 3

Simon Wright updated Sponsors on progress for Stage 3 readiness. Westbourne Park Automatic Feeder Station had been energised and the overhead lines, throughout the central section, were due to be energised within a week.

The 2<sup>nd</sup> testing window had occurred on the previous weekend and had gone better than the first window. CRL remained "in the foothills of testing" with auto reversing not yet working but there was a detailed plan and spreadsheet mapping out the tests required.

On installation CRL was late on signalling systems (C620) and communications and control systems (C660) cables which was scheduled to be installed by the end of May.

CRL remained on schedule for dynamic testing in Zones 3&4 but this would not initially be under signalling control.

Simon Wright noted that CRL needs to look again at the Trial Running and Trial Operations dates due to the need for more dynamic testing windows, combined with delays with non-traction power and cable installation. It was likely that Trial Running would be delayed and there were detailed discussions occurring with the Operators and Infrastructure Managers. CRL would finalise this proposal with all stakeholders before communicating it. CRL would then update Sponsors at the next Sponsor Board, including on the revised Checkpoints (**Action 93b/06**).

Polly Payne asked if CRL still had confidence overall of delivering for December. Simon Wright said CRL was absolutely focussed on opening in December which was still achievable if everyone 'pulled their weight'.

Simon Wright updated Sponsors on stations. Bond Street remained the biggest challenge and Sir Terry Morgan was involved in day to day discussions with the contractors' Chairman. Progress had improved at other stations.

Howard Smith noted that it was vital to achieve the transition/fringe testing to get the trains into the central section for Trial Running (reflected in action 93b/02).

Matt Lodge noted that in a catch up with the ORR they had spoken about a delay in paperwork from June to September. Chris Sexton said he did not believe any submissions to the ORR were currently late. Matt Lodge said he would clarify this with the ORR.

## 6. AOB

N/A

### Action Tracker:

No.	Action	Responsible	Target
93b/01	TfL to write to CRL to confirm that CRL's existing 'comfort letter' was sufficient.	Simon Kilonback / David Hughes	Complete
93b/02	CRL to keep Sponsors apprised on progress and the required support on the transition/fringe testing through the weekly calls.	Simon Wright / Lucy Findlay	Ongoing
93b/03	CRL agreed to circulate the list of activities extending beyond completion to the JST and to share the low probability events via correspondence.	Mathew Duncan	June
93b/04	JST would obtain the necessary information from CRL on the Transition Date proposal.	Simon Adams and [REDACTED]	Complete and to be discussed in Part A
93b/05	Sponsors agreed that the JST would work with CRL to review the process and ensure there was nothing overly onerous and which was not adding value.	[REDACTED] & Patick tenHave	Complete: Process & evidence has been reviewed with CRL. Existing documentation can be used for all aspects.
93b/06	CRL would update Sponsors at the next Sponsor Board on changes to the Trial Running and Trial Operations dates and the revised Checkpoints.	Simon Wright	June

## CROSSRAIL SPONSOR BOARD MINUTES NO.92b

### MINUTES OF MEETING HELD ON

Thursday 19<sup>th</sup> April 2018 14:30-16:15

Venue: DfT, Great Minster House, 3<sup>rd</sup> Floor, 3/23

#### Present:

Polly Payne*	Chair, DfT Director General for Rail
David Hughes*	TfL, Director of Strategy & Network Development
Matt Lodge*	DfT, Director for Major Rail Projects

Simon Adams [REDACTED]	Head of Joint Sponsor Team (JST) Secretariat, JST
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#### By invitation

Emanuela Cernoia-Russo**	TfL, Finance Director
Graham Stockbridge	DfT, Project Director
Robin Wilkin [REDACTED]	Project Representative DfT, Deputy Head of Sponsorship Team
Simon Wright	CRL, Chief Executive and Programme Director
Howard Smith	CRL, Operations Director
Mathew Duncan	CRL, Finance Director
Lucy Findlay [REDACTED]	CRL, Chief of Staff JST
Richard Zavitz	JST

#### Apologies:

Simon Kilonback*	TfL, Chief Financial Officer
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(\* Voting Members)  
(\*\*Alternate Voting Member)

### **1. Minutes and Actions of Meeting 91b**

The minutes of the last meeting, held on the 22nd March, were agreed without alteration.

The actions were covered as follows:

- 91a/01:** Howard Smith updated Sponsors on Item 3, that Stage 2 Phase 1 confidence was high and that contingency arrangements with Great Western Railway (GWR) and MTRC (Mass Transit Railway – Crossrail) were not required.
- 91a/02:** The P-Rep's assessment of the Master Operational Handover Schedule (MOHS), as presented at the March Sponsor Board, had been shared with CRL.
- 91a/03&04:** CRL presented in Item 4 a 'roadmap' on the key decisions or checkpoints and a set of dashboards which could be used to monitor the key critical paths.
- 91a/05:** CRL agreed in Item 2 to update Sponsors on how the scenario-based cost analysis would be updated for reporting.

## 2. Cost Update

Mathew Duncan presented on the provisional Period 13 forecasts (the Anticipated Final Crossrail Direct Costs, AFCDC) which were due for approval at the CRL Board on 26<sup>th</sup> April. Mathew said that the costs had increased by £256m (at P50) due to movements in risks to reflect revised forecasts from individual contractors. Simon Wright noted that the revised costs reflect the revised MOHS and CRL's revised indirect costs. Mathew Duncan said the provisional Period 13 forecasts were between scenarios A1 and A2<sup>1</sup>.

Post-meeting note: On the 27<sup>th</sup> April weekly call CRL clarified that the final P80 and P95 Period 13 numbers were higher because an earlier version of the risk profile previously had been included. The final Period 13 numbers were:

- The P50 AFCDC £12,723m (P50) which exceeds IP2 by £211m.
- The P80 AFCDC is £12,790m which exceeds IP2 by £278m.
- The P95 AFCDC is £12,855m which exceeds IP2 by £343m.

Mathew Duncan noted that the Period 13 P95 number was similar to the B3 scenario (£344m) but the former was based on quantified risk assessments as opposed to the scenario-based approach. Mathew said that the Period 1 AFCDC will report against CRL's budget and the updated scenarios. Sponsors asked CRL to document how the cost forecasts will be updated for future periodic and SACR reporting and to update Sponsors on the revised cost scenarios and the high-impact / low probability events (**Action 92b/01**). Polly Payne explained that Sponsors had tasked Jacobs, as part of their cost review, to work with CRL to consider the revised upper end scenario which reflects the potential 'tail' of activities following December 2018 (**Action 92b/02**).

Mathew Duncan said that CRL were due to finalise a supplementary agreement with ATC, covering 'Systemwide' and 'Plumstead'. The 'Plumstead sidings' (C696) works were one of the few outstanding contracts to be let and CRL were therefore seeking Sponsors' approval before proceeding. Simon Wright said the agreement would create synergies between the interrelated works and would incentivise ATC to meet MOHS. Sponsors **AGREED** for CRL to enter into the supplementary agreement on this basis.

Mathew Duncan said that the CRL Board would need assurance that it had financial authority to cover its planned expenditure in advance of the CRL annual accounts close-out meeting in late June. Sponsors agreed to send an interim statement of assurance to CRL indicating their joint intention to resolve the funding pressures. CRL agreed to draft a statement which would provide assurance to the CRL Board at their 24 May meeting for Sponsors to consider (**Action 92b/03**).

David Hughes said that TfL were considering direct conversations with some Tier 1 contractors to consider the possibility of deferring CRL payments in order to delay the funding requirement. Simon Wright noted the importance of this not impacting upon the commercial discussions with [REDACTED]. David Hughes said the intention was for TfL to engage with [REDACTED] at a corporate level. Sponsors and CRL agreed that the head of the JST would

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<sup>1</sup> CRL's scenario-based cost analysis was presented at the February Sponsor Board. It included two different scenarios (scenario A, in which Stage opening is achieved; and scenario B, in which Stage opening is delayed by 3-12 months) with six different cost ranges (to account for different risks in each scenario). Scenario A1 assumed that work would proceed in-line with the revised MOHS and Scenario A2 assumed some delay and acceleration, resource and work-around costs.



coordinate discussions between Simon Kilonback and Mathew Duncan to ensure CRL's commercial discussions are not impacted (**Action 92b/04**).

### **3. Train performance and Stage 2**

Howard Smith reported that train performance had increased with the miles without a technical incident (MTIN) increasing to 2600 in the period to date. The MTIN was unlikely to reach 10,000 by June as planned, in part because from Stage 2 Phase 1 MTRC will be running two fleets each with relatively low mileage (one on the Greater Eastern line and one on the Great Western line). Howard believed there was unlikely to be train performance issues for Stage 2 Phase 1 and that MTRC's and Bombardier Transportation's (BT) ability to recover from incidents had increased.

Howard Smith reported for Stage 2 Phase 1 that driver training was progressing well with 18 drivers trained (with a minimum of 20 required). The train database was updated on the 10<sup>th</sup> April. The only remaining risks were platform lighting and MTRC approval. Matt Lodge and Graham Stockbridge asked if CRL had confidence that Phase 1 will open on 20th May. Howard Smith said they were confident but it wasn't a done deal yet.

Howard Smith noted for Stage 2 Phase 2 that ETCS remained red which reflected the prioritisation of Stage 3 testing activities. There was yet to be an agreed date for Phase 2, which would depend on the driving training duration following BT's release of an ETCS tested train in mid November. Howard noted that arrangements were being made to extend the leasing arrangements of the Heathrow Connect Class 360 trains to cover the interim period. Matt Lodge questioned the completion date for Stage 2 Phase 2 and noted that it is needed by February 2019 in advance of the end of the financial year to ensure DfT receives the [REDACTED] which CRL noted.

### **4. Stage 3**

Simon Wright reported that a train had been tested under automatic operation in the central section. CRL were planning to move to a blockade (now called testing windows) approach which was intended to be more efficient by reducing the energisation and de-energisation time. The first testing window is due to start on 26<sup>th</sup> April.

Simon Wright provided an update on MOHS. The Systemwide contract was reporting some improvement in installation in zones 3 and 4 and the forecast for dynamic testing remained at 11<sup>th</sup> June. There were challenges with securing access from Network Rail (NR) for possessions to test the fringes between the central section and surface railway. DfT offered to support CRL and CRL agreed to write to DfT to escalate with NR (**Action 92b/05**).

Trial running remained forecast for the 5<sup>th</sup> August. Challenges were being faced in installing walkways which would continue to be reported on in the weekly calls. Trial operations remained scheduled for the 9<sup>th</sup> September. The challenge here was on removing the temporary services. Simon Wright explained that CRL was considering the balance between commencing trial operations as planned and completing the works. To achieve this some assets may need to be removed following trial operations.

The communications software (C660) releases have faced challenges and Mark Wild, Mike Brown and Simon Wright met senior members of Siemens. Improvements had been observed since these discussions and the dialogue is to be continued. The signalling

software (C620) development schedule was reported as running until the end of October and CRL were aiming to bring this forward. The non-traction power works (C650) had faced a one month delay and one substation would now be energised each weekend in order to energise the whole central section in sufficient time to test the ventilation system. Nearly all the platform screen doors had been installed and these would be tested by 10<sup>th</sup> May.

Handover Execution Plans had been shared with the infrastructure managers for all stations. Most stations had seen improvements but Bond Street remained a concern and was being closely monitored. Graham Stockbridge asked when CRL might know if recovery at Bond Street was no longer possible. Simon Wright said that CRL were doing work on when the last 'responsible moment' would be. CRL had already considered only opening one entrance which currently would be more complicated. CRL noted the need to consider this carefully with Sponsors given the reputational implications.

Simon Wright noted that there was an ongoing issue with transferring pockets of land between NR and TfL. If unresolved this could prevent the infrastructure manager, RfL, from assuming its responsibility for Trial Running in August. Simon noted the need to resolve this quickly using the 'Umbrella Agreement' and that fortnightly meetings had been established, with the JST ( [REDACTED] ) in attendance, in case escalation to Sponsors is required.

Simon Wright presented a 'routemap' or T-minus approach in which CRL had created a readiness dashboard which would be reviewed in advance of Trial Running, Trial Operations and Stage 3 opening with all relevant stakeholders. Three checkpoints had been scheduled in June, July and October to give full visibility of the status of readiness and check the status on activities required for trial running, trial operations and Stage 3 opening. The process has the support and full involvement of the infrastructure managers and operator, and will be presented to the CRL Board and Sponsor Board. Any issues will be teased out through this process to give advanced warning to Sponsors.

## **5. AOB**

Graham Stockbridge asked CRL whether there was sufficient resource to meet the revised schedule and manage the risks. Simon Wright said that CRL had extended key people to reflect the revised schedule and it would continue to review this. Mathew Duncan runs CRL's resourcing change appraisal and a robust justification is required for extensions to personnel contracts, balancing schedule delivery and value for money.

**Action Tracker:**

<b>No.</b>	<b>Action</b>	<b>Responsible</b>	<b>Target</b>
92b/01	CRL to document how the cost forecasts will be updated for future periodic and SACR reporting, and to update Sponsors on the revised cost scenarios and the high-impact and low probability events.	Mathew Duncan	May
92b/02	Jacobs, as part of their cost review, to work with CRL to consider the revised upper end scenario which reflects the potential 'tail' of activities following December 2018.	Tom Wilne, Simon Adams and Mathew Duncan	May
92b/03	CRL to draft a statement which would provide assurance to the CRL Board for Sponsors to consider. JST to agree the statement with Sponsors.	Lucy Findlay and Simon Adams	May
92b/04	JST to coordinate discussions between Simon Kilonback and Mathew Duncan to ensure CRL's commercial discussions are not impacted.	Simon Adams	Complete
92b/05	CRL to write to DfT on the challenges in securing access from Network Rail (NR) for possessions to test the fringes between the central section and surface railway. DfT to escalate with NR.	Lucy Findlay and Graham Stockbridge	Complete

## CROSSRAIL SPONSOR BOARD MINUTES NO.91b

### MINUTES OF MEETING HELD ON

Thursday 22<sup>nd</sup> March 2018 16:15-17:30

Venue: TfL, Palestra, 8<sup>th</sup> Floor, London Bridge Room

#### Present:

David Hughes*	TfL (Chair)
Polly Payne*	DfT
Matt Lodge*	DfT

Simon Adams	Head of Joint Sponsor Team (JST)
██████████	Secretariat

#### By invitation

Emanuela Cernoia-Russo**	TfL
Graham Stockbridge	Head of DfT Sponsorship Team
Robin Wilkin	Project Representative
██████████	DfT Sponsorship Team
██████████	JST
Andrew Wolstenholme	Crossrail Limited (CRL)
Howard Smith	CRL
Lucy Findlay	CRL
Simon Wright	CRL
Mathew Duncan	CRL
Chris Sexton	CRL

#### Apologies:

Simon Kilonback*	TfL
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(\* Voting Members)  
(\*\*Alternate Voting Member)

### **1. Minutes and Actions of Meeting 90b**

The minutes of the last meeting, held on the 22<sup>nd</sup> February, were agreed without alteration.  
██████████ updated Sponsors on the actions:

90b/01: CRL's analysis of the implications of high-impact low-probability events was going to be presented in the Cost item. Sponsors agreed that due to time constraints in the meeting CRL would present this to the JST following the March Sponsor Board.

90b/02: The JST had summarised the February cost discussion and its implications for Sponsors in a post February Sponsor Board briefing.

90b/03: Howard Smith had discussed the risks to Stage 2 Phase 1 with Mark Hopwood from Great Western Railway (GWR).

90b/04: ██████████ had liaised with David Hughes, Matt Lodge and Adam Usher (CRL) to organise Sponsor attendance at the open house events.

90b/05: DfT's briefing on Crossrail (ahead of the Thameslink, Southern and Great Northern franchise Public Accounts Committee hearing) was shared with CRL.

## **2. Project Update**

Andrew Wolstenholme updated Sponsors on the programme, saying it is nearly 91% complete and with three key areas of focus: i) the rail system installation; ii) dynamic testing of the trains; and iii) approvals. Andrew noted the recent momentum on stations and the continuing strong health and safety performance. Andrew said that Simon Wright would be taking over from him in April and that, in Simon, CRL were left in extremely capable hands. Chris Sexton was then due to take over as Close Out Director by the end of the year.

## **3. Stage 2**

Howard Smith said that Old Oak Common depot had opened as planned and full-length trains continued to be tested on the Great Western. He noted that the prioritisation of Stage 3 activities meant that the software for Stage 2 Phase 2 was now behind the Master Operational Handover Schedule (MOHS). As a result, Phase 2 will go back to the end of the year and CRL will keep this under review if it coincides with Stage 3.

On Stage 2 Phase 1 Howard Smith said that without Selective Door Opening (SDO) some platforms at Paddington may need to be restricted and this needed to be resolved. Simon Wright noted that there had been progress on Driver Only Operation (DOO) CCTV, with adjustments needed to account for glare and light levels. Hayes and Harlington bay platform extension contract (no longer on the critical path) has been taken over by Amey from Carillion.

Howard Smith said the database on the trains needs to be updated. This was due to be released on the 4<sup>th</sup> April and has gone back one week. Howard had spoken to Great Western Railway (GWR) and Mass Transit Railway – Crossrail (MTRC) and they agreed to assess progress following the software update before considering whether a further contingency arrangement would be needed. David Hughes asked what this contingency would involve. Howard said it would involve leasing GWR Class 387 trains and training MTRC drivers on these trains. The decision would need to be made in sufficient time to train the drivers. Sponsors asked CRL to continue to discuss contingency arrangements with GWR and MTRC and advise Sponsors on the required timing for these arrangements **(Action 91b/01)**.

## **4. Stage 3**

Howard Smith noted that Bombardier Transportation (BT) was prioritising Stage 3 activities and that a revised date of 9<sup>th</sup> April had been agreed for the trains to run under signal control in Zones 1 and 2. Mike Brown was meeting with the BT chairman again to maintain pressure. Howard said that 40 trains had now been constructed and BT had an incentive to release them to free up factory capacity for new orders. Howard emphasised that the focus was on solving bugs and improving reliability. He noted that whilst the whole fleet had been removed two weeks ago the reliability trajectory was in the right direction. Matt Lodge asked whether new issues were emerging as the bugs were addressed. Howard said no new issues were emerging for the Train Protection Warning System (TPWS) software. The central section signalling (CBTC) software had all been tested at the test track in Melton but needed to be tested in the central section.

David Hughes asked what measurements were in place to assess performance against the three key areas Andrew Wolstenholme had listed. He said this was important for Sponsors

to understand whether MOHS was being met and whether December was deliverable. Simon Wright acknowledged the need for this but emphasised that Sponsors and CRL should not take the pressure off the 9<sup>th</sup> December. Matt Lodge agreed but said that in this forum a realistic assessment needed to be discussed. Polly Payne asked whether CRL would agree with P-Rep's assessment that there were significant risks to the December date. Simon Wright said there were significant risks but these were being mitigated by CRL. He emphasised that Stage 3 was different to Stage 2 as it was not linked to a national timetable and therefore could be introduced at any point with the appropriate notice. Sponsors agreed to share the P-Rep MOHS report with CRL (**Action 90b/02**). Sponsors asked CRL to work with the JST to develop a set of performance measurements to measure progress against MOHS (**Action 90b/03**) and a 'roadmap' of the different decision or acknowledgement points linked to the minimum operational requirements to ensure informed decisions were made on Stage 3 opening (**Action 90b/04**).

## 5. Cost

Mathew Duncan explained that the Anticipated Final Crossrail Direct Costs (AFCDC) had increased by £3m at Period 12. There had been a £78m increase in cost, £75m of which was covered by existing risk provisions. There had been a £110m increase in unresolved cost trends (URTs) which will be assessed to inform the Period 13 numbers. Simon Adams asked whether the adoption of MOHS was driving these trends. Mathew said it was likely to be a driver which would be confirmed through CRL's assessments. David Hughes asked whether Intervention Point 2 (IP2) was likely to be breached at the next Semi-Annual Construction Report (SACR). Mathew said this was very likely.

David Hughes said that Sponsors were conscious of the need to resolve the funding issue ahead of June. As a result, it was critical that if the scenario-based analysis might change that CRL update Sponsors immediately. Simon Wright said this would be done as part of the Quantified Risk Assessment (QRA).

Graham Stockbridge asked CRL if it was aware of the latest Network Rail (NR) funding pressure. Simon Wright said they were aware of the key risks and that he understood a funding pressure had been reported to DfT and the action was with NR to find a funding solution. Matt Lodge clarified that NR had reported a £54m funding pressure with a range of £32m-£76m.

David Hughes asked CRL whether, given the funding pressures, Sponsors should reconsider the scope of the Western stations. Simon Wright said that the biggest challenge was in securing planning consent for the station designs. Previous designs had not received planning permission. CRL believe that a descoped design would not provide the same disabled access or the required capacity for the Elizabeth line which could lead to safety concerns as passenger numbers build up on the platform. This could in turn affect the dwell time and performance of the line. If a resubmitted descoped design was refused planning consent this would lead to further delay and cost escalation. Andrew Wolstenholme emphasised that his recommendation was to build the stations as planned. Sponsors noted CRL's advice and that this issue had already been fully considered as part of the descoping exercise when the NR funding pressure of £230m (above the £2.3bn Intervention Price) was raised.

Sponsors asked CRL to discuss with JST how the scenario-based cost analysis could be updated for SACRs and periodic reporting to maintain the governance arrangements

(around IP2 and Put / Call options) and ensure the most likely AFCDC is always reported on. They asked that the new approach is clearly documented (**Action 91b0/05**).

## **6. Regulatory Approvals**

Chris Sexton presented on how CRL are ensuring that the railway would be safe. He explained in detail how CRL had designed the processes to ensure the different approvals would be obtained in a timely way to deliver a safe and reliable railway. CRL have a close relationship with the Office of Rail and Road (ORR), and have agreed a strategy with them. The ORR have welcomed CRL's approach as they know any documents they receive have already passed through safety approvals first.

Chris acknowledged the challenges of Stage 1, in which delays to regulatory approval delayed the commencement of the new trains. He said CRL had learnt to be more intrusive to ensure applications are submitted on time by the different organisations.

Matt Lodge asked how much the regulatory approvals schedule is impacted by schedule delay. Chris said schedule delays compress the time for regulatory approvals and if the design changes the safety argument has to be reviewed and amended.

Matt Lodge asked whether the ORR have sufficient resource to handle Crossrail approvals along with other major programmes. Chris said he doesn't believe the ORR resource is an issue and the ORR have allocated some resource full time to Crossrail. He noted that schedule delays increase pressure on the Assurance Body and Notified Body, and CRL work hard to ensure submissions are made on time to maximise this resource.

On Stage 2 Phase 1 Chris said that the only outstanding approval was the updated safety management system which needs approval from MTRC's Safety Review Panel. Stage 2 Phase 2 approvals were red because of the delay with software testing. Stage 3 is a significant challenge and not all approval documentation would be ready for Trial Operations in September. However, he emphasised that go-ahead for Trial Operations would only be given if safety is proven.

David Hughes asked CRL whether they need any support from Sponsors. Chris said there wasn't anything at this moment. He emphasised that DfT's relationship with the ORR was important but the ORR resource wasn't the critical issue currently.

## **7. Any Other Business**

Sponsors and CRL agreed to cancel the weekly call on the week of Sponsor Boards.

David Hughes ended the Sponsor Board by emphasising his gratitude to Andrew Wolstenholme from both Sponsors for his long period as Chief Executive of CRL and his dedication to the programme and its legacy to the transport and construction industry.

**Action Tracker:**

<b>No.</b>	<b>Action</b>	<b>Responsible</b>	<b>Target</b>
91b/01	CRL to continue to discuss further Stage 2 contingency arrangements with GWR and MTRC in the event of ongoing issues with Phase 1 and advise Sponsors on the required timing for these arrangements.	Howard Smith	April weekly calls
91b/02	P-Rep to share MOHS report with CRL.	Robin Wilkin	Complete
91b/03	CRL and JST to develop a set of measurements which can be used to monitor the key critical paths (including rail systems installation, rolling stock and depot, and approvals).	Simon Adams / Simon Wright & Lucy Findlay	April Sponsor Board
91b/04	CRL and JST to develop a roadmap on the key decision or acknowledgement points (and what is required at each point) which can be used along with the measurements to inform discussions on Stage 3 opening. It should identify the minimum operation requirements and the latest moment at which responsibilities can transition.	Simon Wright & Howard Smith / Simon Adams	April Sponsor Board
91b/05	<p>CRL to discuss how the scenario-based cost analysis can be updated for SACRs and periodic reporting to maintain the governance arrangements (around IP2 and Put / Call) and ensure the most likely AFCDC is always reported on and that the new approach is clearly documented</p> <p>CRL to feedback to JST on the high-impact low-probability scenarios ahead of next Sponsor Board.</p>	Simon Adams / Mathew Duncan	April Sponsor Board



## CROSSRAIL SPONSOR BOARD MINUTES NO.90b

### MINUTES OF MEETING HELD ON


Thursday 22<sup>nd</sup> February 16:00-17:30

Venue: 55 Broadway, 1<sup>st</sup> Floor, East Wing, Room 133


#### Sponsor Board Members

David Hughes*	TfL (Chair)
Simon Kilonback*	TfL
Ruth Hannant*	DfT
Matt Lodge*	DfT

#### In attendance

Graham Stockbridge	Head of DfT Sponsorship Team
Simon Adams	Head of Joint Sponsor Team (JST)
	Secretariat

#### By invitation

	DfT Sponsorship Team
Robin Wilkin	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
Lucy Findlay	CRL
Simon Wright	CRL
Mathew Duncan	CRL

#### Apologies

(\* Voting Members)

#### **Item 1: Minutes and Actions of Meeting 89b**

The minutes of the last meeting, held on the 26<sup>th</sup> January were agreed without alteration. Sponsors acknowledged receipt of CRL's letter confirming the Stage 2 opening plan (action 89b/01). CRL's cost forecasts and scenarios (89b/02) are to be discussed under Item 3. CRL have shared the draft Greater Anglia (GA) / CRL Ilford agreement and JST has engaged DfT and CRL lawyers ahead of the agreement being finalised (89b/03). The terms of reference for the independent cost review (89b/04) was discussed in Part A and Simon Adams and Mathew Duncan will continue to discuss this. The JST will liaise with CRL on the scope and timing of the retrospective lesson learned review and present to Sponsors in March (89b/05). JST continues to work with CRL to review the content of SACR (89b/06) to ensure it meets the requirements of its various audiences (including the European Investment Bank) after CRL's risk team have demobilised.

## **Item 2: Master Operating Handover Schedule (MOHS) and Stages 3-5 Readiness**

Andrew Wolstenholme and Simon Wright presented on the revised MOHS and the complexity and challenge within it. Simon explained about the different critical paths and the importance of performance from the systemwide and systems contracts. Simon also explained how the different types of handover are being finalised with the infrastructure managers to ensure the most efficient preparation for the opening of the central section. David Hughes asked whether the right behaviours are being shown by LUL and Simon Wright said that they were, with positive dialogue and intent.

Simon Adams asked about the level of commitment from third parties and contractors. Simon Wright responded that whilst the majority of contractors supported the programme there were concerns from some. He noted that MOHS has always been ambitious and intended to drive behaviour and that if all the Tier 1 contractors' programmes were simply added together the programme would end in 2020.

Simon Adams asked whether there were leading indicators CRL and Sponsors could review to assess whether MOHS continues to be met. Simon Wright said CRL had different metrics for the different contracts and agreed that if performance didn't meet requirements CRL would know quickly.

David Hughes noted that at the last Sponsor Board CRL expected to know in May whether there were critical issues for opening Stage 3 in December. Simon Wright said that May/June remained a useful date for considering the reliability of the train and the various systems (e.g. signalling, doors, ventilation etc.)

David Hughes asked about the performance of Bombardier Transportation (BT). Howard Smith said the visibility from BT had increased. Testing at Melton had occurred as expected but there needs to be quicker resolution of issues. BT have agreed to prioritise Stage 3 activities and have provided their P80 dates which meet the milestones in MOHS.

## **Item 3: Cost**

Mathew Duncan presented two different scenarios (scenario A, in which Stage opening is achieved; and scenario B, in which Stage opening is delayed by 3-12 months) with six different cost ranges (to account for different risks in each scenario). CRL noted that these scenarios are indicative at this stage and the reality may be a combination of more than one scenario. Following Sponsors' questions several assumptions and exclusions were noted (such as the exclusion of the revenue impact as a result of delays to train services). These are summarised in the JST paper (**Action 90b/02 – see below**).

Sponsors thanked CRL for the analysis. Simon Kilonback asked whether a high impact low probability event like a supplier failure had been included. Mathew Duncan said that whilst it was included in CRL's Quantified Risk Assessment the allowance in the AFCDC is low because of the small likelihood. Mathew agreed to produce a high-level assessment of an illustrative example to inform Sponsors' discussions (**Action 90b/01**).

Mathew Duncan then presented on CRL's projected cash flow, incorporating the two scenarios. This suggests that CRL may need additional cash funding from October 2018 (Period 8). Sponsors noted that it was a very helpful presentation and agreed that the JST should summarise this discussion to inform Sponsors' further discussions (**Action 90b/02**).

#### **Item 4: Stage 2 Readiness**

Howard Smith presented on the key risks to Stage 2. He noted that October was not certain for Stage 2 Phase 2, particularly if Stage 3 activities are prioritised. A full length train is now running on the Great Western for Stage 2 Phase 1. Howard believed that whilst Old Oak Common depot remains a risk, it should be partially opened on 1<sup>st</sup> March ahead of driver training on 5<sup>th</sup> March. Other risks to Phase 1 include the safety justification for driver training and the curved platform issue at Paddington which requires either selective door opening or restrictive access for the trains. Howard noted that DfT and TfL are still working together to secure Heathrow's contribution to the programme.

Graham Stockbridge asked Howard what the contingency was if reduced length trains weren't able to be used in May between Paddington and Hayes and Harlington. Howard said there was no contingency to the contingency plan but he would discuss this with Mark Hopwood of Great Western Railway in March to prepare in the event that a further contingency is required **(Action 90b/03)**.

#### **Item 5: AOB**

Lucy Findlay explained that the 'open house' events (where CRL invites members of the public to visit the new Elizabeth line stations) are due to commence shortly and invited Sponsors to attend. [REDACTED] and Lucy Findlay agreed to liaise on potential dates **(Action 90b/04)**.

Simon Wright noted that the GA / Crossrail agreement on Ilford Track Speeds would be finalised soon and CRL would circulate the final agreement to DfT at that point for the terms and conditions to be reviewed and signed-off.

DfT noted that Bernadette Kelly, DfT's Permanent Secretary, was due to appear at a Public Accounts Committee (PAC) hearing on Monday on the Thameslink, Southern and Great Northern (TSGN) franchise, and Crossrail might be mentioned. DfT/JST will share the briefing which has been provided to Bernadette **(Action 90b/05)**.

<b>No.</b>	<b>Action</b>	<b>Responsible</b>	<b>Target</b>
90b/01	CRL to consider the cost implications that would arise from a high-impact low probability event such as a major supplier failure (Action 90b/01)	Mathew Duncan	March
89b/02	JST to summarise the cost discussion to inform Sponsors' further discussions. This will cover the cost scenarios, timing for additional cash funding, implications under the Sponsors' agreement and next steps (Action 90b/02).	[REDACTED]	Complete
90b/03	CRL to discuss the status and risks to Stage 2 Phase 1 with Mark Hopwood to prepare in the event that a further contingency is required.	Howard Smith	Complete
90b/04	JST and CRL to liaise over Sponsors' attendance and dates for the open house events.	[REDACTED] / [REDACTED] & Lucy Findlay / Adam Usher	March
90b/05	DfT/JST to share Permanent Secretary briefing for TSGN PAC hearing.	[REDACTED]	Complete



## **CROSSRAIL SPONSOR BOARD MINUTES NO.89b**

### **MINUTES OF MEETING HELD ON**


Friday 26<sup>th</sup> January 15:00-16.30

Venue: TfL, Victoria room, 4<sup>th</sup> floor, Palestra, Blackfriars Road


#### **Sponsor Board Members**

David Hughes*	TfL (Chair)
Simon Kilonback*	TfL
Matt Lodge*	DfT

#### **In attendance**

Graham Stockbridge**	Head of DfT Sponsorship Team
Simon Adams	Head of Joint Sponsor Team (JST)
	Secretariat

#### **By invitation**

	DfT Sponsorship Team
Robin Wilkin	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
Lucy Findlay	CRL
Simon Wright	CRL
Mathew Duncan	CRL
Mark Fell	CRL

#### **Apologies**

Ruth Hannant and Polly Payne*	DfT
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(\* Voting Members)

(\*\* Alternative Voting Member)

David Hughes noted the apologies of Ruth Hannant and Polly Payne, DfT's new Directors General for Rail, who had to attend an Executive Committee Away Day.

#### **Item 1: Minutes and Actions of Meeting 88b**

The minutes of the last meeting, held on the 11<sup>th</sup> December, were agreed without alteration, with the exception of actions 88b/2 and 88b/3 (Stage 2 opening). It was agreed, under Item 3 below, that actions 88b/2 and 88b/3 would be replaced by an action for CRL to write to

Sponsors clarifying the plan that is being delivered for May for Stage 2 and the timescales for opening Stage 2, as affirmed (89b/1). 88b/1 (train performance) is covered in Stage 2.

David clarified that the agenda would be reversed and the Board would begin with stage readiness before moving onto cost.

## **Item 2: Project Update**

Andrew Wolstenholme set out the key issues and emphasised that there would be extensive discussion on the cost position. Andrew explained that the update to the Master Operational Handover Schedule (MOHS) would provide a strategic analysis of the programme, examining the pressures on the stations, tunnel and train and bringing these together into an integrated programme. These pressures have been known for some time and the MOHS will help CRL and its partners to focus their efforts. Andrew emphasised that CRL still believe that the most efficient way to complete the programme is to finish it as quickly as they can, working collaboratively with the various stakeholders. Andrew explained that there were some key milestones in the tunnel fit-out works which if delayed would mean resource would be needed for longer impacting upon costs but that CRL were managing this risk. Andrew praised Network Rail (NR) for the very successful Christmas works and for their excellent health and safety performance. Andrew emphasised that the health and safety across the programme was in a good place, with strong leadership and CRL remained focussed on this. CRL were frustrated about the delays to energisation but energisation of the Pudding Mill Lane Auto Transformer Feeder Station (ATFS) on Monday 29<sup>th</sup> January looked positive with dynamic testing scheduled later in February.

David Hughes thanked Andrew for his update and suggested the Board moved onto a discussion of operational readiness.

## **Item 3: Stage 2 Readiness**

Howard Smith provided an update on Stage 2. Mass Transit Railway – Crossrail (MTRC) have submitted Plan B<sup>1</sup> into the timetable but are expecting to run this with reduced length units (RLUs) (previously called Plan C). The Crossrail train (class 345) has been tested down the Heathrow tunnel on the weekends of the 12<sup>th</sup> and 19<sup>th</sup> January. The emergency brakes were tested and various issues were identified which are now being worked through. The testing at Melton test track is better with more stability in the European Train Control System (ETCS) runs. It is nowhere near where it needs to be for May and therefore it was the right decision to submit Plan B into the timetable. The aim is to run Plan A in October.

Graham Stockbridge asked if any thought had been given to delaying Stage 2 Plan A after Stage 5 if required. Howard Smith responded and said it was not straight forward as ETCS needs to be proven for the interface between the tunnel and the Great Western for Stage 3. As a result, completing Heathrow testing helps de-risk this interface. Whilst it's tempting to simplify and delay Stage 2 Plan A most of the software has now been written and therefore

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<sup>1</sup> The three plans described for Stage 2 are:

- Plan A: 4 trains per hour (tph) (full length Crossrail trains) to Heathrow as planned
- Plan B: 2tph (Heathrow connect trains) to Heathrow, 2tph (full length Crossrail trains) to Hayes & Harlington
- Plan C: 2tph (Heathrow connect trains) to Heathrow, 2tph (reduced length Crossrail trains) to Hayes & Harlington.

changing the stage opening could cause more issues at this stage. However, CRL are reviewing Stages 2 and 3 activities to ensure priority is placed on Stage 3 activities where possible. For example, following the good weekend of ETCS testing BT are now focussing on Communications Based Train Control (CBTC) testing.

Matt Lodge asked about the governance for notifying Sponsors that the Stage 2 Plan for May had changed. Sponsors and CRL agreed that a letter would be sent to Sponsors clarifying the Plan being delivered for May and the timescales, steps, costs and risks of introducing Plan A at a later stage. Matt Lodge noted the importance of keeping GWR sighted on the schedule and avoiding any late-minute changes for the franchise. He also noted that the Department has yet to recoup the [REDACTED] and asked CRL to let DfT know if any changes could impact upon this.

**Action 89b/1: CRL to write to Sponsors clarifying the Plan being delivered for May and the timescales, steps, costs and risks of introducing Plan A at a later stage. This replaces actions 88b/2 and 88b/3.**

Howard Smith clarified that RLUs would be taken from the East for the May 2018 operations. Howard said that this was unlikely to be noticed by passengers as the full quantum of 11 trains had not been delivered for Stage 1A. Howard said CRL need to clarify what platforms at Paddington are being used and to finalise the arrangements for Selective Door Opening (SDO). Using RLUs also de-risks the Hayes and Harlington bay platform extension works by taking them off the critical path.

David Hughes asked whether Bombardier Transportation's (BT) behaviours were supporting the programme delivery. Howard said that BT has reaffirmed their commitment to work towards the key milestones.

Howard said that the train simulator had had the latest software installed and was being tested. The final software 'drop' is due in April and this is no longer on the critical path. NR had installed all of the DOO CCTV cameras (inner west), which were due to be tested on the 5<sup>th</sup> March. Simon Wright agreed and said that the lessons from the Stage 1 delay were being adopted with all the site acceptance tests (SATs) having been completed.

Matt Lodge asked about train performance. Howard Smith said the trains had reached 1,000 miles without an incident in Period 9. In period 10 several fixes were introduced which improved performance and in period 11 the performance is expected to reach 2,000 miles without an incident. BT have strengthened their team and produced more cautious growth charts which estimates 5,000 miles without an incident by the end of period 13 and 10,000 miles without an incident by June.

#### **Item 4: Stages 3-5 Readiness**

Simon Wright provided an update on Stage 3. Energisation is planned for the 29<sup>th</sup> January at Pudding Mill Lane ATFS with zones 1 and 2<sup>2</sup> dynamic testing between February-June. The installation of the systems need to be completed in zones 3 and 4<sup>3</sup> ahead of dynamic testing in all zones from June – August. Trial running is scheduled August – September with trial operations due to begin on the 9<sup>th</sup> September.

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<sup>2</sup> The eastern and southern parts of the central section

<sup>3</sup> The western part of the central section

David Hughes asked if this was in effect reverting back to the original schedule before dynamic testing had been brought forward. Simon Wright agreed although the activities originally scheduled in August were a point of debate.

Simon Wright said there was no significant change on stations from the update provided to the December Sponsor Board. Bond Street is still late, Woolwich current schedule shows external cladding outstanding at opening, Liverpool Street will have the lower concourse incomplete in September but it's likely this can be isolated to enable London Underground to begin trial operations in the two ticket halls. The handover strategies are being adapted for each station to reflect what elements can be handed over with works incomplete (e.g. cladding) compared with safety critical works (e.g. fire alarms). CRL have 26 elements which they need to develop handover strategies for and everyone is aware of the challenge. Howard Smith said that whilst stations were divisible (enabling phased handovers) the resilience of the routeway was more critical.

Simon Wright said they had received BT's programme 10 days ago which meets the requirements of MOHS and provide 11 trains for the start of trial running and 22 trains for 14<sup>th</sup> August. David Hughes asked if CRL believe in the BT programme. Howard Smith said he believes the functional units will be ready as planned but the P80 dates do not show the reliability of the systems. A possible scenario is that the dates will be met but the variable will be the testing and integrating of the different aspects of the systems. Simon Adams asked if they have considered factoring BT's P95 dates into MOHS. Simon Wright said CRL hasn't received P95 dates. Howard Smith said that what was more important was how much time BT have factored in for 'unknown unknowns'.

Andrew Wolstenholme said that there is limited float in the BT programme for delivering the train for February but more float towards the end of the programme. He said that provided the February milestone is delivered there will be time later for iterations of the software. CRL have processes in place to work through the phased handover of the stations but the real challenge is completing the physical works to enable zones 3 and 4 dynamic testing from June.

Graham Stockbridge asked CRL at what point Sponsors need to consider planning for a suboptimal or a delayed opening. Graham noted that he had asked the question in November and CRL had said it was too early to consider this. Given the delays to dynamic testing when is the point at which CRL would have to consider a Plan B for Stage 3. Simon Wright responded and said he has considered this question in detail. There is no succinct answer but if the programme reaches May and the train is stopping and emergency braking this would need to be considered. Simon emphasised that this is not to say that the train testing couldn't go well in May and then an unforeseen issue might arise late in the programme which causes a last-minute delay. Sponsors noted this but both David Hughes and Matt Lodge emphasised that a planned and managed change at an early date is far better than a last-minute delay.

Matt Lodge asked how robust is the programme given the reduction in the time for dynamic testing. Andrew Wolstenholme said that if the assets are reliable by the end of September the schedule will be ok. If reliability remains an issue testing and trial operations will have to occur at the same time. Howard Smith said it is unlikely the assets will be fully reliable; the question will be how reliable they are at that stage.

David Hughes asked if there were any considerations Sponsors should be mindful of at this point for Stages 4 and 5. CRL highlighted that NR's programme to install ETCS into Paddington for Stage 5 remains a risk. CRL believe there remains a question on whether it



should be implemented (or whether NR should seek to extend their derogation) and CRL will recommend when it needs to be done by.

### **Item 5: Cost update**

Mathew Duncan began by giving a summary of the cost position at Period 9. The AFCDC had increased by circa £160m. The increase was due to pressures emerging from the delays to energisation and [REDACTED]

[REDACTED] CRL also undertook a detailed review of their unresolved trends (URTs) and determined that most would materialise, increasing their cost allowances. Specific risks were added for Whitechapel, Systemwide and Bond Street. The direct costs increased by £18m against risks already incorporated, such as Bond Street, Paddington and Woolwich. Indirect costs increased due to changes in the business plan as schedule pressures led CRL to believe their demobilisation plan was too ambitious. The AFCDC P50 headroom to IP2 is £48m which will not change at Period 10.

Mathew noted that the Period 9 figures do not incorporate the revised MOHS and the later dates for energisation and dynamic testing, train testing and stations (particularly Bond Street, Liverpool Street and Whitechapel). Mathew also highlighted that there remained 'unfunded items' not included within the forecasts.

David Hughes asked when the cost implications of the revised MOHS would be available. Mathew Duncan said CRL's financial and commercial teams were working through this and it will take a couple of weeks to understand the most appropriate scenarios to cost. Simon Wright agreed and said CRL would aim to provide the standard P50/P80 figures and scenario analysis on what would happen for example if there was a three-month delay. David Hughes said this would be very helpful and would help inform Sponsors' scenario planning.

Mark Fell introduced CRL's supplementary cost briefing paper which had been developed to advise Sponsors on the emerging cost position and set out the work CRL had done to look at all options to reduce costs. Mark said that the paper touches on the step-in events available to each Sponsor in the event of a breach of IP2. Both Sponsors said that they had already discussed these at previous Sponsor Boards. Mark noted that the CRL Board has a corporate duty to ensure there remains sufficient financial authority to meet its obligations. CRL requested an assurance letter of financial support from TfL to satisfy its Board that it has sufficient financial authority. Simon Kilonback emphasised that if the TfL Board is to take action to provide guarantees to CRL then it is critical that CRL set out the potential exposure above IP2 and the quicker Sponsors receive this the quicker they can respond. Sponsors also emphasised that neither Sponsor had available funding and therefore the emphasis was on CRL to manage the programme as far as possible within the funding envelope.

**Action 89b/2: CRL to set out, as soon as possible, the scenarios and possible ranges of the cost exposure above IP2 and the timing at which further financial authority and cash funding might be required.**

Andrew Wolstenholme said that there were three elements of scope which had not been instructed and which theoretically therefore Sponsors could descope. David Hughes clarified whether the three items in question (Ilford line speeds; Ilford wire heights; Plumstead sidings) were required for the effective operation of the railway. Howard Smith said that they were for the new Crossrail trains and to meet Sponsors Requirements. Sponsors agreed that CRL should therefore continue to instruct these items.

Matt Lodge asked if, on the item of Ilford Track Speed, CRL could share with DfT the near final draft agreement between GA and CRL to enable DfT lawyers to agree and sign it off.

Lucy Findlay said this was just being finalised and could be sent through shortly. Simon Wright said CRL were hoping to finalise the agreement shortly and asked what DfT would require. ██████████ explained that as the agreement had implications in the event of in-franchise changes and for future franchises DfT lawyers would need to agree the terms and conditions and he would continue to liaise with Lucy to ensure this meets CRL's required timescales.

**Action 89b/3: CRL to share the near final draft agreement between CRL and GA with DfT on Ilford Track Speed.**

Mathew Duncan explained the first attachment to the CRL cost paper which summarise the fifty or so ideas that CRL had developed to look at options for reducing costs. He noted that these had been proposed no matter how unpalatable. Broadly speaking the ideas divided into:

- i) Cost savings opportunities within the remit of CRL, such as reviewing their accommodation;
- ii) Cost saving opportunities CRL could impose upon its supply chain; and
- iii) Cost saving opportunities which would require Sponsors' input because they had an impact on a partner organisation or a requirement.

Mathew Duncan said CRL were confident of delivering the first two. CRL also discussed attachment 2 and asked Sponsors to reconsider whether additional funding should be provided for the items which CRL perceives to be 'unfunded changes'. David Hughes said Sponsors appreciated CRL's work on this exercise but said that in Sponsors view the third list of opportunities (iii above) would merely defer costs and in some cases, increase costs for Sponsors because it is usually most efficient to complete the works while the supply chain is mobilised. David said that this would not resolve the issue that neither Sponsor has available funds to add into the project and therefore the emphasis remains on CRL to manage the programme as cost-effectively as possible. David noted though that reputationally there remained a positive story to tell in that the funding envelope had been reduced from £15.9bn to £14.8bn so if CRL can deliver close to this envelope on such a major programme it should be seen as a success. All Sponsors agreed that the priority should now be on CRL managing costs efficiently and establishing clarity on the potential exposure above IP2 and the timing of this.

Matt Lodge said that DfT officials had briefed the Secretary of State for Transport on the 22nd January who had emphasised that there is no further funding available and that he was concerned at how the programme's cost and schedule had deteriorated. Matt said that Sponsors would need to consider an independent lessons learned review to examine the reasons behind this change. Simon Kilonback agreed and emphasised that in order for Sponsors to consider providing additional funding they would also need to commission an independent review of CRL's cost forecasts. Sponsors agreed that the latter was the most urgent of the two proposed reviews. Andrew Wolstenholme noted that P-Rep had been in place since the start of the programme. He expressed concern that independent reviews could be time consuming and distract CRL resource during the critical schedule. Simon Wright emphasised that the biggest uncertainty was the reliability of the software development and outcome of testing and commissioning and independent reviewers might have difficulty assessing these areas. David Hughes said that both Sponsors and CRL had made useful points and JST would consider a terms of reference for an independent cost review and the scope and timing for a lessons learned review to share with CRL.

**Action 89b/4: JST to develop draft terms of reference for an independent cost review to be undertaken once CRL have finalised their cost scenarios (Action 89b/2)**

**Action 89b/5: JST to consider the scope and timing of an independent lessons learned review noting CRL's point to avoid impacting schedule critical resources.**

**Item 6: AOB**

Mathew Duncan said that CRL's risk team would demobilise after May and therefore the QCRA would stop after SACR19. Mathew noted that he believed that the focus should switch to cost scenarios instead. Simon Adams agreed but noted the need for CRL to continue to meet the requirements of SACRs, including those of recipients like the European Investment Bank.

**Action 89b/6: JST to work with CRL to ensure alignment on the expectations for future SACRs.**

David Hughes noted that Sponsor Board had **approved** CRL's revised form of reporting on Network Rail costs in Part A.

No.	Action	Responsible	Target
89b/01	CRL to write to Sponsors clarifying the Plan being delivered for May and the timescales, steps, costs and risks of introducing Plan A at a later stage. This replaces actions 88b/2 and 88b/3.	Lucy Findlay	February
89b/02	CRL to set out, as soon as possible, the scenarios and possible ranges of the cost exposure above IP2 and the timing at which further financial authority and cash funding might be required.	Mathew Duncan	February
89b/03	CRL to share the near final draft agreement between CRL and GA with DfT on Ilford Track Speed.	Lucy Findlay	Complete
89b/04	JST to develop draft terms of reference for an independent cost review to be undertaken once CRL have finalised their cost scenarios (Action 89b/2)	Simon Adams	February
89b/05	JST to consider the scope and timing of an independent lessons learned review noting CRL's point to avoid impacting schedule critical resources.	Simon Adams / <span style="background-color: black; color: black;">[REDACTED]</span>	March
89b/06	JST to work with CRL to ensure alignment on the expectations for future SACRs.	Simon Adams / <span style="background-color: black; color: black;">[REDACTED]</span>	March

## CROSSRAIL SPONSOR BOARD MINUTES NO.88b

### MINUTES OF MEETING HELD ON

Monday 11<sup>th</sup> December 2017, 10.00-11.00

Conference call

#### Present:

David Hughes\* TfL (Chair)

Simon Kilonback\* TfL

Matt Lodge\* DfT

(\* Voting Members)

Simon Adams Head of Joint Sponsor Team (JST)

██████████ Secretariat

#### By invitation

Graham Stockbridge Head of DfT Sponsorship Team

██████████ DfT Sponsorship Team

Robin Wilkin Project Representative

Andrew Wolstenholme CRL

Simon Wright CRL

Howard Smith CRL

Mathew Duncan CRL

Lucy Findlay CRL

#### Apologies

N/A

Note: Ruth Hannant and Polly Payne\* (new DfT Directors General for Rail) will join the Sponsor Board from January.

### **1. Minutes and Actions of Meeting 87b**

David Hughes explained that the focus of the Sponsor Board call is to receive updates from CRL on the schedule for stage opening. Any changes to the minutes of meeting 87b will be agreed via correspondence. The two actions on Ilford Line Speeds are due for completion in December / January and will be reviewed at the January Sponsor Board.

### **2. Stage 1**

Howard Smith provided an update on progress towards completing the final elements of Stage 1. 6 trains are now running with 8 accepted. Howard said he expects to start accepting more trains this week following the latest software release, with the aim of accepting 11 trains in total by Christmas.

Matt Lodge asked how the fleet was performing in terms of reliability and what reliability is needed for Stage 3. Howard Smith said the trains were on average now covering 500miles for every incident. Whilst, this is lower than planned everyone is getting more adept at dealing with incidents which means that the impact is reducing. Bombardier Transportation (BT) is aiming to achieve 5,000 miles per incident by the end of the financial year. Howard

noted that Stages 2 and 3 required full length units (FLUs) running on the new signalling systems ETCS and CBTC whereas currently only reduced length units (RLUs) are being run on the existing signalling system Train Protection and Warning System (TPWS). Howard said he would confirm exactly what train performance was required to achieve 15tph for Stage 3.

**Action 88b/01: Howard Smith to confirm the train performance required to achieve 15tph for Stage 3.**

Andrew Wolstenholme asked if Thameslink was a useful comparator on train reliability. Matt Lodge responded that Thameslink was currently performing at around 8000 miles per train incident with the expectation that the train would reach 10,000 by the turn of the year but that it had taken 18 months to get to this point.

### **3. Stage 2 Readiness**

Howard Smith said that BT had completed the level of testing needed at Melton test track to bring the train down to Heathrow. However, although the train was diesel hauled down to Wembley over the weekend BT were unable to obtain approval from Heathrow to enable testing. The train should come back down to Heathrow for testing next weekend.

Howard said that BT sent their updated programme to support Stage 2 opening last Monday (4<sup>th</sup> December) but that it had been rejected because it didn't include sufficient risk allowance and mitigations and there were a number of unqualified assumptions. BT has been asked to produce a revised programme.

Howard said that his confidence in Stage 2 commencing as affirmed was now below 50%. This is because although there has been progress there is no sign of the breakthrough which is needed to support the smooth running of trains as planned for the 20<sup>th</sup> May. Howard said he was therefore ensuring everything is in place for Plan B<sup>1</sup>.

Matt Lodge asked how much of delay there is likely to be with Plan A. Howard Smith said there was likely to be a delay of weeks or a small number of months. Howard said that currently there is a range of outcomes and when CRL see the revised BT programme it will have a better idea of confidence.

Andrew Wolstenholme noted that if Plan B is invoked there needs to be a transition plan back to Plan A. Howard Smith agreed and said they are considering what would be involved – there is a potential of a delay from May to August for running services as planned (Plan A) to Heathrow. There would not be a need for a formal timetabling change but it would require driver training. With only a single track between Heathrow Terminals 2 and 3, and 4 obtaining paths for driver training will be a challenge. Howard said that this is why it is so important to have an ETCS enabled train simulator in advance of driver training.

Graham Stockbridge asked if there were any substantial financial consequences of choosing Plan B. Howard Smith said there were some costs (reduced TfL revenue, the costs of

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<sup>1</sup> The three plans described for Stage 2 are:

- Plan A: 4 trains per hour (tph) (full length Crossrail trains) to Heathrow as planned
- Plan B: 2tph (Heathrow connect trains) to Heathrow, 2tph (full length Crossrail trains) to Hayes & Harlington
- Plan C: 2tph (Heathrow connect trains) to Heathrow, 2tph (reduced length Crossrail trains) to Hayes & Harlington

leasing the Heathrow Connect trains, and MTRC costs for running a slightly less efficient service and some potential for liquidated damages from BT).

Simon Adams asked what the process was for choosing between Plan A and B. Howard Smith said that on the 12-13<sup>th</sup> January MTRC have to submit their timetable to Network Rail (NR) and the NR Route have been resistant to MTRC leaving Plan A in the timetable unless there is a high degree of confidence. MTRC also need to give certainty to Aslef on the driver training plans.

Matt Lodge asked whether any stakeholder management is required before the timetabling bid is submitted as this would make the change public to the industry. Howard Smith said that all stakeholders were involved or sighted on the changes.

Simon Adams asked whether the approval for the change would come through the affirmation process and asked how long this would take if approval is needed by the 12-13<sup>th</sup> January. Andrew Wolstenholme agreed and said that CRL should prepare the affirmation ready in case Plan B is needed. Graham Stockbridge agreed and noted the importance of consistent messaging (if any is required) from the Secretary of State and the Mayor. Lucy Findlay confirmed that Plan B would be a variance of the affirmed opening strategy for Stages 2-5 and that CRL would prepare the affirmation for Sponsors to review. Sponsors asked for this to include the plan for switching back to Plan A.

Sponsors agreed that the working assumption that we needed to work to and develop was Plan B unless and until better information was available that gave greater confidence in Plan A.

**Action 88b/2: CRL to prepare the affirmation on Stage 2 Plan B**

**Action 88b/3: Sponsors to consider the affirmation once received by CRL.**

Simon Wright provided an update on the On Network Works (ONW). Driver Only Operation (DOO) CCTV had slipped by one month but is still on target for Site Acceptance Tests in January and dynamic testing with a train in early February. The works to extend the Hayes and Harlington bay platform have been awarded to Carillion but there is no firm schedule yet. Matt Lodge asked what the mitigation was if the bay platform extension was delayed. Howard Smith responded that this would require Plan C, either by using new RLUs or taking them from the Great Eastern. Howard emphasised though that this all puts the project further back from commencing the full services as planned (Plan A).

Howard Smith noted on Old Oak Common Depot that the fringe signalling had been completed at the end of November (enabling the depot to be connected to the main line as part of the Christmas works). All the necessary testing resource has been confirmed for the Christmas works. The depot will be brought into use in the first half of January to support Stage 2 with section A fully signalled in March and all parts of the depot signalled by May.

**4. Stage 3 Readiness**

Simon Wright updated Sponsors on the Auto Transformer Feeder Station (ATFS) failure at Pudding Mill Lane which occurred during the energisation sequence in November.



[REDACTED] CRL are scrutinising the contractor to make sure the issues don't reoccur. Simon explained that a train is needed in the tunnel to support January dynamic testing and a train with full signalling capability is needed by the 12<sup>th</sup> February to support the dynamic testing plans. Howard Smith said they were hoping to get a revised schedule from BT shortly but that BT had brought forward the CBTC signalling testing to this week at Melton test track which previously had been delayed until January.

Simon Wright explained that C610 (the systemwide contract) is behind on cable installation and the testing of SCADA. Zones 3 and 4<sup>3</sup> energisation is now expected on the 7<sup>th</sup> April with dynamic testing on the 21<sup>st</sup> April. Simon noted that this still enables the programme to use the planned blockades on the Great Eastern (March) and Great Western (May) to test the transitions from the central section to the surface railway. This is very important because it would be extremely difficult to get those possessions at a later time.

Simon Wright provided an update on stations. [REDACTED]

[REDACTED] Bond Street is still not on schedule to fully meet the July handover date. At Liverpool Street the central concourse was forecasted to be late for a long time but Laing O'Rourke has done a good job of mitigating this. At Woolwich the challenge remains with the cladding contractor Sorba whose work is extending beyond July. CRL are exploring mitigations and Andrew Wolstenholme and Simon Wright met them recently to discuss. Challenges with C660 (communications and control systems) software means that the safety management systems are running behind and C620's (signalling systems) progress on providing the necessary equipment, particularly for the transitions, is very slow.

Matt Lodge asked how confident CRL is that BT will provide the trains by the 29<sup>th</sup> January. Simon Wright said that without a reliable schedule from BT this is hard to assess. Howard Smith noted that the train performance is good on the testing rig and noted that because BT have brought forward the CBTC testing at Melton test track this will mean that CRL should have a better idea of confidence by the end of this week.

Matt Lodge asked on Bond Street and Woolwich how much of delay there was likely to be post July. Simon Wright said that Bond Street completion is likely to be October because there are challenges with the escalator and M&E schedules. At Woolwich it is only likely to be the external cladding which is delayed beyond July. Matt Lodge noted that October was very close to the December Stage 3 opening date and questioned the risks that this imports to that date. Simon Wright agreed but said that if all the internal works are complete an imperfect handover can occur in July. Andrew Wolstenholme emphasised that CRL are working very closely with the infrastructure managers in Howard Smith's teams to ensure any physical overruns do not affect trial operations. Howard Smith said that the aim is to have the tunnel fully available for trial running but there will be some residual works, such as the installation of walkways which cannot be installed whilst engineering trains are still running. Whilst these arrangements are not ideal it is all being managed.

Sponsors noted that under the revised schedule there are lots of systems to be tested in a tight window. Simon Wright responded that because CRL can begin testing the systems from February onwards they should be in a strong position by April when Zones 3 and 4 testing begins.

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<sup>2</sup> The eastern and south-eastern sections of the central section

<sup>3</sup> The western sections of the central section

## 5. Any Other Business

N/A

### Action Tracker:

No.	Action	Responsible	Target
88b/01	Howard Smith to confirm the train performance required to achieve 15tph for Stage 3.	Howard Smith	January
88b/02	CRL to prepare the affirmation on Stage 2 Plan B	Lucy Findlay and Howard Smith	January
88b/03	Sponsors to consider the affirmation once received by CRL.	Simon Adams	January



## CROSSRAIL SPONSOR BOARD MINUTES NO.87b

### MINUTES OF MEETING HELD ON

Thursday 23<sup>rd</sup> November, 10.30-11.30

Venue: TfL, 7<sup>th</sup> Floor Auditorium, Albany House, 65 Broadway

#### Present:

David Hughes*	TfL (Chair)
Simon Kilonback*	TfL
Nick Joyce*	DfT

Simon Adams	Head of Joint Sponsor Team (JST)
██████████	Secretariat

#### By invitation

Graham Stockbridge	Head of DfT Sponsorship Team
Robin Wilkin	Project Representative
██████████	DfT Sponsorship Team
Andrew Wolstenholme	CRL
Simon Wright	CRL
Howard Smith	CRL
Mathew Duncan	CRL
Lucy Findlay	CRL

#### Apologies

Matt Lodge*	DfT
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David Hughes began by noting that unfortunately Simon Kilonback and Nick Joyce had to leave the meeting early due to unavoidable and urgent meetings. The aim was to finish at 11.30 and focus on Stages 2 and 3.

#### 1. Minutes and Actions of Meeting 87b

The minutes of the last Part B meeting, held on the 23<sup>rd</sup> June, were agreed without alteration.

Actions 87b/01 (organising the December Sponsor call), 87b/05 (sharing the PAR report) and 87b/06 (comms meeting to agree lines on notional funding envelope) are complete. DfT noted that it is tracking the PAR recommendations and will work collaboratively with the JST and CRL to implement these. Simon Adams noted that draft comms lines on the notional funding envelope have been circulated and are being refined.

Actions 87b/02 and 87b/03 (Ilford Track Speed timescales and costs) are to be discussed.

Actions 87b/05 (CRL to present on confidence/risk in NR's AFC) and 87b/07 (JST paper on Old Oak Common Second Link) are scheduled for the January and February Boards respectively.

## **2. SACR 18**

David Hughes noted that Sponsors had read SACR18 and wanted to discuss the areas of Sponsor support with CRL and the narrative on the headroom to IP1. David noted that Sponsors did not agree with CRL's assessment that lower interest rates had brought the forecast costs closer to the intervention points as CRL have received cost benefits from low inflation. David also said that some of the unfunded items were factually incorrect. The decision to make RfL the central section infrastructure manager was not a Sponsor requested change but a request by Andy Mitchell (former CRL Programme Director) and David Allen (former CRL Finance Director) which was claimed to lead to significant savings of £100m. The decision to use the remaining NR delivery incentives to provide additional funding for the ONW works was made on the basis that CRL advised Sponsors that the money would be paid to NR anyway and therefore the payment was just being brought forward but had no impact on the long-term cost forecasts. Mathew Duncan noted that the delivery incentives had always been classified as unfunded change as they were not included in the Review Point 4.2 budget.

Andrew Wolstenholme noted Sponsors' concerns and responded that there were other additional CRL borne costs which were not referenced but had been included in the AFDCD without funding (such as an additional £122m for surface power traction works). Andrew said the importance for future programmes was to not allow significant change as was emphasised in Robert Jennings' 'Economies of Experience' report to the DfT. David Hughes said that the Sponsors would be noting their rebuttal and dissatisfaction with the narrative used in SACR18 in their formal response to it.

Andrew Wolstenholme noted that the final CRL SACR slide (slide 12) showed the sensitivity in the confidence level of delivering the central section's target final delivery date. He noted that whilst the confidence increases significantly with only a few days delay to this date, P-Rep had rightly pointed out the limitation that three stations are excluded. He explained that if these are included the confidence level becomes unacceptably low and for this reason CRL believe it is best to move towards readiness reporting rather than QSRA confidence levels. David Hughes agreed and noted that the 18 assumptions that enable a 71% confidence level were the areas Sponsors were most concerned about. Andrew Wolstenholme emphasised that CRL is working very hard to address these areas to ensure they do not delay Stage 3 opening.

## **3. Ilford track speeds update**

Howard Smith explained to Sponsors that CRL had continued to progress with the option to buy Greater Anglia (GA) out of five empty train movements which conflict with Elizabeth line passenger services in May 2019. Howard explained that GA have some operational costs which are being covered through a commercial agreement between CRL and GA but that GA have said they require approval from DfT to complete the commercial agreement because of the impact to the future franchise.

Nick Joyce emphasised the importance of understanding the costs to the future franchise in order for DfT to agree to the proposal and asked about timing. Howard Smith said that if possible the commercial agreement needed to be finalised before Christmas but this would be confirmed in a letter to Sponsors. Nick Joyce said DfT would do its best to respond in time to GA. Andrew Wolstenholme emphasised the importance of this deal which would be the best value for money for the Crossrail programme and have the least operational impact on the current franchise.

**Action 87b/01: CRL to provide to DfT and TfL as soon as possible information on the proposed solution, including the assumptions and any costs for the future franchise and the future Elizabeth Line operator.**

**Action 87b/02: DfT to consider the proposed solution and provide a response to the franchisee as soon as possible following receipt of CRL's information.**

#### **4. Stage 2 Operational Readiness**

Howard Smith said that Bombardier Transportation (BT) are aiming to dynamically test a Crossrail train on the Heathrow infrastructure with Alstom's lineside ETCS equipment starting on the 8<sup>th</sup> December. This would provide two weekends of testing ahead of the possessions for the Christmas works. CRL are not expecting the testing to be successful immediately but to identify the number of issues to be worked through.

Howard Smith noted that BT have realised the importance and complexity of what they have to deliver and have strengthened their team, bringing in a new integration lead and director. They are due to release a new programme shortly which CRL will do a QSRA on next week.

Beyond the train testing Stage 2 is dependent upon driver training which needs to be commenced by the 1<sup>st</sup> March. Howard noted the ongoing risk around the delivery of an ETCS simulator by March to support driver training. On ONW Howard said that the DOO CCTV installation is broadly on programme and is scheduled to be finished by January. He noted that CRL believe NR and the other stakeholders have learnt the lessons from Stage 1. Graham Stockbridge asked whether there were any remaining issues over sufficient access for Crossrail works on the surface sections. Simon Wright confirmed that NR have now secured all the possessions they need for the Crossrail works, including the Christmas works.

On the Stage 2 decision Howard noted that it was not a binary switch as Plan A has to be delivered for Stage 2 eventually. Therefore, provided that CRL have everything in place to deliver a fall-back option it makes sense to continue pursuing Plan A for as long as that remains feasible for May. Howard noted that the requirements for switching to Plan B are the driver training plans, the leasing of Heathrow Connect trains (for which Heathrow have recently re-confirmed the reservation agreement), the extension of the Hayes and Harlington platform (for which Howard said the designs look relatively simple and the work is scheduled for completion by April) and the NR timetabling process (for which Howard believed it may be possible that MTRC could use the same train paths for Plan A, B and C).

Nick Joyce asked whether Heathrow were content with the proposals. Howard Smith said they were sighted on all the proposals (up to John Holland-Kaye, Heathrow CEO) and have asked that CRL operations commit to running the inter-terminal shuttle.

Simon Wright noted that his only additional concern was the certifications and the Approval to Place into Service (APIS) from the ORR. Howard Smith agreed but said these were less onerous for Stage 2 than Stage 1 and that the ORR remain cooperative provided the various parties can deliver what the ORR require in a timely way.

Sponsors agreed for the December Sponsor Call to remain for an update on Stage 2 but not as a formal decision point.

## **5. Stage 3 Operational Readiness**

Simon Wright explained that CRL were planning to energise on the 15<sup>th</sup> November but there had been a failure in the Generic Electric equipment at Pudding Mill Lane, caused by a short circuit in the secondary wiring. This will delay the start of testing in Zones 1 and 2 until January. However, there are some advantages in that the railway will remain de-energised for longer enabling CRL to focus on progressing the construction work. It also provides longer for BT to provide a CBTC enabled train. Zones 3 and 4 will be energised in April.

Simon Wright noted that there has been positive progress on stations since the last Sponsor Board. Paddington has had a strong recovery in the last three weeks with the injection of new leadership from CRL and the contractor. The commercial negotiations with Costain Skanska Joint Venture (CSJV) are ongoing. Simon explained that Sorba (a cladding contractor) remain a concern for Bond Street and Woolwich because whilst they do excellent work they have not been able to increase their productivity to meet the programme delays. Tottenham Court Road is almost physically complete and Simon Wright and Andrew Wolstenholme are due to do a 'white glove inspection' at the end of the year and Farringdon is not far behind. Liverpool Street has also seen excellent progress with the completion of Moorgate Shaft.

On the central section signalling Simon Wright noted that there is yet to be a date when the CBTC train will be tested on the Melton test track and there are challenges with Siemens communications software.

Simon Wright noted that CRL have made progress on the asset information but that it's an enormous task and relies on the Tier 1 contractor pushing the Tier 2 and 3 contractors for their documentation. CRL will continue to press to receive the information in a timely manner and to the right quality.

Andrew Wolstenholme noted that the delay of energisation had been a great disappointment. He emphasised that CRL were influencing GE at the right senior levels to ensure this doesn't happen again in the future. Andrew also updated the Sponsors on Lakesmere, a contractor who has recently gone into receivership and who were critical to Paddington, Liverpool Street and Whitechapel station completion. Andrew praised the work of Paul Grammer (the Commercial Director) who has worked to support Lakesmere and avoid what could have been a three-month delay to the programme. Andrew noted there may be other contractors facing similar issues in the next six months which CRL will actively manage as although they may be small contractors they can have a significant programme impact.

Graham Stockbridge noted the increasing programme risks and said that whilst Sponsors appreciate that CRL might not have been able to predict the energisation issue there was a growing feeling amongst Sponsors that in the future they could be faced with a delayed or sub-optimal opening. Graham asked if CRL shared Sponsors' concerns. Andrew Wolstenholme assured Sponsors that everything is in place to make sure there will be a timely and stable opening. Andrew noted that CRL have worked hard to bring forward Dynamic Testing to provide sufficient time to allow for unexpected issues. CRL believe they can achieve handover in July so that the operations team have five months to prepare for passenger services. Andrew emphasised that CRL are not complacent and are doing all they can to mitigate the risks, and that it remains too early at the moment to consider delays to stage opening.

David Hughes asked when would be the time to consider this question in more detail. Simon Wright responded that in 4-6 weeks when CRL has produced an updated Master

Operational Handover Schedule it will be in a better position to assess confidence in Stage 3. He also noted that the July handover date will not be a clinical handover but a phased cascade.

## **6. Any Other Business**

Howard Smith noted the risk that NR are planning to deliver ETCS to Paddington for December 2019 which may leave insufficient float ahead of Stage 5 opening. Howard also noted that MTRC now needs to stable trains at Ilford depot for Stage 3 which means that the adjustment of wire heights in the Ilford depot needs to be brought forward. Matt White (CRL Surface works Director) is raising this with NR to see whether the works can be accelerated.

David Hughes noted that the £84m approval had been received from the Secretary of State. Andrew Wolstenholme noted his thanks and said this confirmation was useful ahead of the High Level Forum where the issue of the timing of the Great Western stations (for which the £84m financial approval was needed) is likely to be raised.

Finally, David Hughes expressed his gratitude on behalf of both Sponsors to [REDACTED] and Sian Evans who are leaving the JST at the end of this year. David said that both would be a great loss and have had a real impact on the project in their time, with Sian having worked on the project since around 2009.

**Action Tracker:**

<b>No.</b>	<b>Action</b>	<b>Responsible</b>	<b>Target</b>
87b/01	Action 87b/01: CRL to provide to DfT and TfL as soon as possible information on the proposed solution, including the assumptions and any costs for the future franchise and the future Elizabeth Line operator.	Howard Smith	End of November / Early December
87b/02	Action 87b/02 DfT to consider the proposed solution and provide a response to the franchisee following receipt of CRL's information.	[REDACTED] and DfT Sponsorship	End of December / Early January

## CROSSRAIL SPONSOR BOARD MINUTES NO.86b

### MINUTES OF MEETING HELD ON

Monday 30th October 2017, 10.30-12.00

Venue: St James Room, 11<sup>th</sup> floor (11B2), TfL Palestra building, Blackfriars Road

#### Present:

David Hughes*	TfL (Chair)
Simon Kilonback*	TfL
Nick Joyce*	DfT
Matt Lodge*	DfT

Simon Adams	Head of Joint Sponsor Team (JST)
[REDACTED]	Secretariat

#### By invitation

Graham Stockbridge	Head of DfT Sponsorship Team
Robin Wilkin	Project Representative
[REDACTED]	DfT Sponsorship Team
[REDACTED]	JST
Andrew Wolstenholme	CRL
Simon Wright	CRL
Howard Smith	CRL
Matt White	CRL
Lucy Findlay	CRL

#### Apologies

Matthew Duncan	CRL
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### 1. Minutes and Actions of Meeting 83b

The minutes of the last Part B meeting, held on the 23<sup>rd</sup> June, were agreed without alteration. All actions were complete.

### 2. Stage 1 Lessons Learned

Howard Smith presented the lesson learned slides, including the six areas identified for improvement and the four key activities that drove delays to Stage 1. Howard explained the actions CRL have taken on each of the four areas and that nearly all of the recommendations have been actioned. Howard noted that the Programme Delivery Boards have been restructured to concentrate on stage opening and that CRL were focussed on getting visibility of the key issues and increasing the speed of information and reporting.

Simon Wright explained that John Boss was asked to undertake the review as he knows the project well and his focus of interviewing people and getting under the skin of the issues in a non-attributable way was useful for reviewing Stage 1.

Matt Lodge asked how CRL will provide earlier visibility to Sponsors given that the delay to Stage 1 was not communicated until very close to the planned opening date. Howard

responded that there were two aspects to this: the first is knowing that there is going to be a delay and the second is how you ensure sufficient visibility of this. Howard noted that even he didn't anticipate there would be a one-month delay to Stage 1. CRL have learnt the lessons in ensuring ensure the right metrics are available and that the operator is involved much earlier in determining the acceptance criteria.

Simon Wright noted that the operational readiness reporting in the CRL Board Reports provides monthly updates to Sponsors but are less useful when the programme gets close to an opening date and issues are constantly changing. Simon also noted that whilst reporting can be overly optimistic there is a balance the CRL executives have to manage between being realistic and promoting a 'can-do' attitude across CRL and its delivery partners and contractors. Matt Lodge noted that as we get close to the other stages opening we need more responsive reporting.

Andrew Wolstenholme said that the delay to Stage 1 was a disappointment but that lessons are now being adopted for Stage 2 which should improve performance.

### **3. Stage 2 Operational Readiness**

Howard Smith gave an overview of the 'red' operational readiness items for Stage 2. CRL are scrutinising the performance of testing of an ETCS enabled train by Bombardier Transportation (BT) at the Old Dalby test track. Due to challenges the testing of the train on the Heathrow infrastructure has slipped to the 17<sup>th</sup> November. Howard explained that the train was due to undertake six weeks of testing at Heathrow and it is very difficult to predict how that testing will go. David Hughes noted that Sponsor Members understood why a confidence percentage figure was not being presented for Stage 2 due to the uncertainty over train software.

Howard explained that the bringing into use of Old Oak Common depot required four railway lines to be connected to the depot, two at the end of November and two as part of the Stage M works at Christmas. The connection of the depot at Christmas relies on the November works being completed successfully and it is not certain yet whether Atkins will be ready to complete the works. The challenge at Christmas is about the number of signalling testers available, which Simon Wright agreed was a serious issue. Sponsor Members checked whether any support was needed. CRL said support might be needed this week in the event that prioritisation of resource was required and CRL would advise if so. Howard explained that if the signalling connection to the depot is not completed then the operator will have to hand signal trains in and out of the depot which restricts the number of trains that can move in and out.

Nick Joyce noted that if CRL do not provide a percentage confidence reporting for Stage 2 we need to be really clear on the dates for a decision on Plan A versus a fall-back option. Howard Smith said that this was not a binary decision as if we decide to go with Plan A we need to have Plan B available and if we go with Plan B we will need to identify a plan to run C345 full length trains to Heathrow at a later stage. There are some dependencies that will affect the timing such as the agreement of a timetable with NR, plans for MTR drivers and agreements with Heathrow and Siemens over the leasing and maintenance of the Heathrow Connect trains. Howard noted that they were hoping to get reservation agreements in place with Heathrow to lease the Heathrow Connect trains as soon as possible, hopefully this week, and to follow-up with a maintenance agreement with Heathrow.



David Hughes agreed that CRL might need to keep progressing both plans in tandem but that by the end of the year there should be a recommendation from CRL to Sponsors on the default option and rationale for this. This should include confidence in the default option and certainty that Plan B is operable with agreements in place. Howard Smith agreed.

**Action: JST to organise a Sponsor Board call in December for CRL to present its recommended decision for Stage 2.**

Simon Adams asked whether there is a risk that Heathrow and Siemens might try and exert a commercially unfavourable agreement. Howard Smith said that CRL know the operating costs of Heathrow Connect and what it will cost to operate six units. They do not expect Heathrow to make a completely unreasonable offer.

Nick Joyce asked about Plan B and Plan C. Howard Smith explained that Plan B required Full Length Units (FLU) whereas Plan C was a fall-back in the event that the FLU train software was not ready and involved taking Reduced Length Units (RLUs) from the Great Eastern Main Line. Plan B would require the Hayes and Harlington bay platform to be extended to allow FLUs to turn-back, and both plans might involve a small change to the timetable to allow the turning back of Crossrail trains at Hayes and Harlington rather than Heathrow. Plan B would also require the FLUs to be authorised on the Great Western Main Line.

Matt Lodge emphasised that if there is any consequential impact to Great Western Railway (GWR) CRL need to make this known immediately. Matt Lodge noted that the current Plans B and C do not affect GWR. Howard Smith agreed and said that Mark Hopwood (MD of GWR) had called him to emphasise this as well.

David Hughes said that as well as understanding the residual risks of the different options he wanted to understand the cost implications of Plan B or C. Howard Smith noted that he expected the net costs to be low. This will involve the operational costs of leasing and running Heathrow Connect and varying the MTR contract but not to a significant extent. There is a small loss of revenue from running a smaller train. Howard anticipated that some of these costs could be netted off against a claim for liquidated damages against BT which Howard felt BT would struggle to argue against.

**Action: CRL to set out costs and residual risks for Plan B and C as part of any proposal.**

#### **4. Stage 3 Operational Readiness**

Simon Wright began the discussion by noting that CRL had recorded their best health and safety performance to date at Period 7.

Simon noted that whilst Dynamic Testing had been delayed from 1 November, CRL did diesel haul a Crossrail train into the tunnel at the weekend which is now parked at Abbey Wood. Energisation is now scheduled for the 15<sup>th</sup> November with Dynamic Testing scheduled for the 28<sup>th</sup> November in Zones 1 and 2 (the eastern and southern parts of the central section). A key 'red item' is having a train enabled with CBTC. The train will now be ready early in the New Year and in the meantime, compatibility testing of the train with the central tunnel infrastructure will be undertaken. The power then will be turned off over Christmas to progress with the construction works.

Matt Lodge asked how the train production was going. Howard responded that the production was going well and BT have built 23 RLUs with 8 accepted at Ilford. If everything was going to plan 15 units would now have been accepted. RfL have refused to accept any more until the outstanding issues have been resolved.

Graham Stockbridge asked how worried CRL were about BT and noted that the Stage 1 lessons learned report had stated that many trains were delivered without the 3000 miles of fault free testing being undertaken. Howard responded that they were very worried and were closely managing BT. Howard said though that he did not believe another provider would have performed better given the complexity of delivering a new train control management which is the first of its kind. He noted that this will be of benefit to future operators.

Simon Wright noted that the focus would be switching to the installation of train systems in Zones 3 and 4 ahead of energisation of the entire central section on the 5<sup>th</sup> February. Simon said that the stations were largely going well with Tottenham Court Road due to be completed by Christmas. [REDACTED] and Bond Street and Woolwich have ongoing concerns about the completion of internal cladding ahead of staff training. The cladding contractor (Sorba) was granted access late and haven't been able to speed up as they are fixated on quality. The escalator contractor (Otis) has also been poor in some areas and CRL have a senior management meeting with them later today to try and address this.

Ilford Track/Line Speeds was discussed. CRL explained that they have a new proposal to buy the operator Greater Anglia (GA) out of the paths which conflict with the Crossrail timetable and therefore avoid the need to upgrade the track at the London end of the depot. This will result in higher operational costs for the franchise but these are likely to be lower than the cost of construction and the associated disruption. Furthermore, CRL believed that the operational costs are likely to lessen when GA introduce their new fleet of trains. Crossrail noted they had an in-principle offer from GA over the weekend requesting a lump sum to cover their operational costs over the duration of the current franchise. CRL will come back to the Department once it has been agreed with GA as it may affect future franchises and will need to be incorporated within the assumptions for those franchises.

**Action: CRL to confirm to Sponsors in November when it will present a proposal on Ilford Track Speeds for agreement with the Department for Transport and Sponsor Board.**

CRL discussed ETCS requirements in the West and noted that the GRIP 4 modelling is due at the end of the month on the delivery of ETCS between Heathrow airport junction and Paddington. CRL noted that whilst the ORR say that ETCS must be commissioned by December 2019 CRL believe it may make it more difficult for other projects and operators and MTRC are concerned that it might lead to a late change. CRL acknowledge it is for NR to lead and determine whether it is needed or whether an extension of the derogation from the ORR could be obtained.

Andrew Wolstenholme endorsed what Simon and Howard had said about the key risks. He emphasised that CRL were looking carefully at the critical path and the stage delivery confidence. [REDACTED]

## **5. Surface Works**

Matt White gave an overview of the surface works. He explained that NR are forecasting to deliver Key Output 4 (all Western infrastructure complete for Stage 2) in approximately six weeks. Three platforms have been delayed until mid-January, but these are not a priority and CRL have agreed to this.

On the DOO CCTV NR are behind on the installation of the leaky feeder cables and ahead on the installation of cameras. The works on gauge clearance are progressing well and have switched from 'red' to 'amber/green'.

The risk to Stage 2 surface works remains with executing the work within the available possessions. Although the work is not complex the challenge for NR is that they only have a short window each night to complete the work which equates to around 40mins to install a camera. Simon Wright noted that any reduction in access will impact upon the programme. Sponsors asked how CRL were managing this to ensure they had oversight of NR's decisions. Matt White said he is now attending the Great Western Programme Board along with the Department where any decision by NR to reprioritise access should be made.

Matt White explained the Christmas 2017 works for Crossrail. On the East the Gidea Park sidings will be extended. On the West NR are undertaking enabling works for the new stations and completing 'Stage M', a data change of the signalling which affects over 900 theoretical routes between Paddington and Acton. NR are building up to this week by week to ensure they are prepared. Howard Smith asked whether NR have got all the signalling testers they need and Matt White responded that all resourcing is 'green' except for OLE testers which is being addressed by NR.

Matt White noted that Abbey Wood station opened for the public as planned on the 23<sup>rd</sup> October and the station was well received. There is some remaining work, including commissioning all of the lifts, and final completion of the station is expected on the 10<sup>th</sup> December.

At Pudding Mill Lane NR have successfully commissioned the new section of slewed track by the portal and the full signalling commissioning is scheduled for 4<sup>th</sup>/5<sup>th</sup> February.

Matt White noted that the AFC is due to increase to £2530 with the additional £80m funding request from NR which was reported to CRL in NR's Period 6 report. Matt White noted that NR maintain some forecasted savings and efficiencies, many of which are assumptions around what risk allowances will not be needed. For example, NR are holding Easter as a contingency for the Christmas works. David Hughes expressed the need for more granular information on CRL's confidence in the revised AFC and the efficiencies which are built into this.

**Action: CRL to present at a future Sponsor Board on the confidence and risk in NR's AFC and projected savings and efficiencies.**

Matt White noted the key dates for the Western station contracts, with the contracts planned to be awarded in May, and works to be undertaken between June 2018 and September 2019.

## **6. Any Other Business**

Matt Lodge noted that the Project Assurance Review has been completed and the reviewers have rated the programme as 'amber/green'. There were some challenges they identified such as more responsive reporting to reflect the stage in the programme and Sponsors will share this report with CRL to work together on implementing the recommendations.

**Action: DfT Sponsorship Team to share the PAR review report with CRL and P-Rep.**

David Hughes noted that Sponsors and CRL need to consider how the cost position is presented in public given the recent increases in the AFCDC and ONW AFC and the need for all organisations to be aligned and on the front foot. Andrew Wolstenholme agreed and noted that CRL have received several Freedom of Information requests on the cost position which could be used to support this.

**Action: JST to organise a meeting with DfT, TfL and CRL press offices to agree the public statement on costs against the notional funding envelope.**

Lucy Findlay asked the Department if the Secretary of State had given financial authority for the £84m of the additional funding. [REDACTED] responded that further advice is with the Secretary of State recommending that financial authority is issued and that she is in close contact with Matt White over this. Nick Joyce emphasised that this is receiving senior attention within the Department.

Lucy Findlay asked whether there is an agreement on the funding for the Old Oak Common Second Link. Sponsors agreed to take this away to be discussed between the JST and CRL.

**Action: JST to prepare a paper on the Old Oak Common Second Link for the January/February Sponsor Board.**

**Action Tracker:**

<b>No.</b>	<b>Action</b>	<b>Responsible</b>	<b>Target</b>
87b/01	JST to organise a Sponsor Board call in December for CRL to present its recommended decision for Stage 2.		November
87b/02	CRL to set out costs and residual risks for Plan B and C as part of any proposal.	Howard Smith	November
87b/03	CRL to confirm to Sponsors when it will present a proposal on Ilford Track Speeds for agreement with the Department for Transport and Sponsor Board.	Howard Smith	November
87b/04	CRL to present on the confidence and risk in NR's AFC and projected savings and efficiencies.	Matt White	January / February
87b/05	DfT Sponsorship Team to share the PAR review report with CRL and P-Rep.	Matt Lodge	November
87b/06	JST to organise a meeting with DfT, TfL and CRL press offices to agree the public statement on costs against the notional funding envelope.	Simon Adams	November
87b/07	JST to prepare a paper on the Old Oak Common Second Link for the Sponsor Board.	JST	January / February

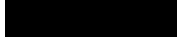
**CROSSRAIL SPONSOR BOARD MEETING No.83**

**MINUTES OF MEETING HELD ON**

**FRIDAY 23<sup>RD</sup> JUNE**

**VICTORIA RM, 4<sup>TH</sup> FLOOR, TFL PALESTRA BUILDING**

Present:

Ian Nunn*	TfL (Chair)
David Hughes*	TfL
Nick Joyce*	DfT
Matt Lodge*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (secretariat)

\* Voting Members

By invitation:

Graham Stockbridge	DfT
Robin Wilkin	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
Mathew Duncan	CRL
Simon Wright	CRL
Lucy Findlay	CRL

Apologies:

None

MEETING PART B

**1. Minutes and Actions of Meeting 82**

The draft minutes of meeting no 82 (Part B) were **AGREED** as tabled.

There were no open actions to discuss.

**2. SACR Report & Operational Readiness update**

Updates on these items were taken together.

Ian Nunn introduced the agenda item by setting out the concerns of the Sponsor Board members following their review of SACR 17. Costs are increasing and confidence levels in staged delivery is reducing, particularly in light of the recent delay to Stage 1, and in view of these serious concerns, Ian Nunn proposed that the board meeting did not go through the report as usual

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but instead, invited Andrew to respond to this overall reading of the SACR 17, and to update Sponsors on the findings of the recent independent commercial and cost report commissioned by the CRL Chairman.

Ian Nunn noted that it was important to Sponsors to hear an honest appraisal of where the stresses and strains of the project lie, as everyone should consider themselves to be part of the same collective working for the same aim.

Andrew Wolstenholme agreed with that approach, and the need for openness and honest discussion. He considered CRL to be clear regarding their responsibility for the overall programme management of Crossrail but also highlighted that there nevertheless remain aspects of the project over which their control is more limited such as, their lack of a contractual relationship with Bombardier. However, he did not consider there to be any divergence in the views of CRL or the Sponsor in this respect.

The discussion moved onto the launch of Stage 1. Howard Smith set out that whilst he recognised the month delay and the disappointment in this, the launch went very well and was technically extremely good. He agreed that it had taken more time and been more challenging to achieve the relevant approvals than originally envisaged. For example, with the DOO CCTV system, resolving the final issues was significantly more challenging and time-consuming than those initially.

Andrew Wolstenholme noted that in terms of a lesson learned review, CRL intend to bring back an independent reviewer, John Boss, who has previously completed very good reviews on other parts of the project. He is expected back during week commencing 3<sup>rd</sup> July to undertake this work, however CRL's sense is that they need to be more granular or intrusive of other parties, and also place a greater focus on the interoperability reviews. Andrew noted that the ORR did what they said they would do, once good information was provided to them.

Ian Nunn asked whether there were lessons to be learned on working better together. Howard Smith replied that he felt that more time-bound and transparent plans are required, and even more clarity on roles and responsibilities, and this was evident in installation and approvals of the DOO CCTV system. Different groups did retreat into their trenches too much and the operations team spent more time arbitrating this than should have been required.

Ian Nunn noted that one perspective on the stage 1 delay was to acknowledge the first stage was the right time to suffer these issues and to put them right. Howard Smith agreed and also noted that the project had kept people's trust throughout the difficult period, including that of the unions. He felt that it would have been possible to have commenced the train operations two weeks earlier, but this would likely have irreparably damaged relationships with certain important stakeholder group.

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Simon Wright reported that CRL have now put in place a senior programme manager, John Williams, to bring all the pieces of Stage 2 operational readiness together. The team will be responsible for integration and look across the whole of the Stage 2 programme to investigate and interrogate activity, so that CRL are always aware of what measured outputs are expected and what risks are occurring within any one period.

Matt Lodge asked under whose remit does a focus on software development fall. Howard Smith replied that this falls under the Rolling Stock Development team in Phil Clarke and Dave Sherrin with input from Phil Threlfall, and noted that a deep-dive on Bombardier's Stage 2 software development plan was currently underway at Bombardier offices, resulting from the fact that they have not been meeting their targets for some time.

Simon Wright agreed, commenting that CRL do not have an increased level of confidence in BT and that the reason the team is there is to get a sense of the real probability of them hitting their programme.

Andrew Wolstenholme reminded the Sponsor Board that it was not long ago that a revised plan for the signalling system on the Great Western railway had to be developed as there was too great a concern around the feasibility of installing ETCS into Paddington Station. These sort of considerations are exactly what the Sponsor Board is here to make.

Ian Nunn asked who was on the list of critical players regarding Stage 2 and queried how we get those groups collectively engaged. Simon Wright replied that it's BT, HAL, and NR, and reassured that there are lots of meetings already in place each period to do so. Nevertheless, it is complicated determining who is responsible for planning, executing and evaluating the testing on something like DOO CCTV, and to determine who makes the judgment about whether the picture is good enough. However Simon Wright reflected that this is CRL's day job and that there is no shortage of communication, and confirmed that CRL would tell Sponsors if there was insufficient resource in any place to do so; everyone needs to deliver against their commitments, there is no small task ahead but CRL are determined to do it.

Mathew Duncan continued, providing an update on the independent commercial and cost review and overall cost position. He outlined that the independent review was commissioned by the CRL Board, took place pre-SACR around Period 12 and was undertaken by two independent reviewers over a 3-4week period. Nine findings were raised which both reinforced the fact that CRL have a high quality process for financially managing the project, but also noted that on projects such as Crossrail, the AFCDC should be considered as having a range of possible outturns. This is reinforced by the way in which the Crossrail P50 AFCDC is converging on the P80.

Ian Nunn asked what the cost trend looked like, in view of a £200m increase in the last SACR period. Mathew Duncan reported that much of the cost increase has been driven by the supplemental agreements which cleared out



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commercial history. CRL also took a look again at the risk allowance remaining versus what was still there in the programme and it was considered quite lean. Mathew Duncan did not consider that the project had yet reached a completely stable cost base, there remained challenges with a small number of contracts.

Simon Wright added that there are principally three contracts which can still drive cost increases. On the systemwide contract there remains a six week challenge in the schedule to achieve dynamic testing in zones 3-4 in early 2018 and to resolve this will likely bring commercial challenge. Additionally, there is cost pressure on the contracts for Whitechapel and Woolwich station, the latter for which there has never been a supplemental agreement finalised.

Ian Nunn asked about the relationship between delivery milestones and cost and whether cost pressures could be alleviated if relief was given on milestones. Mathew Duncan confirmed that this was not the case, and that the commercial and cost review itself supported this. Andrew Wolstenholme reiterated that delivering the MOHS is the best way to control cost achieving clinical demobilisation.

Andrew Wolstenholme commented that although there are challenges out there the project remains on track, to time and within the funding envelope. Sponsors should be challenging and inquisitive of the risks, but he also highlighted that there are matters that CRL need help with and one of those is the funding of the ONW.

Matt Lodge provided an update on the position, noting the funding contributions found by CRL and NR which alleviates the initial position and outlined that the Department will consider the funding of the remaining £84m as part of the financial management exercise in July. Andrew Wolstenholme can expect a response back from the DfT to confirm this shortly.

Nick Joyce asked whether Sponsors could have sight of the independent commercial cost review, and Andrew agreed to check with Terry Morgan who commissioned the report. Ian Nunn added that Sponsors need to respond to CRL on the SACR and will do so in writing very shortly, and concluded by saying that he hoped one of the key takeaways from the meeting was that both Sponsors and CRL are recommitted and redoubling their efforts to delivering the milestones set out.

### **3. AOB**

Mathew Duncan noted that there remains an outstanding issue to be resolved on the cost of the installation of the second link at Old Oak Common.

Finally, on behalf of both Sponsors, Ian Nunn thanked Sarah Johnson for all her work and commitment to the Crossrail project over many years, in this her last meeting. Andrew Wolstenholme added his thanks on behalf of CRL.

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There was no further other business.

\* \* \* \* \*

No.	Action	Responsible	Target
83/01	CRL to confirm the sharing of the independent commercial and cost review report.	Lucy Findlay	10 <sup>th</sup> July


**CROSSRAIL SPONSOR BOARD MEETING No.82**

**MINUTES OF MEETING HELD ON**

**THURSDAY 20 APRIL 2017**

**CROSSRAIL, 8<sup>TH</sup> FLOOR, 1 WESTFERRY CIRCUS, CANARY WHARF**

Present:

David Hughes*	TfL (Chair)
Matt Lodge*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (secretariat)

\* Voting Members

By invitation:

Graham Stockbridge	DfT
Robin Wilkin	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
Mathew Duncan	CRL
Simon Wright	CRL
Lucy Findlay	CRL

Apologies:

Bernadette Kelly	CRL
Ian Nunn	TfL

MEETING PART B

**1. Minutes and Actions of Meeting 81**

The draft minutes of meeting no 81 (Part B) were **AGREED** as tabled.

There were no open actions to discuss.

**2. Operational Readiness**

Howard Smith provided an update on operational readiness. Operational performance of TfL Rail remains very impressive. Timetabling work and infrastructure management recruitment continue to progress well.

Software and assurance remain the main areas of focus. Final Design Overviews, which bring together the assurance documentation, are fully under way involving technical and operational staff.

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Simon Wright added that half of the FDOs had now been carried out, and it was important to CRL to keep to their timetable and complete them as planned, even if it is known that there are issues outstanding going into them. CRL intend to add their FDO tracker to the next CRL board report, and all red-rated issues that arise from the FDOs have a timetable for resolution. The FDO's are proving helpful in building justifications or solutions to issues which can be generically applied to others, and this will help improve the overall quality of assurance documentation that will go to the final assurance bodies such as the RAB-C. In response to a question from David Hughes, Simon Wright confirmed that RAB-C comprises RfL and London Underground staff with an independent chair.

Graham Stockbridge asked how the ORR is performing as a key assurance body. Simon Wright confirmed that engagement with the ORR was going well so far, but it was still early days. The ORR seems to value the frequent dialogue CRL are maintaining with them. Matt Lodge noted that he has a quarterly meeting with the ORR at which they would typically flag any issues that are concerning them, but none has been raised yet.

Andrew Wolstenholme wondered how the Thameslink project was progressing regarding ORR approvals given that this project has the same or similar opening time to Crossrail in December 2018. Matt Lodge noted that for Thameslink, the December date relates to a timetable ramp up rather than the infrastructure delivery, the approvals of which would have all been completed before that point.

Howard Smith continued his update. The trains are still performing well in testing. 002 train has gone back to Derby, and 006 unit is arriving at Ilford to be alongside 005. The final software appears to be functioning including door operations and passenger information. MTR start formal driver training next week. Howard Smith felt that the ORR was prepared to turn their assurance review around with promptly as long as the information submitted to them was sound.

The DOO CCTV system remained the main concern. All physical works were completed by 28<sup>th</sup> February, but it has experienced issues with its operation since then. Further physical alterations took place last weekend, and it appears today that the full system is working between the train and the platform infrastructure. However, a large team of staff from across Bombardier and Network Rail are stopping at any platforms on which the system is still not functioning adequately to undertake any necessary fixes.

All stakeholders remain committed to Ilford depot being operational for 23<sup>rd</sup> May and this remains on track.

Matt Lodge asked what the fleet introduction programme looked like, and Howard Smith outlined that there will only be one train running into June, and technical staff will be present on the train to provide support for any issues that arise.

Matt Lodge asked what reporting back there will be after the train starts on May 23<sup>rd</sup>. Sarah Johnson commented that she would expected to see an update on the train performance with the operational performance section of the CRL periodic board report.

Howard Smith continued, providing an update on Stage 2. A positive mobilisation launch event was recently held for Stage 2 with key delivery partners and stakeholders coming together on the Great Western to discuss and plan how they will work together over the course of the next year.

However, there is now an 8 week delay to beginning the testing of the interface between the Stage 2 signalling systems ETCS and the train control management system. An upcoming telephone conference is scheduled involving Mark Wild of TfL which will test the Alstom / Bombardier recovery plan.

A letter from Great Western Railway has been received confirming the commitment to remove the second link at Old Oak Common by 30<sup>th</sup> Sept 2017, which has allayed concerns around some critical aspects of the programme for Stage 2 completion.

### **3. Project Update**

Andrew Wolstenholme provided an overall project update. He noted that the timing of the meeting was slightly out of sync with the periodic reporting, coming only very shortly before the new Period 13 report was circulated to Sponsors. He would look to provide an up to date picture of progress based on this.

He thanked the Sponsor Board for coming to Canary Wharf and holding the meeting at the base of the Crossrail Integration Facility since the residual risks to the programme predominantly reside in this building, that is, building the systems architecture, delivering against the Crossrail integrated test plan and transferring the results of the Zone 1-2 early dynamic testing to Zones 3-4.

Health & Safety performance remained strong, with RIDDOR AFR at a new low of 0.08. Whilst CRL target zero, this was a commendable position to be in. Five contractors are on the edge of a million work hours without lost time. As CRL move into a new year, the bar will continue to be set higher with to focus on minimising the potential of a lost time incident. It was important to CRL not to dwell on self-promotion, but it was appropriate to recognise the achievement.

Track installation is 88% complete, with floating track slab now complete. The remaining 5.8km section between Farringdon and Tottenham Court Road is being completed by the concrete train at around 200m per night with an aim to move the train out by the end of May. The track at the eastbound platform at Whitechapel will then be completed manually. Platform screens doors are

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being installed and tunnel preparation progressed steadily all with a focus on reaching early dynamic testing in November. The more time that is spent on testing in Zones 1-2 will be of inherent value to the subsequent testing in zones 3-4.

One of the key milestones in 2017/18 will be the handover of the assets and the areas which remain of primary focus are Woolwich station, Bond St stations and the progress of C610 system-wide installation. [REDACTED]

Andrew Wolstenholme reported that the project has experienced a period of cost instability. The breach of IP1 at Period 12 was £79m and he reported that further cost growth would be seen in Period 13 which would increase the breach to around £200m. Such increases were inevitably not desirable but CRL's ambition and focus was on reaching a stable cost position. He noted that the CRL Chairman Sir Terry Morgan had initiated an independent cost review of the AFCDC.

In relation to the On-Network Works, Andrew Wolstenholme recognised that productivity has stepped up in recent months and progress looked good compared to the position 6-8 months ago. The works at Shenfield over Easter have gone well, coupled with the achievement at Christmas.

Simon Wright continued. Dynamic testing in Zones 3-4 is scheduled for February 2018, and CRL have work to do to find an M&E delivery plan in the central section that can achieve that date. Progress in most stations is in good shape, with the exception of Paddington where productivity has continued to be poorer, Bond Street and Woolwich. Woolwich has been a difficult contract for some time, but CRL now have a schedule that works and it is in a much improved position in the last 4 weeks. Signalling and communications installation was progressing without concern at the moment, and escalators have begun to be installed from the TfL framework.

Andrew Wolstenholme reported that he had recently met Mark Carne to discuss the funding challenge around the On Network Works and how they would work to respond to Bernadette's request in early April for them to jointly review the position. He noted that CRL did not consider NR's early suggestion to remove stations from scope to be acceptable or in line with the ambition of a world class railway, but they would continue to work through options. Andrew Wolstenholme indicated that they were aiming to give a response back to Sponsors in two or three week's time.

Andrew Wolstenholme provided an update on the impact of IR35 legislation which had been the basis of their Material Event Notice. He reported that of 231 individuals that were subject to the legislation, 35 had left the project, and CRL were now focussing on those residual individuals who remained undecided. He considered that it was right for CRL to highlight the risk that this might have posed, but after proactive management by CRL and some

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good support from Human Resources staff in CRL and TfL, it was unlikely that the project would feel a major management impact.

There was nothing of note to report around industrial relations.

### **4. AOB**

There was no other business.

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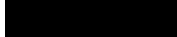
**CROSSRAIL SPONSOR BOARD MEETING No.81**

**MINUTES OF MEETING HELD ON**

**THURSDAY 16 FEBRUARY 2017**

**RM H3 DFT, GREAT MINISTER HOUSE, HORSEFERRY ROAD**

Present:

Ian Nunn*	TfL
David Hughes*	TfL
Bernadette Kelly*	DfT (Chair)
Matt Lodge*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (secretariat)

\* Voting Members

By invitation:

Graham Stockbridge	DfT
Robin Wilkin	Project Representative
Andrew Wolstenholme	CRL
Danny Fox	CRL (for Howard Smith)
Mathew Duncan	CRL
Simon Wright	CRL
Lucy Findlay	CRL

Apologies:

Howard Smith	CRL
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MEETING PART B

**1. Minutes and Actions of Meeting 80**

The draft minutes of meeting no 80 (Part B) were **AGREED** as tabled.

The one open action relates to an operational readiness update which is dealt with on the agenda.

**2. Operational Readiness**

Danny Fox, deputy director for Operations, provided an update to Sponsors on operational readiness. TfL Rail continues to perform well with Period 10 PPM at 96.2%. Staff recruitment has been successful so far, despite being up against the market of higher staff salaries at Network Rail and London Underground. With the Elizabeth line being a brand new railway, with new signalling systems, there is a need to create its own new rule book and



## OFFICIAL – SENSITIVE COMMERCIAL

procedures, with training to be tailored around this. Driver training is around 10-12 months long.

The output of the trail model for the timetable is expected in the next few weeks which will give confidence that the timetable can achieve 92-95%. It's the fifth version of the model so is not expected to throw up any surprises. The paper around the enhanced services is scheduled to be taken at the March TfL Board.

Regarding train testing, train unit 002 ran in the day for the first time this week, and is clocking up mileage well. The delivery of 005 unit to Ilford – the first 'sale' unit - is now scheduled for 27<sup>th</sup> February, slightly behind the original date of 22<sup>nd</sup> February. The train received a further software update whilst at Derby and there was a delay in getting a train crew to take it to Melton, resulting in it being slight delayed going to Ilford. There is no significant issue with this.

The successful completion and handover of DOO CCTV kit both on the platform and within the train cab remains a primary area of focus for Stage 1 opening. The DOO CCTV system that is being used on the Elizabeth line sees the train effectively talking to the platform. DOO CCTV is already in use on the Great Eastern route now, but the new DOO CCTV installation is a significant upgrade to what is there at the moment. This is different to the Great Western route, which does not operate DOO CCTV at all at the moment.

Informal feedback from drivers who have gone into the full cab simulator has suggested that they have been very impressed with the new system and its usability. It's a manifest improvement in quality to the system that is currently in place. Although testing of a class 345 train took place at Harold Wood on 31 January, there is a programme of testing scheduled at all stations and this will provide the confidence in the system across the route.

Ilford Depot works remain on track to complete in May. The blockade works on the Great Eastern route are going well. GRIP2 design work is underway for the Ilford depot turnout speeds and this is on track to report back to CRL in April.

For Stage 2, some difficulties have been experienced in getting ETCS and TCMS on the train to work together, but positively Siemens and Bombardier are now working better together as organisations.

Discussions with Great Western Railway continue around confirming the removal of the second link into Old Oak Common by Sept 2017. CRL are offering GW use of 5 out of 6 sidings at Maidenhead but one is needed for the test train which is scheduled to arrive on 21<sup>st</sup> February. An integrated programme for the stepping and gauging work on the Great Western route is expected at the end of February.

IN asked what the top concerns for Danny are. He confirmed that the handover process for DOO CCTV and the train software remain top of his list of priorities. The issues experienced with original software before Christmas shouldn't have happened and were unforeseen, and it demonstrated that whilst new software can be written in a matter of days, the accreditation of it can take many times longer.

Matt Lodge fed back that some of the issues experienced on Thameslink were linked to drivers reacting incorrectly, despite their training, to the new train systems. Siemens ended up providing staff at the end of the route to meet the train and speak to drivers about any problems they had had. Simon Wright highlighted that the drivers would have a man in the cab with them at the outset and Danny Fox noted that Crossrail in this respect should feel the benefit of MTR having a full cab simulator available which has allowed them to do as much as they can ahead of drivers getting into a train.

Sponsors thanked Danny for the update.

### **3. Project Update**

Andrew Wolstenholme provided a project update based on the Period 10 report (11 Dec 2016 – 7 Jan 2017). CRL had had a very good period with respect to health and safety with reportable incidents down at the lowest level at 0.14 (RIDDOR AFR). However, overall project performance had been mixed. CRL have now spent exactly £10bn with £102m spent in the period and is nearly 81% complete.

Track installation has had a good month, together with progress on room handovers which are on the critical path. Tunnel preparation has been less satisfactory. There are some very important months ahead in the run up to Early Dynamic Testing in November 17 and heading for station completion next year.

CRL are focussed on stabilising the performance of C610 and station fit out. Woolwich for example, has suffered from an overtime ban since November. However a deal at Whitechapel with BMV has been unanimously voted in the last week and Woolwich will vote on a deal next week.

New risk allowances of £23m were introduced to the programme which has increased the breach of IP1 to £27m. CRL are seriously focussed on mitigating these pressures but new commercial pressures have arisen this month which is taking the AFCDC in the wrong direction.

Simon Wright continued and brought the picture up to date beyond the period end. Track installation is going well, however, a recent heavy shunt was suffered in the tunnel which resulted in contractors being stood down for four days. The tunnel is very busy and this incident will be looked at closely. An investigation is underway.

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There have been good results with M&E works, and very good productivity achieved in the weekends in the run up to the incident. The programme to achieve energisation for Zones 1-2 for Early Dynamic Testing looks good, but the programme for Zones 3-4 is under pressure and it is expected that the January 2018 date will be revisited.

There is a 15 day delay being experienced with the installation of Platform Screen Doors suffered because the contractor did not have the right people available when it got on site. This is being worked on. There is generally good performance in most stations.

Simon Wright went on to update on the impact of the implementation of IR35. Approximately 230 individuals are at risk. CRL has undergone significant consultation with their workforce, but it remains a challenge to try and convince individuals to move onto PAYE, and there remains a risk of losing some staff. Whilst it is hard to know how many staff may be lost, it is right to flag that there would likely be a significant risk to project delivery if half that number were to leave.

Simon Wright noted that the difficulty with this issue is one of timing. IR35 affects small groups of people in very specific areas and in some cases the implementation has come at the worst possible time, affecting staff with only a few months of work left to go.

CRL will continue to work hard to mitigate the impact and all options are being considered in terms of the offers that can reasonably be made to staff in order to retain them. However there are likely to be a significant number that are not interested in accepting such offers, but this will be better understood in due course.

Mathew Duncan provided an update on the funding position with the ONW. He fed back that he had attended the DfT chaired NR Portfolio Board with Matt White, at which NR's estimate of the need for £150m additional funding was discussed. This has now triggered a request from DfT for a formal de-scope or deferral report. The re-profiling of the loan remains an option that CRL would wish to explore.

Simon Wright noted that deferral of works would almost certainly increase the cost of the works which Bernadette Kelly acknowledged, but also noted that in circumstances of no available current funding this may be preferable. However, she also recorded that there already exists a significant over-programmed liability in Control Period 6 so wholesale deferral of the pressure is unlikely to be an easy solution.

Andrew Wolstenholme noted that CRL will take the de-scope assessment requested of them seriously and look closely at what is possible, although CRL expect that the number of feasible de-scope options will be limited. CRL will report back in due course.

**4. AOB**

There was no other business.

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**CROSSRAIL SPONSOR BOARD MEETING No.80**

**MINUTES OF MEETING HELD ON**

**THURSDAY 17 NOVEMBER 2016**

**RM H2 DFT, GREAT MINISTER HOUSE, HORSEFERRY ROAD**

Present:

Ian Nunn*	TfL
David Hughes*	TfL
Bernadette Kelly*	DfT (Chair)
Matt Lodge*	DfT
Graham Stockbridge	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (secretariat)

\* Voting Members

By invitation:

Robin Wilkin	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
Mathew Duncan	CRL
Simon Wright	CRL
Lucy Findlay	CRL

MEETING PART B

**1. Minutes and Actions of Meeting 79**

The draft minutes of meeting no 79 (Part B) were **AGREED** as tabled.

There are no outstanding actions on which to report.

**2. SACR update**

Andrew Wolstenholme provided a project update based on the SACR16 provided to Sponsors.

As an overview, a substantial amount of work was completed in the last SACR period with some notable highlights shown in the report. The project continues to forecast completion on time, although it was recognised that there will be questions around the now reduced level (£20m) of the headroom to Intervention Point 1. The plan for 2017/18 is now more mature which gives

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confidence but there is no question that pressures remain and CRL are not complacent. Nevertheless, it remains CRL's view that the best way to deliver the project successfully is to deliver the Master Operational Handover Schedule.

Performance in Health and Safety has continued to be strong in the period. The overall Health and Safety Performance Index score has increased from 2.33 to 2.37 in the SACR period, with 13 of 15 active contracts over the corporate benchmark of 2.2. The Accident Frequency Rate has remained static across the 6 month period, but the Lost Time Case injury rate has drifted up. Andrew Wolstenholme acknowledged the importance of CRL continuing to stay on top of Health and Safety performance. CRL recently hosted a positive visit by the Chairman of the Health and Safety Executive who was impressed with CRL's approach to Health and Safety.

Mathew Duncan provided an update on cost. Intervention Point 1 has gradually declined over the recent SACR periods and were it not for the reduction in interest rates (£357m) and CRL's assessment of 'unfunded change' (£312m) (on which there is a long-standing disagreement between Sponsors and CRL), the headroom to IP1 would be much greater than the £20m at which it now stands.

The percentage completion of the project has improved in the last six months, and the probability of completion has now remained around 75% for more than two years which is positive. A one percent reduction in the period is not significant. The value of open NCE's has declined and the general rate at which each is being closed is increasing. The Cost To Go is less than £2bn, and the Unresolved Trend (URT) risk amount has dropped as CRL expected it would. It is fair to assume that the URTs will convert to actual cost, but there remains some uncertainty around the value. This leaves £248m of risk allowance, of which the unallocated programme risk of £116m requires continued focus.

In the SACR period, the actions taken to protect the headroom to IP1 have been a continuation and extension of those activities reported previously. Fourteen contracts have been identified for Supplemental Agreements and these have now been substantially completed and agreed. A deal has been done with C620 which is expected to be signed before Christmas, and a bottom-up forecast of cost for Woolwich station is expected in the same time-frame to understand better the AFC position with this contract. The Value Engineering Review programme is well-established and continues. Where savings are identified by one contract, CRL ensure these opportunities are passed across to other project managers for maximum implementation. CRL are continuing to press contractors to demobilise wherever possible and appropriate.

£77m of glidepath savings have been 'trended' meaning that they have been locked into the AFCDC. A further £211m of opportunities have been identified which is a healthy pipeline, but CRL remain cautious as to when these opportunities are considered sufficiently certain to become 'trended'.

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CRL are closely managing their indirect cost base and looking at the demobilisation of their own resources and the structure of their organisation through the final stages of the project, which is a major part of their current business planning process. Additionally CRL will be moving out of one level of their offices in Canary Wharf.

Bernadette Kelly asked how many staff CRL currently employed. In period 7, CRL employed around 1100 staff including their delivery partners. Andrew Wolstenholme noted that there is a gradual downward progression in staff numbers with a particular steep drop in September 2017. The challenge for CRL is to balance early staff departure against retention and motivation of staff to complete a good job.

Certain strategic options are being investigated to mitigate costs relating to NR financing. For example, CRL lent money to Network Rail through the Interim Crossrail Ltd Funding Payments Agreement which was begun to be repaid in October 2016. An extension of this loan can help CRL to avoid the required financing charges paid to NR, whilst also helping NR by extending their financing for longer. These will continue to be explored.

Mathew Duncan continued. In SACR, CRL have reported a view of the ONW AFC of £2,285m. This view has not been formalised with NR, but has been informed by CRL's assessment of Network Rail's ability to deliver their cost savings opportunities and successful contract negotiations with certain key suppliers. The value of the Crossrail Managed Risk remains un-agreed between CRL and NR with a range of £110m – £190m being reported. The two parties are coming closer, but this is still under negotiation. CRL have increased the estimated value of the Costain contract to reflect what they consider to be a realistic position.

In terms of delivery of ONW, the successful completion of the works planned at Christmas will see Stage 1 being reported as 80% complete. The weekend works leading up to Christmas have been delivered well so far. There remains a risk of unions taking action during Christmas which would have a significant impact on the programme. Andrew Wolstenholme has written to Mark Carne on this matter and on the availability of resources.

Simon Wright provided a further update on programme delivery. In terms of stations, Bond Street is now back on plan for completion in August 2018, following a change in the construction methodology of the masterplan shaft. The late handover of the Moorgate shaft (Liverpool St station) has presented significant challenges, but Laing O'Rourke had performed well recently and this was on a more positive footing. There is a concern around the handover of the concourse at Liverpool Street, and this is being closely worked through. The overall schedule of room handovers to systemwide contractors is being maintained, despite challenges.

The track is now 68% complete with all track east of Stepney Green complete. The Floating Track Slab is well under way, and the concrete train will finish its

final section of track west of Stepney Green to Liverpool Street. The last section of track from Liverpool Street to Tottenham Court Road will be completed by concrete shuttles.

C610 Systemwide are keeping to their recovery plan, which shows that all the cables will be in place for the start of testing next summer. Andrew Wolstenholme added that the best way of delivering the project was to make sure that the milestone of early dynamic testing of a train down the tunnel in Nov 2017 was met and this was CRL's main focus.

### **3. Operations Update**

Howard Smith provided a brief update on operational readiness on Stages 1 and 2. Stage 1 remains on track but the completion of the DOO CCTV and stepping and gauging work needs to hold and remains under close monitoring.

One of the main challenges for Stage 2 is the implementation of ETCS. Alstom are speaking to Bombardier to ensure that the train and signal interface is managed appropriately, and this will be helped by the fact that the first time the wayside equipment meets the train is early, allowing significant time for any fault rectification.

With regards to rolling stock, the Anglia test train's arrival in Ilford has been delayed but is now due in early December. The development and testing of the Train Control Management Software remains an area of close concern and monitoring.

Howard Smith reported to the Sponsor Board that following a public consultation which raised no significant concerns, the central operating section has been designated by TfL and RfL(I) as 'specialised infrastructure' for use by high capacity metro passenger railway services with immediate effect. The consultation response is available via the TfL website. Howard Smith invited questions, but none were raised.

Sponsors agreed that the next Sponsor Board in February should focus upon Operational Readiness and that this should be placed first on the agenda and given sufficient time to discuss thoroughly.

**Action:** [REDACTED]

### **4. AOB**

There was no other business.



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No.	Action	Responsible	Target
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**Summary of Actions**

21/01	A full update on Operational Readiness to be the first item on the agenda of next Sponsor Board	[REDACTED]	16 Feb

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**CROSSRAIL SPONSOR BOARD MEETING No.79**

**MINUTES OF MEETING HELD ON**

**MONDAY, 26 SEPTEMBER 2016**

**RM 3.23 DFT, GREAT MINISTER HOUSE, HORSEFERRY ROAD**

Present:

Ian Nunn*	TfL
David Hughes*	TfL
Bernadette Kelly*	DfT (Chair)
Matt Lodge*	DfT
Graham Stockbridge	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (secretariat)

\* Voting Members

By invitation:

Robin Wilkin	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
Simon Wright	CRL
Lucy Findlay	CRL
Matthew White	CRL
Ben Wheeldon	NR

MEETING PART B

**1. Minutes and Actions of Meeting 78**

The draft minutes of meeting no 78 (Part B) were **AGREED** as tabled.

All actions have been completed and closed. Sarah Johnson noted that CRL had completed a piece of work requested by Sponsors to breakdown and profile risk across all Stages of the project and this has been received by the Joint Sponsor Team. Any recommendations arising from this work would be brought to Sponsors attention as part of the SACR reporting in November.

**2. Project Update**

Andrew Wolstenholme provided a project update to the Board. Track installation is now 50% complete, and Period 5 has been a stable month from a health and safety perspective. The culture across sites is very good, but this

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will be reinforced during Stepping Up week which is approaching shortly. Overall project progress is positive, with 1.9% completion rate in the period, which is slightly below planned but still a solid performance. The overall cost remains stable this month with headroom of £71m to IP1. Additional money has now been approved by the CRL Board on Ilford Yard, as well as on Bond Street and Whitechapel. The direction of travel to SACR 16 is that the headroom to IP1 will reduce further.

Ilford Yard remains a closely watched issue. CRL have entered the blockade which was hard won and lessons learned are being properly collected. A stabling solution for Stage 1 is being actively worked through. An update on 'On Network Works' (ONW) is being provided today in order to give Sponsors more visibility on progress, particularly around the cost work.

Programme risk is being monitored closely at both Bond Street and Whitechapel stations. Whitechapel is subject to a recovery plan, and whilst C510 (tunnel contract) and C512 (station contract) are going well, C510 is not working to a compliant schedule which is placing risk on the interface with the station fit out. Simon Wright added that C512 have been sticking to their schedule well, but this means that costs are not expected to come down as CRL would like by being able to demobilise resources earlier.

Simon Wright provided the latest position with the Bond Street master-plan shaft. The contractor has submitted a programme showing Station completion in 2019 which is not acceptable and CRL have challenged them to pull this back. He noted that the contractor has cited cost consequences of this perceived acceleration which will be discussed in due course.

Andrew Wolstenholme reported to Sponsors that CRL's Programme Director had commissioned an expert peer reviewer, Ian Rannachan, to review CRL's overall master schedule and provide him with independent assurance that potential areas of complexity and risk in the programme (as have been experienced in the Bond Street masterplan shaft) are being identified and flagged strongly enough.

Ian Nunn queried the track installation figures in the Period 5 report which showed 26,182m actual against a planned 32,126m. Simon Wright confirmed that those figures represented a programme with a December 2016 completion date. This was now not possible given the earlier problems experienced. The target completion for all track installation was now March 2017.

Andrew Wolstenholme provided an update to Sponsors on industrial relations, outlining that CRL's approach to managing relations with the unions has been for CRL to do so at a strategic level but to ask contractors to do so at a local level. (There are 16 1<sup>st</sup> tier contractors on 14 sites).

BK noted that she and Sponsors would welcome being kept aware of developments on this matter.

### 3. Operations Update

Howard Smith reported particularly strong performance of TfL Rail in Period 5. The first train continues to be tested at Melton RIDC and it is operating as it should be at this stage. TCMS remains under focus given the number of releases of software versions planned. Visits to Stockholm are planned to monitor the situation with ETCS, and Mark Wild is visiting Germany with Howard Smith in late October to view the testing of CBTC.

A modified design for a pantograph has been provided by Network Rail which appears to alleviate the potential difficulties created with the interface with the overhead lines. Nevertheless, the Operations Team intend to continue with the survey of the Anglia overhead lines via a camera on the top of an existing train.

DOO CCTV provision on stations on Anglia remains planned for completion by 28<sup>th</sup> February 2017. Three stations are currently shown completing after that date, two are easier to bring back in, but Maryland station needs special attention to do so. The scope of gauging work is diminishing with positive RSSB approval. Work continues to look at the various stabling options for the first three train units when they are brought into service in May 2017.

### 4. Surface Works update

Matt White introduced the paper 79-4. The key recommendations of the John Boss review which was commissioned earlier in the year to look at all aspects of the delivery viability of the On Network Works, are now being progressed and tracked as part of business as usual.

CRL have established a cost and commercial assurance programme which has been delivering progress with variation notices in the last 6 periods, and is leading the various cost substantiation initiatives planned with Network Rail in the coming months.

Additionally, there is opportunity to look at the provisions being made in the AFC for compensation paid to train operators for access. If works at Christmas go to plan, it will be possible to give up a series of contingency possessions with corresponding cost savings.

There remains a question as to whether Network Rail have the right level of commercial resourcing and capability in place. However, CRL acknowledge the requests made by Sponsors' in their response to the Adverse Event Notice and the need to have greater confidence in the ONW AFC, and CRL are giving this a corresponding level of focus with Network Rail. Andrew Wolstenholme noted that whilst CRL understood Sponsors instruction to only part-instruct the next stage of works on Stations West, CRL believe that this approach may not be the most cost-effective overall for the contractor.

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Ben Wheeldon provided an update on programme progress. Network Rail has been achieving a very good health and safety record, now with two years free from reportable injury. A safety week would be held in October, aligned with Crossrail's Stepping up week, to sustain the focus on this. The dispute with Abellio over access possessions running up to Christmas has been won successfully by Network Rail and those weekend possessions had now commenced. Preparation for the works at Christmas were progressing well, with all resources booked and an experienced team in place to deliver this. However it remained the largest volume of work being delivered by Network Rail over a Christmas period.

Ben added that, with respect to commercial challenges on ONW, Network Rail will be focussing on the delivery of the cost recovery plan, and in particular the £50m of new cost reduction activity on top of the already planned £90m of identified opportunities.

Sponsor Board **NOTED** the Surface Works update.

### 5. AOB

There was no other business.

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**CROSSRAIL SPONSOR BOARD MEETING No.78**

**MINUTES OF MEETING HELD ON**

**THURSDAY, 28 JULY 2016**

**RM 2.26/27 DFT, GREAT MINISTER HOUSE, HORSEFERRY ROAD**

Present:

Ian Nunn*	TfL (Chair)
David Hughes*	TfL
Graham Stockbridge*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (secretariat)

\* Voting Members

By invitation:

David Craig	Project Representative
Mathew Duncan	CRL
Howard Smith	CRL
Simon Wright	CRL
Lucy Findlay	CRL

Apologies

Bernadette Kelly*	DfT
Matt Lodge*	DfT
Andrew Wolstenholme	CRL

In addition to the expected absence of Bernadette Kelly, Matt Lodge was also unable to attend the meeting at short notice due to unforeseen circumstances. Under Schedule 2 of the Sponsors Agreement, it is allowable for the one remaining voting member to cast votes on behalf of the absent voting member.

MEETING PART B

**1. Minutes and Actions of Meeting 77**

The draft minutes of meeting no 77 (Part B) were **AGREED** as tabled.

All actions are not yet due and therefore remain ongoing.

## 2. Project Update

Simon Wright provided a verbal update on the project. Health and safety performance measured by RIDDOR AFR had improved slightly in Period 3 and improved further in Period 4. With new M&E contractors coming on board, it is a continuous priority to ensure they receive sufficient induction into the Crossrail approach to health and safety.

Concreting of the track is 43% complete but remains behind programme. The concreting train will reach Stepney Green on 12<sup>th</sup> August, at which point it will be turned around and sent up to Pudding Mill Lane. Shuttles operating from the west have reached 400m of track laid in a week.

A week was lost in the period due to a health and safety alert relating to the concreting train but work has resumed and progress is much improved. The complicated work of pouring the floating track slab has begun. Overall the project is 75% complete, and progress remains to plan.

Simon Wright explained that the main issue for the project is the Ilford blockade and seeking approval for it to start as planned. BT have now committed to vacating Paintshop A and Workshop B by Friday August 5<sup>th</sup> (the day before the blockade is due to start). CRL have also agreed an increased level of access into the depot during the blockade. AGA had offered five hours a day, but this has now been increased to 14 hours a day which goes a long way to allowing CRL to complete the works required during the blockade.

Simon Wright reported that the final 'Go No-Go' meeting is scheduled with Network Rail for tomorrow, and CRL are doing what they can to ensure a positive decision is reached. A call is scheduled later today for Simon Wright and Howard Smith to speak to AGA and resolve any outstanding issues they have to allow them to support the approval of the start of the blockade. Howard Smith reiterated the importance of this, noting that there would almost certainly be an impact on the Stage 1 introduction of trains were it not to go ahead.

Graham Stockbridge noted the concerns and asked that CRL let Sponsors know the outcome of the discussion with AGA and if any support or intervention was required. CRL agreed to do so.

Simon Wright continued with a project update. Access Passage 9 has now been handed over to the Liverpool Street station contractor. C610 remain on programme for dynamic testing from 1 November 2017. There are some schedule issues at Bond Street relating to the master plan shaft which are being worked through.

A better programme has been received for DOO CCTV installation on the Anglia route ahead of Stage 1 opening. This provides for all DOO CCTV to be completed at all stations with the exception of two. A temporary gauging certificate is in place for Stage 1 North Eastern section of track, but CRL have now got to make sure that Network Rail are providing the right information in a

timely way to the RSSB to achieve their approval of the permanent gauging work in September.

In the West, the installation of ETCS balises in the Heathrow tunnel is ongoing. Simon Wright reported that there is increased uncertainty around Network Rail being able to install ETCS right into the Paddington ‘throat’ for Stage 5 (Dec 2019). He considered it likely that Network Rail will need to seek an extension to their derogation which provides for ETCS to be in place by Dec 2019. Crossrail trains will typically only use ETCS or CBTC, as Airport Junction will be fitted with ETCS, and NR will fit ETCS as far as the Crossrail portal and on 0-12 mainline. However any Crossrail train that may get diverted into Paddington would have to run on TPWS on the Paddington approaches.

Simon Wright confirmed that the Christmas possessions have now been approved for 6 days by all involved, but with some conditions.

With regards to the Adverse Event Notice, Sarah Johnson reported to CRL that Sponsors had discussed this, and there is a plan of activity through August to explore the increase in the funding limit which was the subject of the notice, and to ensure that a decision on the funding of Stations West work will be achieved in September. The Joint Sponsor Team are meeting with Matt White, Crossrail Surface Director later in the day to start this work off and will also be looking at the options for a re-design of Ilford station works with him and his team.

Ian Nunn confirmed that CRL should expect a letter from Sponsors on this notice by the end of August, and that this would not include a requirement for a remedial action plan.

#### **Action – Sarah Johnson**

### **3. Operations Update**

Howard Smith provided an update on Operations. The rolling stock programme is on schedule, including the development of the signalling software. The new trains are being launched by the TfL Commissioner Mike Brown tomorrow. The train is on track to begin testing at Old Dalby on 17<sup>th</sup> August. The programme is currently showing that that train will make it onto the Great Eastern route two weeks later than intended in November but work is ongoing to bring that back.

### **4. Crossrail Services ICA**

Howard Smith introduced the Crossrail Services paper SB 78 – 5. Paragraph 17 onward of the paper sets out the proposed next steps. He flagged that the current proposal does not yet include the benefits of running to Heathrow which should improve the case. This modelling will be completed in August and incorporated into the proposal.



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Ian Nunn queried the figures in Table 3 which seem to suggest that overall this proposition looks slightly negative. Howard Smith confirmed that without the cost and benefits of running to Heathrow, the figures indicate there is a marginal cost but this is over a long period (30 years); however there are significant benefits for passengers in less waiting time for services and travelling more quickly to destinations. Nevertheless the next stage work needs to be completed.

Sarah Johnson outlined that once the output of the modelling work is received and incorporated the proposal would go through an assurance loop in both organisations. Additionally a discussion will be required between Ian Nunn and Bernadette Kelly to discuss the commercial position between the two Sponsors.

The Sponsor Board **NOTED** the operational feasibility assessment completed by CRL for the Crossrail Services proposal and **AGREED** that the proposal should be progressed in accordance with the next steps outlined at Paragraph 17

### 5. AOB

There was no other business.

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**Summary of Actions**

No.	Action	Responsible	Target
19/01	Sponsor to issue response to Adverse Event Notice to CRL	Sarah Johnson	31 August

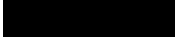
**CROSSRAIL SPONSOR BOARD MEETING No.77**

**MINUTES OF MEETING HELD ON**

**WEDNESDAY, 8 JUNE 2016**

**RM 2.26/27 DfT, GREAT MINISTER HOUSE, HORSEFERRY ROAD**

Present:

Ian Nunn*	TfL
David Hughes*	TfL
Bernadette Kelly*	DfT (Chair)
Matt Lodge*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (secretariat)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
Mathew Duncan	CRL
Howard Smith	CRL
Simon Wright	CRL
Lucy Findlay	CRL
Matthew White	CRL (Item 4)
Matthew Steele	NR (Item 4)
Robbie Burns	NR (Item 4)

MEETING PART B

**1. Minutes and Actions of Meeting 76**

The draft minutes of meeting no 76 (Part B) were **AGREED** without change.

Actions 14/36, 16/06 and 17/06 are closed.

Actions 17/05 will be dealt with as part of today's agenda. Action 14/44 remains ongoing and is being taken forward by DfT.

**2. SACR 15**

Andrew Wolstenholme presented the SACR 15 report and a CRL summary slidepack.

## OFFICIAL – SENSITIVE COMMERCIAL

Crossrail is on time and within the funding envelope. The SACR period has been challenging but good progress has been achieved across the programme.

Overall, the health & safety story for the full year was good, despite poor performance in certain individual periods, and there have been improvements in all 4 H&S indicators across the year. The focus in the coming year will be on maintaining and striving to improve this position. Concerns remain around C610 performance, particularly in light of its increasing presence across the project. CRL is addressing these concerns through direct contact with the joint venture leadership team. The last 5 weeks have been accident free which is the longest accident free period in Crossrail history.

Probability of opening Stage 3 on time has gone from a low of 72% in SACR13 to a high of 77% in SACR14 and in SACR15 rests at 75% reflecting a good level of confidence from CRL. The AFCDC has increased to £11,804m with a headroom of £101m to IP1 at P50. This headroom has reduced by £45m in the SACR period, driven by a £10m increase in costs and a £35m reduction in the Intervention Points. Contingency has reduced from £1.5bn to £800m and CRL considers that the level of risk being carried is appropriate.

Ian Nunn asked what was driving the probability calculation of 75%, and Simon Wright explained that it was driven by the progress against significant critical path items such as track laying, M&E and OLE in tunnels, Whitechapel platform completion to allow the train through and power and energisation in 2017. Simon Wright reassured the Sponsor Board that he invested most of his time talking to the contractors responsible for these items to ensure they were aware of the reliance being placed upon them.

Ian Nunn asked whether we should expect to see the 75% increase as we move through the programme and when we might expect this. Simon Wright considered that this would increase as we move through critical milestones in the MOHS and this would likely be in the latter part of 2017. Andrew Wolstenholme noted that Sponsors should feel confident right now and highlighted that CRL has split out the probability across each of the Stages for the first time.

Sarah Johnson commented that the Joint Sponsor Team would be considering how we could make those critical milestones more visible in the reporting to ensure focus is maintained.

### **Action: Sarah Johnson**

Mathew Duncan led the presentation of the financial headlines. The breach of IP0 stands at £139m. The reduction in interest rates has had a significant impact in the last 6 months, and if not for this, the position against IP0 would be better.

A total of £8.8bn of the overall £11.8bn has been spent. The QRA at SACR 15 stands at £763m down from £1,175m due to the completion of supplemental

agreements in the period. This figure carries £32m of glide-path savings which have now been taken account of, and includes £109m of overall programme risk that is not allocated against any specific scheme.

Ian Nunn asked whether it would be possible to see a diagram that showed the breakdown of AFCDC / QRA / Cost to go projected forward (akin to that on Slide 5).

David Craig additionally asked whether the £763m of risk has been split across all the Stages. CRL confirmed that they were in the process of doing so and agreed to provide a break down of allocated risk for Stages 4 & 5.

### **Action – Mathew Duncan**

Mathew Duncan highlighted that a number of activities were underway to protect the headroom to IP1. Significant progress had been made on agreeing supplemental agreements which provided a greater clarity on cost by clearing out any areas of previous disagreements, refocussing incentives, and reducing the risk amounts carried as risks were known. These agreements also ensure both client and contractor focus on what there is still to deliver and are not distracted by prior disagreements. Only 27% of agreements are still to settle and this relates to 4 contracts.

There remains momentum behind the glide-path initiative. C305, the tunnels contract, is the most mature and hence most progress has been made here. Regarding indirect costs, the big challenge is managing the headcount. The risk of demobilisation is significant and CRL is working with TfL on transition plans as CRL would like to see good people kept within the industry.

Simon Wright gave an overview of the cost position of the On Network Works, in which an increase from £1,990m to £2,149m has been experienced since SACR 14. However, following a Network Rail executive-level challenge, it is known that the AFC reported by Network Rail will be reduced by £60m to £2,089m for CRL Period 3.

CRL does not accept the Network Rail valuation of £167m for the outstanding variation notices which primarily relate to DOO CCTV, Ilford, and Stations West. David Hughes asked what made up the Stations West variations and Simon Wright explained that this relates to station improvements, step-free works and other works that were stakeholder and politically driven such as at Ealing Broadway, West Ealing & Southall and which would be hard to renege on.

Matt Lodge queried why Network Rail had not been reporting a higher figure earlier since many of these variations would have been known about for a long time. Simon Wright commented that it has taken Network Rail a long time to get design through the GRIP process and with a contractor, and there was still more to do yet. Bernadette Kelly emphasised the need for CRL to drive Network Rail cost performance in the same way as other contractors.

## OFFICIAL – SENSITIVE COMMERCIAL

Howard Smith cautioned against de-scoping works at stations which risked a compromise that could affect many thousands of passengers. Andrew Wolstenholme agreed that very little of the works could easily be considered optional but noted that the overall Network Rail Crossrail programme is being maintained.

Bernadette Kelly asked whether CRL was getting clarity over scope and Simon Wright explained that the detail was not there yet and not as good as CRL would like, but many of the variations were going through GRIP 3 or 4 and progress was being made.

Andrew Wolstenholme briefly highlighted a number of areas of Sponsor support that CRL had raised in the SACR. Matt Lodge encouraged CRL to ask early for support whenever it was required, as this made it more likely for Sponsors to be able to act and be effective.

Finally Andrew Wolstenholme touched on challenges and risks for CRL to address in the coming months, and Bernadette Kelly noted that if it would be helpful for the Sponsor Board to take time to consider any of these specifically in future meetings, Sponsors would be happy to do so.

### **3. Operations Update**

Howard Smith provided a verbal update on operations and reported good performance across all areas. PPM in the last period was 95.9% which was the best performance so far. CSS also went up in Period 2, and the timetable has been further tweaked to smooth remaining gaps.

The rolling stock programme is also progressing well. The Secretary of State visited the V-shop in Derby a few weeks ago. Mike Brown, Andrew Wolstenholme and Howard Smith recently visited the first car and this is being powered up and will shortly run up and down the test track.

The main risk remains in the successful delivery of the software for the train management system and TPWS and ETCS. CRL now has more visibility and confidence around what they are being told around ETCS, have twice visited Stockholm and have an auditor there regularly to check the reports being received. In terms of the key activities to achieve Stage 1 i.e. getting the train out to the test track, Ilford Yard works, DOO CCTV and stepping and gauging on Anglia – these hold some challenges, are well known and closely monitored.

Good progress is being made on the final timetable with a series of meetings taking place to develop it, with all the right representatives from the FOCs and TOCs engaging. Freight was supportive when details of the proposed timetable were introduced to them.

Matt Lodge flagged that software development was the issue that caused the biggest delay on Thameslink with problems encountered getting it on the train

and getting it to work as it should be, and he wondered how confident CRL is in this regard.

Howard Smith considered that it was too early to be confident, but the right plan was in place. BT has train zero, software signoff is sufficiently developed to move the train backwards and forwards, and there are 4 or 5 new releases in the next few months. There is then a clear plan of testing on the Derby test track, then to Old Dalby, onto Great Eastern in November and into passenger service. Chris Binns is tracking Thameslink lessons, and CRL considers the effort BT is putting into this is substantial.

#### **4. Surface Works update**

Robbie Burns began by reporting that a Network Rail employee had been killed in a road traffic accident the previous Sunday when driving home from his place of work at a Crossrail (Abbey Wood) site. The passenger survived, and the cause of the accident is not yet clear; no other vehicle was involved and individual was within the required 14hours working day and journey time. Network Rail will be looking into the incident.

Matthew Steele presented SB 77-4 reporting substantial progress on surface works since the last Sponsor Board. Three major blockades have been delivered at Easter and May Bank holidays without any overruns impacting on passenger services.

Key Output 1 is reported as Amber due to the volume of gauging work which still has to be delivered. The nature of the work required is now understood, after design rules were agreed with the RSSB. A deviation has been submitted for approval in early July, whilst in the meantime, the RSSB have agreed that work can carry on. Key Output 4 is also reported as Amber for the same reason. The programme will be confirmed in the next 8 weeks, and there will be greater certainty at this point. Key Outputs 02, 05a and 05b are reported as green.

Regarding financial headlines, Matthew Steele confirmed that Network Rail had met its commitments and completed a bottom up cost review which had then been peer reviewed. Additionally, it had completed a number of deep dives on specific contracts. The current AFC is £2.089bn against a target of £2.051bn. £52m of stretch opportunities are already taken account of within the AFC of £2.089bn. These figures are Network Rail Period 2 report which feeds through to CRL Period 3 report.

Matthew Steele noted that the challenge now is for Network Rail to deliver the £52m of stretch opportunities, which respond to the £60m challenge set by the Network RailExcom. Some straightforward operating cost opportunities have already been taken.

## OFFICIAL – SENSITIVE COMMERCIAL

Matt Steele noted that the CRL Report for Period 2 will have far more detail and visibility on the cost components, and set out that CRL had been extremely constructive in the way they had worked with Network Rail on this.

Ian Nunn asked whether the split of costs between Network Rail and their supply chain in delivering the £2.3bn of On Network Works could be provided, showing both the value and with which contractor.

### **Action: Matthew Steele**

Matthew Steele set out that the Network Rail value of £167m for the outstanding variation notices took the cost of the ONW above the current funding provided following the Hendy Review. Network Rail has provided a categorised proposal to CRL, identifying, in their view, which variations are critical to operate the railway (Category A, e.g. Pudding Mill Lane) and others which are less important for running the trains and less possession critical, and on which decisions could be taken later (Category C, e.g. station enhancements) There is some urgency on agreeing Category A variations.

Robbie Burns raised that Network Rail contractors have firm instruction on some work but not on the remainder, and Network Rail would like to instruct the whole scope of work to maintain contractors on site, but do not currently have the overall funding to be able to do so. Matthew Steele noted that NR can keep on working on costs, but they were unlikely to reduce significantly and an instruction for the whole of the works with a corresponding commitment for funding was required, otherwise there could be a need to slow down contractors.

Bernadette Kelly emphasised that she would like to drill down everywhere on the cost and asked for a substantive and urgent report back on the issues flagged in the meeting by the Joint Sponsor Team. Sarah Johnson agreed to do so before her annual leave on June 23<sup>rd</sup>.

### **Action: Sarah Johnson**

Matthew Steele continued with an update on progress of the surface works and the milestones for Stage 1. KD 10 was reported to have slipped back to July 2016 from June 2016 following 4 weeks delay due to RSSB submission. Some concerns remain around achieving KO1, due in November 2016, due to the volume of gauging work required to reach it.

The DOO CCTV variation notice has been worked through, contractors have been instructed, and anything with long-lead in times had been ordered. The first cameras are up in Harold Wood. Stratford is expected to be a challenging station.

Works planned at Shenfield are a significant challenge due to the complexity and scale of works including track remodelling, 25 new point ends, new signalling, new overhead lines and substantial remodelling. A longer blockade



OFFICIAL – SENSITIVE COMMERCIAL

has been required at Christmas, and a revised Alstom signalling plan is now in place and being closely monitored.

KD 13 relating to provision of ETCS in Heathrow tunnel remains on target for April 2017. Interlocking data has been issued, and testing will commence February 2017.

Robbie Burns reported that the West Outer Electrification work is on schedule to support the new Class 387 EMUs but there remain some issues with agreeing the Christmas blockade dates. Network Rail have requested 6 days of complete closure at Paddington, something which has never taken place before. This is unpalatable to HEX who wish to work to 5 days, but without this duration at Christmas this will increase the need for access in 2017 and increase the risk to the programme. It is important that this is resolved by the end of this month.

Bernadette Kelly flagged that this should be escalated if required and Network Rail has the offer of help should it be needed.

**AOB**

There was no other business.

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**Summary of Actions**

No.	Action	Responsible	Target
18/01	<p><b>Critical milestone reporting</b>                      JST to consider options to ensure critical milestones leading to each Stage opening are sufficiently clear and their delivery assessed in regular reporting.</p>	Sarah Johnson	21 <sup>st</sup> Sept
18/02	<p><b>Additional cost analysis</b>                      Provide a breakdown of AFCDC/QRA/Cost-to-go projected into the future, and breakdown risk across all stages.</p>	Mathew Duncan	28 <sup>th</sup> July
18/03	<p><b>ONW Costs – split NR &amp; Supply chain</b>                      MS to provide analysis on the split of costs between NR and their supply chain in delivering the On Network Works showing both the value and the contractor.</p>	Matthew Steele	28 <sup>th</sup> July
18/04	<p><b>Status of Variation Notices &amp; delivery issues</b>                      Sarah Johnson to investigate with CRL and NR the position on the instruction of variation notices and provide a report back to Chair of Sponsor Board urgently.</p>	Sarah Johnson	23 <sup>rd</sup> June

**CROSSRAIL SPONSOR BOARD MEETING No.76**

**MINUTES OF MEETING HELD ON**

**WEDNESDAY, 9 MARCH 2016**

**5<sup>TH</sup> FLOOR, ROOM 05R1M1, WINDSOR HOUSE, VICTORIA STREET**

Present:

Ian Nunn*	TfL (Chair)
David Hughes*	TfL
Bernadette Kelly*	DfT
Graham Stockbridge*	DfT
Sarah Johnson	Joint Sponsor Team
Sian Evans	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
Mathew Duncan	CRL
Howard Smith	CRL
Simon Wright	CRL
Lucy Findlay	CRL
Chris Sexton	CRL (Item 5)
Matthew White	CRL (Item 4)
Matthew Steele	NR (Item 4)
Robbie Burns	NR (Item 4)

MEETING PART B

**1. Minutes and Actions of Meeting 75**

The draft minutes of meeting no 75 (Part B) were **AGREED**.

Action 14/36 is to be addressed during the meeting.

Actions 14/44 and 16/06 remain open and are ongoing.

With regard to action 16/06, Mathew Duncan updated the meeting that, as requested by Sponsor Board, CRL had discussed with Network Rail the option of categorising the cost of the temporary second link at Old Oak Common as Network Rail Programme Costs to then be repaid by the CSAC arrangement. Network Rail had confirmed that they did not agree with this approach and did not consider that the works could be categorised as

Network Rail Programme Costs. Sponsor Board requested that CRL confirm this position back to Ian Nunn in writing and a final decision will then be made on the funding source for this work. Mathew Duncan noted that the work is continuing whilst this matter is being resolved.

**Action: Mathew Duncan**

Actions 15/33, 16/04 and 16/05 have been closed.

## **2. Crossrail Project and Operations Update**

Andrew Wolstenholme updated Sponsor Board on a number of Crossrail developments since the last meeting of the Sponsor Board;

- A much improved performance continues at Whitechapel. The possession strategy for the remainder of the works at Whitechapel was considered and approved at the Rail and Underground Executive on 8 March 2016.
- The productivity rate for the standard track slab installation has improved, and CRL remain confident that the track installation will be completed on time. The baseline schedule for track slab installation is based on achieving 200m per night and to date this has proved challenging but at the end of period 11 this target had been exceeded.
- The Safety performance for Crossrail during period 12 has deteriorated with 13 significant incidents, but CRL is still currently expecting to meet 2015/16 year end targets. Many of the incidents occurred on Systemwide main works (C610) and CRL is to hold discussions with the C610 contractor on actions that are required to be implemented to improve the safety performance.
- Until each of the contracts' commercial agreements have been concluded and implemented, the reported KPIs will not accurately reflect the status of the programme. The most significant outstanding commercial agreements to be finalised are Tottenham Court Road, Farringdon and Woolwich.

Howard Smith gave a verbal update on operations issues. MTR services between Shenfield and Liverpool Street operated at 91.5% PPM in Period 11. MTRC performance was similar to previous periods although there were some pockets of poor performance as a result of delays caused by faulty NR Infrastructure. Within this, there were a number of failures related to the Crossrail project work on the GE Route. The emerging results for period 12 are showing an improvement on the period 11 position.

Howard Smith updated Sponsor Board that the progress on the rolling stock and depot is satisfactory. There had been an increase in delay on the programme but mitigating actions implemented by Bombardier have recovered some of the slippage and the current delay is not currently

considered to be critical. Bombardier is experiencing difficulty integrating ETCS hardware in the train. This issue needs to be resolved by December 2017 before trains start running on the West (due May 2018).

A third car has now been assembled and a fourth is nearing completion, but the supply of materials has been an issue for Bombardier. RfL and Bombardier will be visiting the principal supplier to address these issues.

Howard Smith reported that there is an issue on the update of the on board signalling system to ETCS version 3.4. Bombardier has reported that this is causing them additional work, expense and delay that will use all the float in the schedule and expend all the contingency. Howard Smith reported that RfL's response is that the version update is not a "change in law" as Bombardier has stated.

A CEO/Commissioner level meeting is to be held in Derby on the 11<sup>th</sup> March followed by a fact finding visit to Bombardier's in house subcontractor in Stockholm.

### **3. Crossrail Services Update**

Howard Smith provided an update on the development of the timetabling and business case work for the Crossrail Services proposal, following the receipt of the Sponsor Change Notice. Timetable feasibility work has continued in order to develop a viable proposal for discussion with key stakeholders and Sponsors.

An initial meeting had been held with the DfT GW franchise team to present the proposal and the current assumptions for the timetable. A number of issues were raised and further analysis is to be undertaken by RfL/CRL to provide a response to DfT at a meeting to be scheduled for early April 2016.

Graham Stockbridge noted that further work was required before DfT would be able to support the proposal and that this would need to include input from the Freight and Passenger Services teams, as well as GW.

Sarah Johnson stated the importance that the final proposal had been sufficiently consulted with the various parties prior to submitting the Initial Change Appraisal and recommendations to the Sponsor Board.

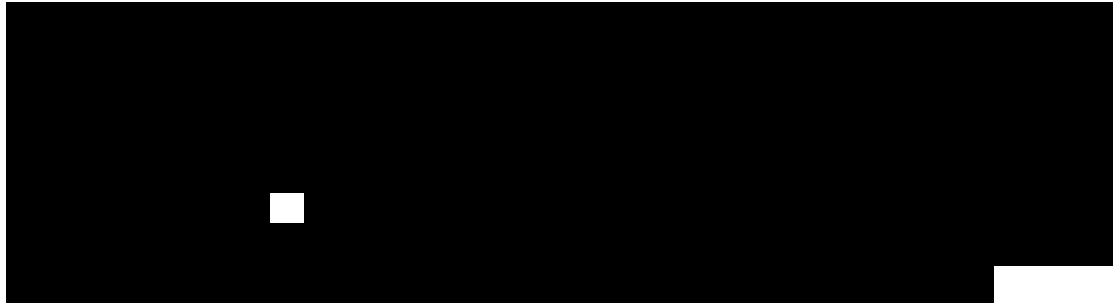
### **4. Surface Works update**

Matthew Steele introduced the presentation SB76-2 entitled Crossrail ONW.

There were 3 key safety related incidents in periods 11 and 12: a member of public suicide; an LTI RIDDOR at Acton; and an RTA involving a small tipper

truck on the M25. There has been a significant focus on Close Call reporting and close out, which is now reported on all daily production calls.

ONW progress since September 2015 included completion of the Christmas works; the handover of the Romford ROC to CRL; Stockley flyover box structure completed; and the construction of the new Abbey Wood Station has commenced.



With regards to the West Outer Electrification programme, practical completion of Construction and Energisation is forecast for December 2016 although this was reported as required by June 2017 in the Hendy Review. This activity remains a challenge for Network Rail as the programme is focussed on the delivery of an accelerated schedule, and the delivery of the Iver diversion is a critical element.

The implementation of ETCS Stage A (Heathrow to Airport Junction) remains on plan although there are some outstanding issues regarding the fitment of the required equipment into the Heathrow tunnel. Two options are being designed by NR and a decision is required by May 2016 on the preferred option to maintain the overall programme.

Preparation for the Easter 2016 is underway The works will include substantial track, OLE and associated signalling modifications at Shenfield together with work on the majority of the stations and routes. Network Rail is now beginning to focus on planning the works required to be completed over Christmas 2016, which is a major programme of work. There are currently a number of concerns about the length of the possession from TOCs and FOCs and there are also some clashes with planned LU works over the same period of time. An alternative option with a reduced blockade is being considered by NR and LU but this may be a suboptimal option for Network Rail and the Crossrail project.

David Hughes stated that if the outcome of the LU modelling was not satisfactory and introduced a high level of risk to the Christmas 2016 work programme then Network Rail should report this to Sponsor Board.

**Action: Matthew White**

An interim output from the ONW cost forecast and risk review was presented but further work is to be done for the forecast to be complete. CRL will be reviewing the inputs and outputs of the cost review and report conclusions in

SACR 15. Bernadette Kelly noted that any increase in the AFC above what has been included in CP5 would be a matter for discussion between Network Rail and DfT initially. David Hughes stated that in this event, TfL would want to be involved in any discussions and particularly if those discussions were considering scope reductions to mitigate cost increases.

## **5. Bringing into Use**

Chris Sexton introduced presentation SB76-3, entitled “Bringing Crossrail into Use – Regulatory Approvals”. Chris Sexton noted that Crossrail requires authorisation from the ORR before it can be placed into operational service and the presentation was to set out the approach Crossrail is taking, the accountabilities of CRL and others and the timeframe for obtaining the authorisations.

There are a number of parties required to obtain authorisation for the end to end railway but there needs to be a lead party responsible for the whole process. ORR agreed that RfL is best placed to act as the lead but CRL will fulfil this role on RfL’s behalf and then it will transition to RfL at a time to be agreed.

The authorisations required are linked to the Stages of Opening and Chris Sexton presented a road map of requirements by respective parties over the staged opening timeframe. This road map has been shared with the ORR who has agreed to the proposed approach in principle.

Sponsor Board noted the work that has been done and requested that an update on the Bringing into Use workstream be included in the general periodic updates provided by CRL to the Sponsor Board.

**Action: Andrew Wolstenholme**

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**Summary of Actions**

No.	Action	Responsible	Target
17/04	<b>Funding of Temporary Second Link</b> : CRL to confirm to Sponsors (Ian Nunn) in writing the NR response to funding the work through the RAB.	Mathew Duncan	31 March 2016
17/05	<b>Christmas 2016 Works</b> : CRL to inform Sponsors if the LU modelling of the alternative options for the Christmas 2016 works is not satisfactory.	Matthew White	8 June 2016
17/06	<b>Bringing into Use updates</b> : CRL to provide an update to Sponsor Board on Bringing into Use progress as part of the periodic updates	Andrew Wolstenholme	8 June 2016



**CROSSRAIL SPONSOR BOARD MEETING No.75**

**MINUTES OF MEETING HELD ON**

**WEDNESDAY, 20 JANUARY 2016**

**IN ROOM 181, 1ST FLOOR, NORTH WING, 55 BROADWAY**

Present:

Ian Nunn*	TfL (Chair) (Agenda item 1 and 2 only)
David Hughes*	TfL (Chair – Agenda items 3 to 5)
Bernadette Kelly*	DfT
Matt Lodge*	DfT
Sarah Johnson	Joint Sponsor Team
Sian Evans	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
Mathew Duncan	CRL
Howard Smith	CRL
Lucy Findlay	CRL

MEETING PART B

**1. Minutes and Actions of Meeting 74**

The draft minutes of meeting no 74 (part B) were **AGREED**.

Actions 14/36 and 14/44 were outstanding.

**2. Crossrail Project Update**

**Project Report**

Andrew Wolstenholme updated Sponsor Board on a number of Crossrail achievements since the last meeting of the Sponsor Board;

- All of the planned Network Rail Christmas work was completed on time and without any lost time injuries. The work included 30 operational worksites and the commissioning of four major signaling systems, requiring over 300,000 hours to be worked. Planning for the Easter works is now underway;

## OFFICIAL – SENSITIVE COMMERCIAL

- The Temporary Ticket Hall at Whitechapel Station was successfully opened on 18<sup>th</sup> January 2016. The contractor schedule for Whitechapel is now compliant with Crossrail's Master Operational Handover Schedule (MOHS); and
- The productivity rate for the standard track slab installation has improved, and CRL remain confident that the track installation will be completed on time. The baseline schedule for track slab installation is based on achieving 200m per night and to date this has proved challenging but at the end of period 10 this target has been exceeded on consecutive nights.

Ian Nunn raised a concern that within the CEO Summary of the CRL Board Report all activities were behind target although the general message of the report was that things were going well. Andrew Wolstenholme replied that in some cases the baseline, as reported, does not reflect the revisions made to MOHS and the schedule that is being implemented. The MOHS will be refreshed in March 2016 in time for SACR15.

Andrew Wolstenholme concluded that although good progress was being made on the commercial issues they were still not fully resolved and there were still major challenges to be overcome at Tottenham Court Road, Ilford and Bond Street.

### **SACR14 Update**

Mathew Duncan introduced the presentation "SACR 14 Update", which was circulated during the meeting. Mathew Duncan summarised the key actions that CRL identified in SACR14 to control costs pressures.

Mathew Duncan reported that the forecast spend to completion (based on period 9) was £3.49bn, of which 70% would be spent by March 2017. The risk provision in the £3.49bn is £827m, of which £205m is unallocated risk.

Ian Nunn asked if CRL considered the unallocated risk provision to be sufficient at this stage of the project. Andrew Wolstenholme replied that on the analysis done to date that this was considered by CRL to be sufficient.

David Hughes noted that the breach at period 9 had increased to £107m and the headroom to IP1 has decreased to £133m, with the risk of breaching IP1 to be just over 30%.

Matthew Duncan updated Sponsor Board on the work that CRL is doing with project managers to implement cost initiatives, managed through a glide path. The first round of glide paths has been completed and commercial settlements have been agreed and implemented. Andrew Wolstenholme stated that this will provide cost certainty to the end of the work and there is likely to be fewer compensation events arising. The outcome of the commercial settlements has not been reflected in the CRL reported cost forecast.

Ian Nunn updated the meeting that discussions had taken place with the CRL Chairman and Sponsors' Non Executive Directors about Crossrail cost reporting and there was an acceptance that the focus going forward would be on the position of AFCDC against Intervention Point 1. A letter setting out the formal requirements of the Sponsor Board for future CRL Reporting would be sent to CRL following the Sponsor Board.

**Action: Sarah Johnson**

Ian Nunn and Bernadette Kelly noted the work being undertaken by CRL and CRL's commitment to the task of constraining cost growth and that it was encouraging to see the broad range of initiatives that are being established to focus on cost across the whole of the project.

**Operations Update**

Howard Smith gave a verbal update on operations issues. MTR services between Shenfield and Liverpool Street achieved 95.3 % PPM (Period 9) and the emerging Period 10 results were looking to maintain if not improve on the period 9 results. The period 9 result placed TfL Rail second in the national performance league and is significantly better than the performance by the former operator (88.5%) in the same period last year. Howard Smith noted that the Network Rail works on the East, which are due to commence in quarter 1 2016, are likely to impact TfL Rail performance in the forthcoming periods.

Howard Smith updated Sponsor Board that the progress on the rolling stock and depot is satisfactory. The depot works remained approximately 3-4 weeks behind schedule but the slippage is not considered critical and a recovery programme is being implemented. Bombardier has experienced difficulty integrating ECTS hardware in the train. This issue needs to be resolved by December 2017 before trains start running on the West (due May 2018).

**3. Network Rail Interim Financing Agreement**

Matthew Duncan introduced paper SB 75-4 entitled "Network Rail Interim Financing Agreement". The paper summarised the proposal to extend the Interim Financing Agreement, under the terms of which CRL will advance up to £1.6bn of funds from the Sponsor Funding account to Network Rail by 17 September 2016, with the entire advanced amount being repaid by 30 September 2017. The net benefit to CRL is forecast to be £45.1m, with £8.9m compensation to be paid to Network Rail.

Ian Nunn updated the meeting that each Sponsor would need to seek approval through the respective organisations governance processes. There were also some specific queries that need to be addressed in advance of these processes.

Sponsor Board;

**NOTED** the paper; and

**APPROVED** the extension of the Interim Financing Agreement, to allow an advance of £1.6bn of funds from the SFA to Network Rail by 17 September 2016, with full repayment by 30 September 2017.

#### **4. Project Delivery Partner Incentives**

Mathew Duncan introduced paper SB 75-5 entitled “Project Delivery Partner Final Incentive Scheme”. The paper summarised a proposal to realign the current Final Incentive Scheme contained within the Project Delivery Partner (PDP) Services Contract with Bechtel Limited.

Mathew Duncan reported that it is considered by CRL to be in the overall interest of the project for the PDP Incentive arrangement to align with current programme requirements and objectives.

Ian Nunn updated the meeting that this was a matter reserved for TfL Board under TfL Standing Orders, and would need to be considered by the Finance and Policy Committee meeting to be held in March 2016. Matt Lodge noted that the position on the DfT Governance requirements would need to be adhered to and DfT would provide guidance on what the requirements would be.

**Action: Matthew Lodge**

Sponsor Board :-

**NOTED** the paper; and

**APPROVED** the proposal (option 2 as listed in the paper) to amend the PDP contract to incorporate a revised Final Incentive Scheme to align with current programme requirements and CRL’s corporate objectives.

#### **5. Funding of Temporary Second Link at Old Oak Common**

Mathew Duncan introduced paper SB 75-6 entitled “Temporary second link at Old Oak Common”. The paper is seeking direction from the Sponsor Board regarding the funding of the change costs payable by RfL to Bombardier under the Rolling Stock and Depot Agreement as a result of the disruption caused by the temporary second link from the Great Western Railway depot to the national rail network.

CRL recommended that action is taken to agree with Network Rail that the RSD Change Costs should be reimbursed by NR, and that the reimbursed

costs should be deemed to constitute NR Programme Costs for the purpose of the Crossrail Network Rail Programme Protocol.

Ian Nunn noted that it was likely that any solution would result in the costs falling to TfL but his preference would be for the costs to be categorised as NR Programme Costs and repaid by the Crossrail Supplementary Access Charge arrangements. It was agreed that a further discussion would need to take place to consider all possible and realistic options for funding and / or recouping the costs associated with the second link. Ian Nunn therefore proposed that a decision on the funding of the second link be deferred until all the information could be considered.

**Action : Sarah Johnson**

## **6. Any Other Business**

Ian Nunn updated CRL attendees that in Part A (Sponsor Only) of the meeting Sponsor Board had agreed to issue a Sponsor Change Notice to CRL relating to the Crossrail Services and Timetable proposal.

## **Date of Next Meeting**

The next meeting will take place on 9<sup>th</sup> March 2016.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	Jan 2016
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	20/1/16
15/33	<b>ORR Approvals:</b> Report to Sponsor Board on the outcome of the senior level meeting with ORR which was due to take place at the end of October.	Simon Wright	20/1/16
16/04	<b>Crossrail Cost Reporting:</b> Sponsors to issue a letter to CRL confirming cost reporting requirements with a focus on IP1	Sarah Johnson	19/2/2016
16/05	<b>PDP Incentives Governance:</b> DfT to confirm if there is any DfT Governance process to be completed for the PDP Incentives Proposal	Matt Lodge	19/02/2016
16/06	<b>OOC Second Link:</b> Meeting to be set up within TfL to review the position on the funding of the OOC second link	Sarah Johnson	19/02/2016

**CROSSRAIL SPONSOR BOARD MEETING No.74**

**MINUTES OF MEETING HELD ON**

**FRIDAY, 20 NOVEMBER, 2015**

**IN ROOM 05R1MI, 5<sup>th</sup> FLOOR, WINDSOR HOUSE, VICTORIA STREET.**

Present:

Ian Nunn*	TfL (Chair) (Agenda item 1 and 2 only)
David Hughes*	TfL (Chair – Agenda items 3 to 5)
Bernadette Kelly*	DfT
Becky Wood*	DfT
[REDACTED]	DfT
Sarah Johnson	Joint Sponsor Team
[REDACTED]	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
Mathew Duncan	CRL
Simon Wright	CRL
Howard Smith	CRL
Lucy Findlay	CRL
Matt White	CRL (Agenda item 4 only)
Matt Steele	NR (Agenda item 4 only)

MEETING PART B

**1. Minutes and Actions of Meeting 73**

The draft minutes of meeting no 73 (part B) were **AGREED**.

Actions 14/44 and 15/33 were outstanding. Action 15/32 was covered under the SACR14 agenda item.

**2. SACR14/Period Report**

Andrew Wolstenholme introduced the presentation entitled 'SACR 14 Overview'. The highlights of SACR 14 included an increase in schedule confidence from 72% to 77% which was very positive news. Six assumptions in SACR 13 had been addressed and productivity rates had improved. In Period 8, progress indicators would appear to drift back, but this was not a

## OFFICIAL – SENSITIVE COMMERCIAL

concern as the increase in budget would have diluted the figures. The SACR period was positive in terms of the H&S metrics, but the trend in some metrics had reversed in the last period. The AFCDC P50 had breached Intervention Point 0 (IP0) for the first time in the SACR period which was unwelcome. CRL was confident with the measures it was taking to put pressure on costs, but was not complacent, and there were still risks at Whitechapel.

Mathew Duncan noted that the Intervention Points had trended downwards, primarily because of the movement in interest rates. Historically, the AFCDC had trended downwards, but it now breached IP0 by £94m. The IP0 headroom would have been £547m had it not been for unfunded changes and the movement in interest rates. David Hughes noted that Sponsors would not necessarily agree with this point.

Simon Wright reported that, in order to re-baseline including MOHS, CRL was addressing each contract in turn and there were 3 contracts where the bottom-up forecast was outstanding. Simon Wright confirmed that where agreement had been reached on 7 contracts, this was reflected in the forecast with provisions made for the remaining 3 contracts. Andrew Wolstenholme noted that the position on contracts at Whitechapel, Tottenham Court Road, Ilford and Farringdon had yet to be finalised.

Mathew Duncan reported that the spend to completion was £3.5bn, of which 70% would be spent by March 2017. There were two key points with the figures in slide 7. The contingency had dropped from £2.4bn at SACR9 to £1.5bn at SACR14, and, against the contingency of £1.5bn, the AFCDC P50 risk was £1.175bn, providing a gap of £335m which was equivalent to 28%. David Hughes noted that at P95 there would be a drawdown of £185m of the TfL contingency.

Mathew Duncan reported that CRL was approaching the end of its business planning process and CRL had pushed hard across all Directorates to reduce indirect costs, and the good news was that the support function forecasts were less than the Business Plan of a year ago. Andrew Wolstenholme noted that the Business Plan had not been signed off by the CRL Board yet and offered to take Sponsors through the business planning process. In response to a query from Ian Nunn, Andrew Wolstenholme noted that CRL was continually challenging costs.

As regards matters that may require Sponsors' support, Sarah Johnson noted that Sponsors required the NR IFA details as soon as possible because it was not certain that Sponsors could approve a proposal and there was a lot of governance to go through. Becky Wood noted that the NR balance sheet position had changed which affected NR's ability to go to the market. Andrew Wolstenholme reported that the NR IFA proposal had a net effect of £20m which had not been included in SACR14, but would be included in the Business Plan. Sarah Johnson undertook to discuss the proposal with Mathew Duncan during week commencing 23 November.

**Action: Sarah Johnson**



Becky Wood raised the issue of the NR Variations. Of 25 variations, it was understood that only one had been agreed which led to concerns, particularly about the ability of Crossrail services to run to Reading. Simon Wright noted that NR had accepted the changes, but needed funding authority to draw down the cash. The changes had been instructed, but were subject to NR processes.

Simon Wright reported on the 60% design gate review of the Siemens C620 signalling contract (Action 15/32). The gate had been passed and Siemens had 12 weeks to clear the conditions, including, for example, the resolution of configuration issues. CRL had established a tracker to ensure that the conditions were cleared in advance of the 12 week deadline.

Simon Wright reported on the position at Whitechapel. There had been very significant difficulties including poor contractor performance. A joint report had been commissioned which produced 50 recommendations, most of which had been closed out. Both CRL and the contractors had brought in new staff which had resulted in much stronger teams which were working together much better. Planning for possessions had improved as had productivity. The commercial agreement was still subject to negotiation. There would be a very important Christmas possession and CRL would need additional access in Autumn 2016.

Simon Wright reported on the construction of the last section of primary lining for an escalator barrel under Electra House. Whilst it was not proposed to freeze the ground, it might be necessary to move the occupants out of the building temporarily due to serviceability problems.

### **3. Operations Update**

Howard Smith gave a verbal update on operations issues. MTR services on the GA were achieving 95% PPM. Production of the rolling stock had commenced at the Bombardier factory and the design of the new trains had just been launched. Progress on the depot construction was satisfactory and was three weeks behind schedule; the implications of the Old Oak Common throat change were being worked through.

Howard Smith noted that the timetable in 2019 would be the same as the one in 2018 so it was being written as if it included services to T5 and on the GW which, in fact, worked better. Discussions were being held with GWR and would be held with Sarah Johnson, in advance of reporting back to Sponsor Board.

██████████ reported that JST had received a letter from the Department stating that the Department had approved the CRL ERTMS Migration Plan which was a condition of the signalling derogation. Therefore a risk to the opening of Crossrail services had been removed.

#### 4. Surface Works Update

Matt Steele introduced paper SB 74 – 5 entitled 'Network Rail Crossrail Programme - Crossrail Sponsor Board Update.' Regarding safety, NR was focused on possession management as the site arrangements were different every night. The Lost Time Injury Frequency Rate had just reduced to 0.32. The AFC had remained the same, but there would be some EFC fluctuations over the next two periods, though not above the target, due to some staging realignment.

Matt Steele reported that the completion of the critical weekend works in advance of the Christmas possessions was essential and the weather was presenting a big challenge. NR was working to understand the costs of the station works as additional scope had arisen in the schedule 7 planning process.

Matt Steele noted that NR had applied for an additional £110m of RAB funding, in addition to the existing £2,049m, as part of the Hendy review. If forecast costs exceeded £2,159m, then there would need to be a discussion with the Department. Becky Wood noted that the ONW costs should not form part of the CP5 Enhancements Plan and that she would address the issue outside of the meeting. David Hughes noted that the affordability limit was £2,300m and that funding might need to be provided up to that limit; therefore Sponsor Board should discuss the issue.

**Action: Sarah Johnson**

Simon Wright queried whether any of the variations had not been instructed to contractors. Matt Steele noted that he was working through the variation notices with Matt White and there had not been any impact on the programme yet. Simon Wright asked to be notified of any potential delays arising from the variations.

Matt Steele reported that NR would be incurring costs of £64m on the GW during the Christmas possessions. Matt Steele's team would be working closely with GW Route colleagues in a similar arrangement to the Easter possessions. 34 engineering trains were required, of which 17 were required in the first 2 hours.

Matt Steele reported that the Longford diversion of cables was critical as the wires were required to be turned on in December 2016. Matt Steele confirmed that the outage had been booked.

Matt Steele was confident that the TPWS Plan B would be delivered by May 2017.

David Hughes noted that there the Surface Works Update item should occur higher up the agenda in January.

**Action: Sarah Johnson**

**5. Any Other Business**

There were no issues to report.

**Date of Next Meeting**

The next meeting will take place on 20<sup>th</sup> January 2016.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	Jan 2016
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	20/1/16
15/32	<b>Siemens C620 signalling contract:</b> Report to Sponsor Board on the outcome of the 60% design gate review.	Simon Wright	Closed
15/33	<b>ORR Approvals:</b> Report to Sponsor Board on the outcome of the senior level meeting with ORR which was due to take place at the end of October.	Simon Wright	20/1/16
15/36	<b>NR IFA:</b> Discuss the IFA proposal with Mathew Duncan.	Sarah Johnson	27/11/15
15/37	<b>NR RAB Funding:</b> Sponsor Board to discuss the level of NR RAB funding for the ONW works.	Sarah Johnson	Dec 2015
15/38	<b>Surface Works:</b> Move the Surface Works Update item higher up the agenda for the January meeting of Sponsor Board.	Sarah Johnson	20/1/16

**CROSSRAIL SPONSOR BOARD MEETING No.73**

**MINUTES OF MEETING HELD ON**

**FRIDAY, 18 SEPTEMBER, 2015**

**IN ROOM 05R1MI, 5<sup>th</sup> FLOOR, WINDSOR HOUSE, VICTORIA STREET.**

Present:

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Brian Etheridge*	DfT
Becky Wood*	DfT
Sarah Johnson	Joint Sponsor Team
██████████	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

Ian Nunn	TfL (Agenda items 1 to 4)
██████████	DfT
David Craig	Project Representative
David Allen	CRL
Simon Wright	CRL
Howard Smith	CRL
Jeremy Bates	CRL (Agenda items 1 to 4)
Lucy Findlay	CRL
Matt White	CRL (Agenda item 5)
Robbie Burns	CRL (Agenda item 5)

Apologies for absence were received from Andrew Wolstenholme, Chris Sexton and Matt Steele.

MEETING PART B

**1. Minutes and Actions of Meeting 72**

The draft minutes of meeting no 72 (part B) were **AGREED**.

Actions 14/45, 15/13, 15/21 and 15/25 to 15/28 had been closed. Actions 14/36 and 14/44 were not due.

## **2. Operations Update**

Howard Smith gave a verbal update on Crossrail operations. The current train operations were going well with a PPM figure of 96.9% in Period 5 and greater than 95% in Period 6. As regards the new rolling stock and depot, the first car body had been constructed in Derby and the first train would use the Derby test track in March 2016. NR had stated that it would be using the same ETCS version as CRL had assumed so the associated risk had been resolved. Lawyers were working to conclude the agreement for the use of the Melton test track. The physical works at Old Oak Common depot were progressing well and were on schedule.

Howard Smith noted that NR had accepted FGW's request to resolve the Key Date 32 issue of access to Old Oak Common depot. Consequently NR and FGW had to conclude an agreement and a variation would be required to the CRL/Bombardier contract. The operational readiness work was on schedule. The main issues and risks of signalling on the GW and the bringing into use testing and commissioning process were on the agenda for the meeting.

## **3. Crossrail Project Update**

Simon Wright gave a verbal update on progress on the Crossrail project in Periods 4 and 5. There had been a poor health and safety performance in Period 4 with 18 serious incidents, though this reduced to 4 in Period 5. The RIDDOR AFR had held steady at 0.16 and the Lost Time AFR was 0.28. Seven contracts had had no lost time incidents for over 6 months and 2 for over 2 years. Progress in Period 5 had been encouraging with MOHS well-embedded and with most contractors having bought into it. C610 had agreed to the plan to start dynamic testing in November 2017. CRL was seeking efficiencies and productivity gains and had resurrected the Six Sigma programme.

Simon Wright noted that the track laying in the Connaught Tunnel was completed on time and the concreting train would commence in early October and would work from Plumstead towards the west. At Paddington station, the tops of the piles had been recreated, all of the material had been excavated and pouring of the columns has commenced, but there remained 4 months slippage to address. At Tottenham Court Road station (TCR), the construction of the platforms had been completed and the platform edge doors were being installed; Bond Street station was slightly behind TCR. At Farringdon station, the TBMs had been cut up and removed. There was a difficult issue at Liverpool Street where there will be a potential 2 month delay due to grouting Access Passage 9. If the grouting is not successful, then the ground will need to be frozen which would cause further delays.

Simon Wright noted the continuing problems at Whitechapel where work on the LU and London Overground concourses and rooms needed to take place during blockades. CRL had changed some of its staff and had asked the

contractor to review its staffing. Plan A remained to get the contractor to perform, but it would be necessary to consider alternatives if there was no improvement, such as through-running whilst still progressing the works, and disaggregating the Crossrail station work from the LU and London Overground works. Whilst Custom House was almost complete and Pudding Mill Lane portal was on time, there would be a challenge to hand over Limmo on time.

David Allen noted that there had been a £10.3m increase in the AFCDC(P50) and a slight decrease in Intervention Points (IPs) resulting in an IPO breach of £46m. At P80, there was a £47m breach of IP1. The cumulative CPI and SPI were 0.93 and 0.97 respectively. On the C510 and C512 contracts, extrapolating the worst case would lead to an overspend of £140m if remedial action was not undertaken. It had been a good period for change with a reduction of £7m in Period 5 due to the retirement of some scope. It was likely that there would be an increase in the breach of IPO at SACR14 due to the problems at Whitechapel which would be partly mitigated by a review of the QRA and savings in business planning through stopping non-essential activities earlier. The breach would potentially be in the range of £50m to £90m.

Simon Wright noted there would be an important 60% design gate on the Siemens C620 signalling contract at the end of October. So far, the performance had been good and Siemens were on track for the design gate. Steve Allen noted that Sponsor Board would require a further update on this issue in November.

**Action: Simon Wright**

Sarah Johnson queried the confidence level which could be placed on the outcome of the design gate and would consider the matter further with CRL. Simon Wright noted there was long list of deliverable documents which would need to be consistent and compatible.

**4. Bringing into Use**

Jeremy Bates introduced paper SB 73 – 5 entitled, 'Integration/Handover/Bringing into Use'. Railway Integration Review Point 4 (RIRP4) had been held in May 2015 and RIRP5 was planned to take place in December 2015. There had been significant action to de-risk the testing and commissioning phase of the work through pulling forward testing activities. The Handover Strategy had been originally published in August 2014 and CRL was about to publish the second version. CRL was still aiming for handover in July 2018 with the stations to be ready 4 to 5 months in advance of this date. There would be 17 certificates to demonstrate to Sponsors that CRL had handed over the Central Section. The Surface Works had been addressed in the strategy with the fixed assets being handed over to the route.

Howard Smith reported that RfL and LU, as Infrastructure Managers, would be ready to receive the assets. The LU position is less challenging and LU understands what is required and this is backed up by signed documentation, though there could be issues depending on what else was going on at key moments.

Jeremy Bates noted that the orange activities and milestones on the authorisation roadmap slide represented interactions with the ORR. Simon Wright noted that CRL and ORR needed to jointly consider ORR's readiness and capacity, and it was noted that there was an existing Sponsor Board action for JST. There would be a senior level meeting with ORR at the end of October and Simon Wright would report back.

**Action: Simon Wright**

Simon Wright noted that the roll out of the work throughout CRL was work in progress and noted that the Heathrow position would be challenging.

**5. Surface Works Update**

Robbie Burns introduced paper SB 73 – 6 entitled, 'Network Rail Crossrail Programme – Crossrail Sponsor Board Update.' The Stage I Christmas 2015 works in the West represented £69m of work to be completed in 10 days with 4 days of all line blocks and 6 days of a 2 track railway which was more work than had ever been done. The first of 5 signalling data changes would take place and all of them have to take place on time to deliver the KD13 ETCS overlay scope. On the east, the biggest risk arising from the Christmas 2015 works related to the wiring and piling at Shenfield.

Robbie Burns reported that there would be a meeting between Mark Carne and Andrew Wolstenholme to discuss the issues arising from the installation of ETCS in the Paddington throat. ORR's formal consultation on Plan B (TPWS temporary arrangements for 18 months) closes on 27 October and a decision is anticipated in December.

Robbie Burns noted that, as a result of negotiations with Local Authorities on schedule 7 matters, £90m of additional scope for architectural improvements had arisen. As regards KD32, FGW had chosen to put NR's draft letter through its lawyers. Becky Wood agreed to call FGW.

Simon Wright asked what evidence there was of SSL delivering. Robbie Burns reported that SSL had performed better at Easter following the problems at Christmas, but there had been massive supervision. The same team would supervise SSL for the Christmas 2015 works.

**6. Any Other Business**

Nothing to report.



**Date of Next Meeting**

The next meeting will take place on Friday 20 November, from 1200 to 1500, in Windsor House.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	Jan 2016
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	20/11/15
14/45	<b>Railway Integration Review Point 4:</b> Report to Sponsor Board following completion of Railway Integration Review Point 4.	Chris Sexton	Closed
15/13	<b>Enhanced TPWS:</b> Contact Clare Moriarty if there are delays in establishing the next steps so that DfT can raise the issue with ORR.	Matt Steele	Closed
15/21	<b>HS2 Interface:</b> Investigate the implications for Crossrail and HS2 of HS2 not having access to the sewer under the Crossrail Depot Throat.	Allison Phillips	Closed
15/25	<b>ETCS Versions:</b> Check the Thameslink position with Matt Lodge.	Sarah Johnson	Closed
15/26	<b>Signalling:</b> A copy of the NR letter to Simon Wright of 2 July will be sent to Becky Wood.	Sarah Johnson	Closed
15/27	<b>Key Date 32:</b> Discuss the position with Peter Wilkinson.	Becky Wood	Closed
15/28	<b>4G Demand:</b> Arrange a separate discussion.	Simon Wright	Closed
15/32	<b>Siemens C620 signalling contract:</b> Report to Sponsor Board on the outcome of the 60% design gate review.	Simon Wright	20/11/15
15/33	<b>ORR Approvals:</b> Report to Sponsor Board on the outcome of the senior level meeting with ORR which is due to take place at the end of October.	Simon Wright	20/11/15

**CROSSRAIL SPONSOR BOARD MEETING No.72**

**MINUTES OF MEETING HELD ON**

**FRIDAY, 17 JULY, 2015**

**IN ROOM 05R1MI, 5<sup>th</sup> FLOOR, WINDSOR HOUSE, VICTORIA STREET.**

Present:

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Clare Moriarty*	DfT
Becky Wood*	DfT
Allison Phillips	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

Andrew Wolstenholme	CRL
Simon Wright	CRL
David Allen	CRL
Lucy Findlay	CRL
Howard Smith	CRL
Matt White	CRL

Apologies:

David Craig	Project Representative
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MEETING PART B

**1. Minutes and Actions of Meeting 71**

The draft minutes of meeting no 71 (part B) were **AGREED**.

Action14/44. Sarah Johnson reported that some work had been completed on the quantity of ORR approvals, but there would be a slight pause pending the outcome of the CP5 Review. A further update will be given later in the year.

## **2. Operations Update**

Howard Smith reported that MTR/Crossrail had achieved 97% PPM in this period, up from 94%, and that the concerns over the operation of Ilford Depot have not materialised. The first testing of the new body shell for the Crossrail Rolling Stock will commence soon. There is currently a concern related to the signalling and the associated software embedded in the train. Whilst ETCS version 3.3 exists, CRL has agreed to use version 3.4. However NR has suggested that it would be better to await version 3.5 in order to futureproof the software, but this would introduce additional risk to CRL. Becky Wood agreed as there had been similar issues on Thameslink. Becky Wood asked JST to check the position with Matt Lodge. Howard Smith said that CRL needed to fix on version 3.4 and Simon Wright noted that this needed to be reviewed in conjunction with Siemens.

### **Action: Sarah Johnson**

Howard Smith noted that the depot construction was progressing well and the final planning consents had been received. NR has written to Bombardier regarding the use of the Old Dalby test track and Bombardier should write back on 17 July to close the agreement. Simon Wright noted that CRL would shortly open discussions with a view to installing additional infrastructure on the test track.

## **3. Crossrail Project Update**

Andrew Wolstenholme noted that the period 3 report had been submitted to the Crossrail Board on 16 July. In period 2, there was an IPO breach of £44m, but this had fallen to £36m in period 3. There are currently specific cost and schedule pressures at Ilford Yard (£1m to £5m), Liverpool Street and Whitechapel. At Whitechapel, there was better visibility of the possession strategy and the vertical shaft had been agreed in principle. The AFCDC might increase over the time to period 6, but CRL was trying to understand possible savings and what action to take if there was a breach at the end of the SACR14 period. Clarity on possible increases would grow over the next 3 to 4 periods. In period 3, the RIDDOR AFR had fallen to 0.14, which was the best result for 3 years.

Andrew Wolstenholme reported that production had been adequate and work was continuing in line with the MOHS programme. C610 now had a programme which was compliant with MOHS. There was good visibility through to early dynamic testing in November 2017 in the east. In the west, there were still 6 to 7 critical challenges to deliver early dynamic testing in January 2018.

Simon Wright noted that the TBMs were being broken up and removed from the tunnels. The concrete train was being built up and would start in the Thames tunnels in September. C610 was working in Connaught tunnel and PEDs were being installed at Tottenham Court Road (TCR). The last thirds of the platforms were being installed at Bond Street and TCR. C620 was on

schedule with the 60% design gate due in October. The residual issue was at Whitechapel where a schedule and bottom up forecast were required. CRL was continuing to focus on the contractor's performance, but there had not been a performance breakthrough.

Andrew Wolstenholme reported that cost pressures were emerging at Liverpool Street where the sequence of handovers was complex though the pressures were of a different order of magnitude to Whitechapel. CRL was satisfied with the quality of the contractor at Liverpool Street, but the schedule position will be tight and a supplemental agreement will be required.

In response to a question from Clare Moriarty about the key indicators to watch over the coming months, David Allen noted that the production measures at the front of the report, including SPI and the key dates, would indicate if the MOHS was not holding up.

#### **4. Enhanced TPWS & ONW Key Date 32**

##### **4.1 Enhanced TPWS**

Matt White introduced paper SB 72 – 5, entitled, 'ETCS 'Plan B' Update. NR is aiming to award the contract to implement Plan B by the end of July; this approach is acceptable to ORR as it increases the degree of train protection by the fitment of TPWS to more signals on the GW. NR has confirmed that ETCS will not be delivered west of Airport Junction in CP5. C620 is already working on a CBTC/TPWS transition for the eastern section of the route, but Siemens will need to be formally instructed to incorporate the Plan B scenario on the western section of the route. In Spring 2016, Siemens will need to be informed what the primary train protection system will be on the GW when Crossrail services begin to operate (May 2019).

Simon Wright noted that Siemens would need to continue to work on the transition to ETCS (Plan A) as the derogation would only be valid until December 2019. Bombardier would not be affected. A copy of the NR letter to Simon Wright of 2 July will be sent to Becky Wood.

**Action: Sarah Johnson**

Sponsor Board **NOTED** that:-

- Crossrail will progress, through Network Rail, the development and implementation of an alternative (Plan B) train protection as a contingency to ETCS Level 2 overlay on the Great Western.
- Crossrail will progress the incorporation of Plan B as a parallel activity with Siemens (C620).

## 4.2 ONW Key Date 32

Matt White introduced paper SB 72 – 6, entitled, 'Old Oak Common: Key Date 32.' CRL's preferred option is option 1 combined with option 3 as this would allow the works to go ahead at Christmas 2015 and avoid any impact on Bombardier's critical path to build and commission the depot in time for the commencement of stage 2 services. However FGW is using its power of veto and the standard industry access dispute process is underway. FGW's concerns relate to capacity in and out of the depot in the morning and evening peaks and resilience should the key set of points fail, though NR has agreed to treat the points as a gold/platinum asset. Howard Smith noted that the access dispute panel would consider the matter in September or October, but CRL would prefer that the issue is resolved beforehand.

Matt White noted that NR had commenced the option 2 design, but the infrastructure was unlikely to be in place until March 2016 which would mean that FGW would have to operate on one line from January to March 2016. There will also be impacts on the construction of the depot by Bombardier due to the proximity of the running line and these impacts will need to be assessed. There will also be a future issue as this option might affect stage 2 services.

Howard Smith reported on two meetings which CRL had held with FGW. FGW's concern was that the effects are cumulative, but it has operated with one line for 14 weeks in the past and Mark Hopwood stated that he would live with this solution if told to do so by the Department. The problem will exist from Christmas 2015 to Christmas 2016 as a minimum, but FGW believes that it may extend to 2017. In CRL's view, the issue came down to a senior DfT judgement weighing up the performance risk against cost and schedule impacts on the Crossrail programme. Becky Wood undertook to speak to Peter Wilkinson.

**Action: Becky Wood**

## 5. Any Other Business

Simon Wright noted that a meeting would be held in Brussels to discuss CRL's draft ERTMS Migration Plan.

Simon Wright reported that CRL was developing a solution to provide 4G services to the emergency services and public in tunnels and stations. However 4G service providers have stated that the CRL design will not meet increased public demands in 2018. CRL is considering the position and will report back to Sponsors. The associated cable must be ordered in August 2015. Steve Allen noted that the commercial case needed to be understood. Simon Wright undertook to arrange a separate discussion.

**Action: Simon Wright**

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Steve Allen thanked Clare Moriarty and Allison Phillips for their contributions to the Crossrail Sponsor Board as it was their last meeting.

**Date of Next Meeting**

The next meeting will be held on Friday, 18<sup>th</sup> September, from 0930 to 1230 in Windsor House.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	Jan 2016
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	20/11/15
14/45	<b>Railway Integration Review Point 4:</b> Report to Sponsor Board following completion of Railway Integration Review Point 4.	Chris Sexton	18/9/15
15/13	<b>Enhanced TPWS:</b> Contact Clare Moriarty if there are delays in establishing the next steps so that DfT can raise the issue with ORR.	Matt Steele	18/9/15
15/21	<b>HS2 Interface:</b> Investigate the implications for Crossrail and HS2 of HS2 not having access to the sewer under the Crossrail Depot Throat.	Allison Phillips	18/9/15
15/25	<b>ETCS Versions:</b> Check the Thameslink position with Matt Lodge.	Sarah Johnson	31/7/15
15/26	<b>Signalling:</b> A copy of the NR letter to Simon Wright of 2 July will be sent to Becky Wood.	Sarah Johnson	31/7/15
15/27	<b>Key Date 32:</b> Discuss the position with Peter Wilkinson.	Becky Wood	31/7/15
15/28	<b>4G Demand:</b> Arrange a separate discussion.	Simon Wright	31/7/15



**CROSSRAIL SPONSOR BOARD MEETING No.71**

**MINUTES OF MEETING HELD ON**

**FRIDAY, 19 JUNE, 2015**

**IN THE BOARD ROOM, WINDSOR HOUSE, VICTORIA STREET**

Present:

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Clare Moriarty*	DfT
Allison Phillips	DfT
Sarah Johnson	Joint Sponsor Team
Sian Evans	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

Andrew Wolstenholme	CRL
Simon Wright	CRL
David Allen	CRL
Lucy Findlay	CRL
Howard Smith	CRL
David Craig	Project Representative

Apologies:

Becky Wood*	DfT
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MEETING PART B

**1. Minutes and Actions of Meeting 70**

The draft minutes of meeting no 70 (part B) were **AGREED**.

Sarah Johnson reported that the majority of the outstanding actions, other than those not due or closed, would be covered under the meeting agenda.

With regard to action 14/44 (ORR Approvals), activity is ongoing and Sarah Johnson will provide a verbal update at the Sponsor Board meeting in July.

With regard to action 14/45, CRL will now report to Sponsor Board on the completion of Railway Integration Review Point 4 in July 2015.

Action 15/13 is with Network Rail to feedback to DfT should any support be required.

## 2. Progress Update and SACR 13

Andrew Wolstenholme provided Sponsor Board with a summary of SACR 13 and a progress update for period 2. The key items discussed included:

### 1. Implementation of the Master Operational Handover Schedule (MOHS).

The cost of implementing the MOHS has been identified as circa £200m. Systemwide Main Works C610 is the main contract where changes are needed to accommodate the MOHS, essentially the access dates need to be revised and the sequence for the release of track needs to be revised.

The 72% confidence rating against the planned Stage 3 (Central Section) opening date of December 2018 assumes the third parties will meet the timescales set out in MOHS.

Steve Allen commented that Sponsors would welcome some early input into CRL's discussions regarding cost versus schedule going forward, to gain a greater insight into the value for money of schedule mitigation actions, a fuller explanation of the steps required and the implications of the 'do nothing' scenario.

### 2. Cost Pressures

In Period 2, CRL's AFCDC at P50 increased by £51m to £11,756m, and consequently Intervention Point 0 (IP0) was breached at P50 by £44m (at P1 the IP0 headroom was £7m). The main reason for the increase is due to a growth in risk at Paddington Station following receipt of the latest forecast from the contractor. The additional costs primarily relate to the prolongation and re-sequencing work due to the issues with the piling at Paddington.

A review of the cost pressures is now underway at Whitechapel (C512/C510), and Systemwide Main Works (C610). Trends and risk allowances have been made for potential increases, but due to the uncertainty during commercial negotiations, forecast costs may continue to increase. Sponsor Board were informed of the work Paul Grammer (Commercial Director) is undertaking to implement a solid process for the commercial close out of the contracts.

In response to the IP0 breach in period 2, CRL is implementing a 3 point plan based on:

- i. Lessons learnt on Paddington
- ii. Deep dives on Whitechapel, C610, Ilford Depot and Liverpool Street cost forecasts.
- iii. Review of changes approved through the CRL Change Process.

Andrew Wolstenholme agreed to provide an update on the emerging conclusions and cost position at the July Sponsor Board.

### 3. Railway Integration

Simon Wright updated Sponsors on the improvements being made to the Railway Integration Authority, which all the Infrastructure Managers attend and which he chairs. Sponsor Board noted the importance of this work and that the Railway Integration Authority will become an important feature in future governance.

#### 4. Surface Works

Simon Wright provided an update on Network Rail's performance and in particular that, although milestones were being met, constraints on resources are increasing.

Simon Wright informed Sponsor Board that planning for the Christmas 2015 possessions was starting, with no current areas of concern.

#### 5. Signalling

Simon Wright noted that there was an increasing concern regarding Network Rail's ability to deliver ERTMS Plan A. In July 2015, ERTMS Plan B will have completed GRIP Stage 4 and a decision will be required to proceed to GRIP 5- 8. Network Rail has started the tendering process for this work and CRL's assumption is that NR will fund this work. CRL, Network Rail and ORR are meeting on the 8<sup>th</sup> July 2015 to have further discussions about the ORR approval process for 'Plan B'.

Sponsor Board noted that the ERTMS migration plan is an agenda item for the next Sponsor Board meeting in July.

### **3. Operations Update**

Howard Smith gave a verbal update on operations issues. MTR commenced Stage 0 operations as planned on 31<sup>st</sup> May 2015. Whilst the transferring of the services to TfL Rail was successful, there have been performance issues on the route during the first month of operations which the team are seeking to actively manage.

Howard Smith noted that there are 3 operators at Ilford depot following the transfer, though there is still the same number of units. Simon Wright noted that options for the replacement of the training facility were being examined and that CRL was continuing to try to reduce the cost of the facility.

Howard Smith noted that the Old Oak Common depot construction was going very well with the piling ahead of programme. Rolling stock progress was also good and there was continual focus on the associated signalling interfaces. The issues between NR and Bombardier regarding Old Dalby are nearing resolution.

#### **4. HS2 Interfaces Update**

Sarah Johnson introduced the 'HS2 Update' (SB71-4) to update the Sponsor Board on issues relating to the interface between Crossrail and the proposed HS2 Project at Old Oak Common.

One of the main remaining issues relates to the sewer under the Crossrail depot throat. HS2 proposes to line the structure to protect it from potential settlement caused by HS2 works. CRL has clearly indicated for the past 18 months that these works could take place before the depot piling commenced in April 2015. This date has now passed and depot piling has commenced and therefore HS2 has missed this opportunity.

Clare Moriarty questioned the implications for Crossrail and HS2 of not having access to the sewer. Allison Phillips responded that the full impact was not known but that any change would now introduce delays to the work on-site and would likely incur costs (which would be met by HS2). Clare Moriarty requested that Allison Phillips investigate the implications of this on HS2 and report back to Sponsors.

#### **Action: Allison Phillips**

Sarah Johnson updated Sponsor Board that HS2 plan to include the provision works for infrastructure at Old Oak Common which could support a future connection of Crossrail to the WCML within an Additional Provision (AP2) to the HS2 Phase 1 Hybrid Bill which is expected to be deposited to Parliament in July. This would address TfL's petition item on HS2 providing future provision for Crossrail WCML and, crucially, will secure adequate turn back capacity for Crossrail trains at Old Oak Common. The JST are working with Network Rail and DfT to develop an evidence package to support the inclusion of these works within the AP; validating costs, reviewing alternatives and quantifying impacts on Crossrail operations.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	17/7/15
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	17/7/15
14/45	<b>Railway Integration Review Point 4:</b> Report to Sponsor Board following completion of Railway Integration Review Point 4.	Chris Sexton	17/7/15
15/13	<b>Enhanced TPWS:</b> Contact Clare Moriarty if there are delays in establishing the next steps so that DfT can raise the issue with ORR.	Matt Steele	17/7/15
15/17	<b>Ilford Training Facility:</b> Send CRL the contact details of Karen Letten who is responsible for the GA franchise competition.	Sarah Johnson	Closed
15/18	<b>Enhanced TPWS Decision Timelines:</b> Inform Sarah Johnson of the likely timescales for the ORR determination of the Enhanced TPWS submission following the meeting between NR and ORR.	Matt White	Closed
15/19	<b>Signalling:</b> Clarify the signalling assumptions for the route between Airport Junction and Reading.	Sarah Johnson	Closed
15/21	<b>HS2 Interface:</b> Investigate the implications for Crossrail and HS2 of HS2 not having access to the sewer under the Crossrail Depot Throat.	Allison Phillips	17/7/15


**CROSSRAIL SPONSOR BOARD MEETING No.70**

**MINUTES OF MEETING HELD ON**

**FRIDAY, 17 APRIL, 2015**

**IN THE DISTRICT ROOM, 7<sup>TH</sup> FLOOR, EAST WING, 55, BROADWAY  
SW1H 0BD**

Present:

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Clare Moriarty*	DfT
Becky Wood*	DfT
Allison Phillips	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
David Allen	CRL
Simon Wright	CRL
Howard Smith	CRL
Martin Buck	CRL
Lucy Findlay	CRL
Matt White	CRL (Agenda item 4 only)
Matt Steele	NR (Agenda item 4 only)

MEETING PART B

**1. Minutes and Actions of Meeting No 69**

The draft minutes of meeting no 69 (part B) were **AGREED**.

Sarah Johnson noted that the outstanding actions, other than those not due, would be covered under the relevant agenda items.

## **2. Operations Update**

Howard Smith gave a verbal update on operations issues. MTR was almost fully established and had taken on an additional 8 drivers to offset the TUPE risk which could have affected the transfer of GA services on 31 May. The negotiation of the station leases continues to progress well and most of the information had been sent to ORR, though there were a few boundary and asset condition issues to sort out with NR.

Howard Smith noted that there would be 3 operators at Ilford depot following the transfer, though there would still be the same number of units. Recruitment was underway to fill the vacancies at the depot and both MTR and London Overground would have overnight supervision. There would be an intensive CRL project at the depot following the transfer. Simon Wright noted that options for the replacement of the training facility were being examined and that CRL was trying to reduce the cost of the facility. Andrew Wolstenholme noted that CRL might need some help to gain alignment of the stakeholders. Sarah Johnson will send CRL the contact details of Karen Letten who is responsible for the GA franchise competition.

### **Action: Sarah Johnson**

Howard Smith noted that the depot construction was going very well with the piling ahead of programme. Rolling stock progress was also good and there was continual focus on the associated signalling interfaces. The NR Investment Committee was due to meet on 17 April to discuss Old Dalby. Andrew Wolstenholme noted the schedule and reputational risk and would meet Mark Carne on 17 April to discuss the issue. Clare Moriarty offered to help if it was not possible to resolve the issue.

## **3. Period Report**

Andrew Wolstenholme gave a progress update. Safety had been stable in period 12 and period 13 had been an incident free period. Progress was 63.9% at the end of period 13, which meant that 15% had been completed in the full year as planned. The in-period CPI was not as high as had been wished, but it should move to a steady state in the next 4 to 5 periods. Whilst there had been a breach of IPO in period 12, the forecast came in just below IPO in period 13, although this had not been discussed by the CRL Board. The challenges at SACR13 would remain for the next 12 months.

Simon Wright noted that the MOHS programme would be the roadmap to the end of the project. Work which was underway on the QRA looked reasonable and there was good contractor buy in, although the arrangements had not been contracted at this stage. There would be a summer blockade at Whitechapel following helpful dialogue with TfL and discussions were underway regarding autumn and Christmas.

#### **4. Surface Works Update**

Matt Steele introduced paper SB 70 – 2 entitled, 'Crossrail Programme – Easter 2015 Update'. A route-wide safety stand down had taken place in the week before Easter which was attended by 1,460 staff and two injuries had occurred during the possession. NR had completed all of the work which was planned to take place over the Easter period. The West Outer signalling had gone well with the physical works completed by midnight and the paperwork by 03.00 in advance of the commencement of services; SSL's performance had improved greatly. The lessons learnt had been written up, but there would be 2 challenges in future in relation to multi-disciplinary sites and the need to use the best NR resources. Andrew Wolstenholme, Simon Wright and Matt Steele will meet to discuss how the lessons learnt can be locked in for future work.

Matt Steele reported that a number of clarifications on the ERTMS Plan B submission had been sent to the ORR. NR was trying to set up a meeting with ORR to discuss the clarifications and to ascertain the timeline through to approval. Sarah Johnson requested that Sponsors be informed of the likely timescales once NR had met with ORR.

#### **Action: Matt White**

In terms of procurement, NR was progressing as if the approval had been obtained and the contracts were planned to be awarded in July and August. Clare Moriarty noted that the issue had been flagged with Anna Walker and asked Matt Steele to advise if help was required.

Matt Steele reported that the ERTMS Plan A schedule was being updated over the next few weeks and priority would be given to the Heathrow tunnels. NR had authorised the Heathrow to Paddington ERTMS project which was being undertaken by Matt Steele's team. The Stockley to Reading section, which remained with the central ETCS programme, was currently in GRIP stage 3 and had not been confirmed as the delivery times and costs were under review. Simon Wright noted that CRL was assuming that the Stockley to Reading work would be delivered. Matt Steele noted that the plan was to deliver the work by 2019. ██████████ noted that the assumption at the time of the Reading change was that Crossrail services would use conventional signalling west of Airport Junction. Sarah Johnson undertook to clarify the signalling assumption.

#### **Action: Sarah Johnson**

#### **5. CRL/TfL Organisational Transition**

Martin Buck introduced paper SB 70 – 3 entitled, 'Crossrail Close-Out Transition Strategy.'



Sponsor Board **NOTED** the approach to managing the Crossrail transition as set out in the Crossrail Transition Strategy.

**6. Any Other Business**

There was nothing to report.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	17/7/15
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	19/6/15
14/45	<b>Railway Integration Review Point 4:</b> Report to Sponsor Board following completion of Railway Integration Review Point 4.	Chris Sexton	19/6/15
15/13	<b>Enhanced TPWS:</b> Contact Clare Moriarty if there are delays in establishing the next steps so that DfT can raise the issue with ORR.	Matt Steele	19/6/15
15/17	<b>Ilford Training Facility:</b> Send CRL the contact details of Karen Letten who is responsible for the GA franchise competition.	Sarah Johnson	24/4/15
15/18	<b>Enhanced TPWS Decision Timelines:</b> Inform Sarah Johnson of the likely timescales for the ORR determination of the Enhanced TPWS submission following the meeting between NR and ORR.	Matt White	19/6/15
15/19	<b>Signalling:</b> Clarify the signalling assumptions for the route between Airport Junction and Reading.	Sarah Johnson	1/5/15

**CROSSRAIL SPONSOR BOARD MEETING No.69**

**MINUTES OF MEETING HELD ON**

**THURSDAY, 19 MARCH, 2015**

**IN ROOM H5, GREAT MINSTER HOUSE, 33 HORSEFERRY ROAD,  
LONDON**

Present:

Clare Moriarty*	DfT (Chair)
Becky Wood*	DfT
Steve Allen*	TfL
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
██████████	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
David Allen	CRL
Howard Smith	CRL
Lucy Findlay	CRL
Matt White	CRL (Agenda item 4 only)
Matt Steele	NR (Agenda item 4 only)

Apologies for absence were received from Allison Phillips and Simon Wright.

MEETING PART B

**1. Minutes and Actions of Meeting No 68**

The draft minutes which had been circulated with the papers for the meeting were **AGREED**. All of the actions had been completed or were not due.

**2. Operations Update**

Howard Smith gave a verbal report on operational issues. The rolling stock and depot concession was progressing well. There were detailed issues with the signalling interfaces, but a series of meetings had been arranged to address these. The associated process of sign-off and approvals would be reviewed in May. At Ilford Depot, the wires were too high and NR needed to lower the wires; Andrew Wolstenholme had raised this issue with Mark Carne.

The only red-rated issue on the dashboard for the May 2015 transfer of services related to the station leases where the commercial position on the condition of the stations needed to be resolved with NR. Clare Moriarty noted that she would discuss this issue with Steve Allen after the meeting.

Howard Smith reported that the only DfT issue related to Stratford station retailing and he had written to Allison Phillips. The station staff would need to be issued with TUPE notices.

### **3. Period report**

Andrew Wolstenholme gave a progress update including the period 11 highlights. The two TBMs were at Liverpool Street and would complete their traverse of the station in the next two weeks. The 2014/15 milestone for completion of the tunnelling would not be met with completion anticipated in May 2015. The AFCDC P50 was trending upwards with £15m headroom to IP0 in Period 11; there was £4m of headroom between AFCDC P80 and IP1. Discussions would be held with the CRL Board during week commencing 23 March regarding the probability of an IPO breach occurring in Period 12, though there would be a review of risk allowances and contingency in Period 13 to ascertain whether that would change the position. Previously there had been headroom, but it was not certain that this would continue.

Andrew Wolstenholme reported that there had been seven safety incidents in Period 11 and the AFR had risen to 0.23, Period 12 had been stable with the AFR remaining at 0.23 and there had not been any incidents in Period 13. The Fisher Street incident inquest had been closed out and accidental death with a narrative had been recorded. CRL was reviewing the narrative in order to learn lessons.

Andrew Wolstenholme noted that there were gaps between CRL's and contractors' views of costs to completion and the target costs. The gaps were big at Paddington and Whitechapel. A concern remained at Paddington where the 10 to 12 week delay had been reduced to 4 weeks, but it was expected to become longer and this would be worked through in Period 13. The biggest concern was at Whitechapel which remained a critical issue and Andrew Wolstenholme had met the CEOs of the contractors concerned. David Craig noted that PRep had shared its briefing note with CRL. Clare Moriarty welcomed the level of engagement which CRL had had at Whitechapel.

Andrew Wolstenholme reported that systemwide had made a good start and was now around 10% complete with earlier procurement delays having been recovered.

#### 4. Surface Works Update

Matt Steele introduced paper SB 69 – 1 entitled, 'Crossrail Programme – Easter 2015 Update'. On Crossrail West, there were two major sets of works which were located at Acton and Slough. The main challenge at Acton related to safe working as the main lines would be open whilst the relief lines were shut and there would be about 6 possession changes; peer reviews had been held to manage safety. The points works at West Drayton represented a lower risk from a safety perspective as they were not located on the main line. The work at Stockley was critical, but could be curtailed.

Matt Steele noted that the work at Slough was most significant with re-signalling and the transfer of control from Slough signal box to Thames Valley. The works were very important for Crossrail with the additional benefit of unlocking the piling for the OLE. If the data programme work was not completed in advance of the possession, then NR would still try to resolve the problem and complete the work over Easter because of the timetable consequences. If the work was not undertaken at Easter, then it would slip to Christmas which would delay the electrification programme and affect Crossrail. The data programme work at Reading was greater than that for Slough and there were dependencies between the two; the Reading and Slough work had been subject to a deep dive review by the Non-Executive Directors. Once the work had commenced, there was no plan B and the work would need to be completed. NR confirmed that a prioritisation had been agreed for handing back the assets in the order of mains, reliefs, branch lines and sidings. Matt Steele clarified that HEX services would continue to run over the Easter period.

Matt Steele noted that the scheduling of the data programme work was dictated by the availability of scarce specialist resources across the industry and the need to have the scope locked down. Matt White noted that FGW had challenged the layout at Old Oak Common and this could affect the work scheduled for Christmas. Matt Steele confirmed that this was the case as the design was proceeding on the basis of the current scope. Howard Smith noted that intensive negotiations were underway with FGW who had a veto because of the Network Change procedure.

Matt Steele reported that CRL and NR would formally clarify the issues identified by ORR in relation to the enhanced TPWS exemption application by 27 March. A meeting would then be necessary to establish the next steps. Matt Steele was **REMITTED** to contact Clare Moriarty if there was a delay in establishing the next steps so that she could raise the issue with ORR.

**Action: Matt Steele**

Andrew Wolstenholme reported that he had raised the issue of CRL's use of the Old Dalby test track with Mark Carne as CRL did not have confidence that the issue would be resolved. Howard Smith noted that the issue had been passed to a number of separate teams and a high level executive decision was required. Andrew Wolstenholme noted that Mark Carne considered that

there were only low level cost issues. Sarah Johnson was **REMITTED** to add the issue to the agenda for the next meeting between the Commissioner and Mark Carne. Clare Moriarty asked that Sponsor Board be kept informed.

**Action: Sarah Johnson**

## **5. CRL New Operating Model**

Andrew Wolstenholme introduced paper SB 69 – 2 entitled, 'Crossrail new operating model.' CRL had been mapping back the requirements from 2017/18 and, in two years, the last organisational change would be required as the programme moved to the testing and commissioning phase. Clare Moriarty noted that a very sensible evolutionary approach had been adopted. David Craig noted that CRL was currently transitioning to the new structure and that it would be necessary to obtain the support of staff if the new structure was to become fully effective.

## **6. Any Other Business**

Andrew Wolstenholme reported that the CRL Executive Committee had signed off the transition strategy.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	17/4/15
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	22/5/15
14/45	<b>Railway Integration Review Point 4:</b> Report to Sponsor Board following completion of Railway Integration Review Point 4.	Chris Sexton	22/5/15
15/02	<b>Draft Minutes of Meeting 66:</b> Add some further context to section 3 of the minutes and re-circulate the minutes.	Sarah Johnson	Action closed
15/03	<b>Costs and Indicators:</b> Discuss with David Allen preparing for a detailed review of the costs and associated indicators at SACR13.	Sarah Johnson	Action closed
15/08	<b>Yellow Plant:</b> Ascertain the assumptions for yellow plant in the RfL budget.	Sarah Johnson	Action closed
15/13	<b>Enhanced TPWS:</b> Contact Clare Moriarty if there are delays in establishing the next steps so that DfT can raise the issue with ORR.	Matt Steele	17/4/15
15/14	<b>Old Dalby Test Track:</b> Add the issue to the agenda for the next meeting between the Commissioner and Mark Carne. Keep Sponsor Board informed of progress.	Sarah Johnson	Action closed

**CROSSRAIL SPONSOR BOARD MEETING No.68**

**MINUTES OF MEETING HELD ON**

**MONDAY, 23 FEBRUARY, 2015**

**IN ROOMS 2/26 & 2/27, GREAT MINSTER HOUSE, 33 HORSEFERRY  
ROAD, LONDON**

Present:

Clare Moriarty*	DfT (Chair)
Allison Phillips*	DfT
██████████	DfT
Steve Allen*	TfL
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
██████████	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
David Allen	CRL
Simon Wright	CRL
Howard Smith	CRL
Lucy Findlay	CRL
Chris Sexton	CRL
Valerie Todd	CRL (Agenda item 3 only)
Stephen Field	TfL (Agenda Item 3 only)

Apologies for absence were received from Jeremy Rolstone.

MEETING PART B

**1. Minutes and Actions of Meeting No 67**

The draft minutes of meeting no 67 (part B) were agreed.

Actions 14/23 and 14/43 were covered at the meeting under the relevant agenda items.

Action 15/04. The wheel lathe settlement issue had been discussed, but had not been closed out. Sarah Johnson noted that a reply to CRL's letter was outstanding.



## 2. Review of Yellow Plant and Funding

Clare Moriarty thanked CRL for paper SB 68 – 4 entitled, 'Yellow Plant' noting that the paper sought guidance from Sponsor Board. The provisions of the Project Development Agreement (PDA) were ambiguous and Sponsor Board proposed a pragmatic approach such that CRL should pay for the railhead profiling machine (which required modification) and for any signalling modifications which would be required for other plant, with RfL responsible for the cost of the remaining plant and for the procurement. Chris Sexton noted that the overall cost of the plant was in the range of £15m to £25m with the cost of the railhead profiling machine being about £10m.

David Allen noted that CRL did not have any allowance for the cost of the yellow plant in its forecast nor in its risk provision, and that the current forecast was only £15m below IPO with a £30m reduction in IPO to come following interest rate changes. It had been reported that the purpose of the PDA clause was to prevent savings on the tunnel and platforms being taken by CRL at the expense of the maintenance equipment which Sponsors would have to fund. David Hughes did not recall the interpretation of the PDA clause mentioned and reported that TfL and RfL also had no allowance in its budget and risk provision.

Chris Sexton reported that CRL had worked hard with RfL on development of the maintenance strategy and plans, and putting together the maintenance fleet that would give the lowest possible maintenance cost. No items of maintenance plant could be bought 'off the shelf', as they were built up from base specifications. In that regard the railhead profiling machine was no different to other items of plant.

Andrew Wolstenholme noted that CRL accepted that it would pay for the signalling equipment associated with the maintenance equipment. The railhead profiling machine was required to be dedicated because of the high tonnage which would use the railway, but in CRL's view, it was not bespoke. David Allen noted that CRL did not accept that it should fund (or part fund) scope on activities simply because no other entity had established relevant budgets.

Clare Moriarty offered CRL the opportunity to make further representations and Sponsor Board **REMITTED** Sarah Johnson to ascertain the assumptions for yellow plant in the RfL budget. Subsequently Sponsors will write to CRL.

**Action: Sarah Johnson**

## 3. Crossrail Pension Scheme

Valerie Todd introduced paper SB 68 – 5, entitled 'Dealing with the legacy pension arrangements for Crossrail Ltd.' The joint CRL/TfL working party had been reviewing the position of the CRL pension scheme as the end of the project approached. In phase 1 of the work last year, the Omnibus section of

the RPS was closed to new entrants. In phase 2, the working party had investigated the options to deal with the section 75 debt and had identified two options which were set out in the paper.

Allison Phillips asked if Sue Waring could be included in the working group and noted that decisions could not be put to Ministers during the election period.

Clare Moriarty noted that there would be two stages to the work; working through the options and determining the optimum timing to enter into the agreements, and these should be kept separate. Continuing to work on the options was the right approach.

Sponsor Board **AGREED** that:-

- i. TfL will inherit all CRL's legacy pension arrangements following the completion of the project (subject to an appropriate commercial agreement);
- ii. The joint working party should proceed with due diligence around the two preferred options for receiving a transfer of CRL's liabilities (and assets) from the Omnibus Section of the Railways Pension Scheme (RPS), namely to either a new CRL section within the RPS or to the Public Sector Section of the TfL Pension Fund;
- iii. CRL and TfL will subsequently enter into a formal agreement to avoid triggering a section 75 debt in the receiving arrangement should CRL be wound up or cease to employ any active members and that due diligence should commence around the most appropriate mechanism for achieving this; and
- iv. The terms of the proposed agreement will be submitted to Sponsor Board for endorsement prior to execution.

#### **4. Period Report**

Andrew Wolstenholme reported on progress with the project. In period 10, the cumulative CPI was 0.94 with an in-period figure of 0.81 and the cumulative SPI was 0.99 with an in-period figure over one. CRL was trying to get the principal stations in the central section handed over to the systems contractors and to ensure that the risks of late handovers were mitigated. In terms of safety, period 10 had been stable, but period 11 had not been so good and the Bond Street site had had to be closed. CRL needed to protect the critical paths given that there were delays of 4 to 6 weeks in the west and the east due to different reasons, and Whitechapel remained a concern.

Simon Wright reported on progress of each of the central section stations and of the TBMs. Whitechapel was immensely complicated and was currently six weeks behind programme. There was good news at Canary Wharf where the

C660 communications contractor had commenced work. Mitigations against delays included undertaking early survey work for C610 and smarter working under the same contract. The schedule was tight, CRL faced big challenges and the position was likely to get worse before improving, though CRL was aiming to maintain the early start date for dynamic testing. As regards the surface works, three weeks ago the NR Board had agreed to go ahead with the Easter works though this was not without risk. There was concern about the commencement of services on the Tuesday morning and mitigations were being put in place. CRL was reviewing the position closely and would be receiving reports at six-hourly intervals.

Clare Moriarty reported that the Secretary of State had asked ORR to advise on NR's readiness for the Easter works so ORR would be engaging with the T-4 review.

Andrew Wolstenholme noted that the implementation of ETCS between Paddington and Airport Junction was still part of the bigger picture. With respect to plan B, enhanced TPWS, ORR had requested answers to a lengthy list of questions and CRL would respond by the end of February. Simon Wright noted that the decision time was around June and that development of the plan B scheme was continuing in the meantime.

Clare Moriarty noted how many of the contractors' progress assessments indicated that they were on the critical path. Simon Wright noted that there was a linear path to the end of the project. The Master Operational Handover Schedule (MOHS) would glue the activities together and ensure value for money. CRL was looking carefully at any investment to ensure that it provided value for money. The best value for money outcome would be achieved by sticking to the schedule.

Clare Moriarty noted that last month risks had crystallised, but the forecast had remained stable. However, in the period the headroom to IPO had dropped. David Allen noted that the position in period 10 was containable, but in period 11 the forecast needed to reflect the lack of progress at Bond Street and Tottenham Court Road stations. The greatest concern was at Whitechapel station where problems had arisen through aggressive bidding and the contractor had not performed well. CRL was placing a lot of focus on this project.

## **5. Operations Update**

Howard Smith reported that the rolling stock activities were going well at Derby, as was the depot construction with longer hours now being worked. The mobilisation for the commencement of services in May was also going well with the only issue being the negotiation of the station leases and the associated condition of the stations. Other challenges included interfaces, in relation to DOO CCTV for example, signalling testing and resolution of an acceptable maintenance regime for a four track railway. Howard Smith noted

the good working relationships between Operations and other parties, including other parts of CRL, NR, Bombardier and MTR.

## **6. Paddington Bakerloo Line Link**

Clare Moriarty thanked CRL for its report in response to the Sponsors' Change Notice. Given that the proposal to partially demolish the Royal Mail Group building in 2015 would affect the Stage 3 opening date, Sponsor Board had agreed that the change should be rejected and JST had been asked to issue a change rejection notice. Nevertheless TfL and CRL should investigate what other options would be available to allow GWD to share the site in advance of completion of the Crossrail BLL works.

## **7. Any Other Business**

Sarah Johnson reported that Sponsors had met with the Home Office to discuss the emergency services network. It would be necessary to implement the network irrespective of other communications requirements which were a separate consideration. A meeting between CRL and Home Office technical experts was being arranged. Chris Sexton noted that the emergency services network would not pay for the provision of 4G.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/23	<b>Yellow Plant:</b> Provide an update on the review of yellow plant and the associated funding implications.	Andrew Wolstenholme	Action closed.
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	17/4/15
14/43	<b>Enhanced TPWS:</b> Keep Sponsors informed of progress with the enhanced TPWS exemption application, particularly with respect to whether Sponsors can assist with discussions with ORR and TOCs.	Andrew Wolstenholme	Action closed.
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	17/4/15
14/45	<b>Railway Integration Review Point 4:</b> Report to Sponsor Board following completion of Railway Integration Review Point 4.	Chris Sexton	22/5/15
15/02	<b>Draft Minutes of Meeting 66:</b> Add some further context to section 3 of the minutes and re-circulate the minutes.	Sarah Johnson	27/2/15
15/03	<b>Costs and Indicators:</b> Discuss with David Allen preparing for a detailed review of the costs and associated indicators at SACR13.	Sarah Johnson	17/4/15
15/04	<b>HS2 - Wheel Lathe Settlement:</b> Speak to Allison Phillips and [REDACTED] in order to progress the matter within 2 weeks.	Sarah Johnson	Action closed.
15/08	<b>Yellow Plant:</b> Ascertain the assumptions for yellow plant in the RfL budget.	Sarah Johnson	17/4/15

**CROSSRAIL SPONSOR BOARD MEETING No.67**

**MINUTES OF MEETING HELD ON**

**MONDAY, 19<sup>TH</sup> JANUARY, 2015**

**IN ROOM H5, GREAT MINSTER HOUSE, 33 HORSEFERRY ROAD,  
LONDON**

Present:

Clare Moriarty*	DfT (Chair)
Allison Phillips*	DfT
██████████	DfT
Steve Allen*	TfL
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
██████████	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
David Allen	CRL
Simon Wright	CRL
Howard Smith	CRL
Lucy Findlay	CRL
Matt White	CRL (Items 4 & 5 only)
Robbie Burns	NR (Item 5 only)
Matt Steele	NR (Item 5 only)

Apologies for absence were received from Jeremy Rolstone

MEETING PART B

Clare Moriarty introduced ██████████ to the meeting.

**1. Minutes and Actions of Meeting No 66**

Clare Moriarty noted that some small amendments had been made to the draft minutes. Sarah Johnson undertook to add some further context to section 3 of the minutes of the meeting and to re-circulate the minutes.

**Action: Sarah Johnson**

Sarah Johnson reported that none of the actions were due apart from action 14/43 which would be covered under the surface works update section 5 of the agenda.

## 2. Period report

Andrew Wolstenholme reported on two incidents; one which had resulted in an elective amputation of an ankle and lower right leg and one which had caused a complicated leg injury. The Accident Frequency Rate (AFR) was stable at 0.2 whilst the Lost Time figure had increased from 0.34 to 0.35. The SPI had decreased from 0.99 to 0.98, but would increase to 0.99 in period 10. The CPI had decreased from 0.95 to 0.94 with the figure remaining at 0.94 in period 10. AFCDC(P50) was £36m below IP0 and AFCDC(P80) was £25m below IP1 with AFCDC(P50) below EAC Low.

Andrew Wolstenholme reported that the SCL progress was slightly behind, but good progress had been achieved on the Farringdon reception chambers. It was anticipated that the TBMs would complete the tunnelling at the end of March or start of April; Victoria had struck a steel tube resulting in damage to the cutter head and 5 days lost production. NR had delivered the planned scope at Christmas, but did not hand back the fast and relief lines on time on 27 December. The On Network Works were 34% complete and the funding headroom was £179m.

Simon Wright reported that the handover to C610 at Paddington would be delayed by about one month due to the problems with the Paddington piles. C300 would require around a further two weeks at Bond Street and Tottenham Court Road before the station contractor could gain access to install platforms. The TBMs were now up and running following the Christmas break. C610 had commenced work in the Connaught Tunnel on time and Siemens would commence the communications installation at Canary Wharf in February. It had been another challenging period but the prospects were better with the stations and systems installations due to progress in 2015.

David Allen reported the main cost variances on various contracts. There had been a transition period when interface risks had materialised and station work had been delayed.

Clare Moriarty noted that there was a rising trend on overspends and that the AFCDC(P50) had remained relatively unchanged, and asked about the relationship between the two. Clare Moriarty also asked whether the rising trend of overspends was expected to cap out. David Allen noted that the cost variances on the tunnelling would come to an end, but that there had not been a sufficient track record on systemwide to be able to give an answer on that. There was still a significant amount of risk and the risks had been crystallising in relation to the interfaces. There was enough risk provision at present, but £25m to £30m per period was not affordable.

Andrew Wolstenholme noted that the risk provisions were matching the crystallised events which suggested that the Intervention Point would not be breached. David Allen confirmed that a lower CPI could be consistent with a stable AFCDC(P50) provided that the risk provisions offset increased costs.

Sarah Johnson undertook to discuss with David Allen preparing for a detailed review of the costs and associated indicators at SACR13

**Action: Sarah Johnson**

### **3. Operations Update**

Howard Smith gave an operations update. CTOC was almost fully staffed up and was focussing on the commencement of services in May. The key concern was the decline in PPM on the GA from 94% to 91%, but action was being taken with respect to the recruitment of drivers, fleet reliability, NR response levels and the relationship with the police. Station lease work was continuing with Roger Jones, but there were some financial issues with respect to the condition of stations. Demolition work had been completed at Old Oak Common and boring for the geothermal piles had commenced. The train interiors had been settled, but access to Old Dalby had not. The TRAIL modelling results at the end of 2014 were good but work was still required to clarify maintenance issues. On the central tunnel section, the focus had been on yellow plant. Work would be commencing on the control rooms and interfaces at Romford and Didcot, and with LU.

### **4. HS2 Interfaces Update**

Sarah Johnson introduced paper SB 67-1 entitled, 'High Speed 2 Update'. CRL had proposed a way forward on 4 key areas in a letter to JST, however there were outstanding questions in relation to settlement.

Matt White noted that CRL had very good working relations with HS2 and had held 5 or 6 meetings to discuss settlement. The issue related to the wheel lathe tolerances and CRL engineers had put forward proposals involving stub walls and sheet piles which would reduce the settlement. However HS2 could not proceed as it did not have consultants to consider the matter. There was no longer any time left in the schedule to incorporate a design change and, furthermore, there are low cost options for HS2 to progress.

Clare Moriarty noted there was a need to understand whether there was a credible threat to the Crossrail opening date if a design change was implemented. Sarah Johnson noted that the alternative was for HS2 to monitor the settlement and provide mitigation. David Hughes noted that CRL should continue with the works in the absence of a Sponsors' change instruction. Clare Moriarty noted that it would be necessary to understand HS2's position and that the issue would need to be resolved outside of the meeting.

Sarah Johnson will speak to Allison Phillips and [REDACTED] in order to progress the matter within 2 weeks. Clare Moriarty suggested that the matter could be resolved by correspondence.



**Action: Sarah Johnson**

## **5. Surface Works Update**

Robbie Burns introduced the presentation entitled, 'Network Rail Crossrail Programme – Crossrail Sponsor Board Update'. NR was ready for the Plumstead Portal Key Date 26 on 11 May 2015 which was required for the C610 tunnel fit-out. Matt Steele gave an overview of the Christmas possession, Crossrail West progress and ETCS delivery. The work at Old Oak Common (OOC) had overrun on 27 December and an investigation was underway, however the root cause appeared to be the control of staff on site including the controls over the return of the checking paperwork.

Robbie Burns noted that a number of measures were in hand to address the issues arising from the OOC overrun. Peter Henderson had been brought in, but there was a balance to be struck between undertaking a root and branch review, and progressing the work. On 5 February, Francis Paonessa would chair the T-8 review for the Easter work on the GW and Peter Henderson would give a peer review. The work involved commissioning both Reading and Crossrail signalling work and the associated interface. NR had investigated whether it would be possible to have 11 days to undertake the work rather than the 10 days which had been planned. However this had not proved possible as the extra day would have been on 7 April which was a normal commuting day. Robbie Burns noted that the consequence of not proceeding with the work would be a delay of a year. Andrew Wolstenholme noted the concerns associated with the work and offered CRL's support.

Matt Steele gave a report on the HEX track trolley incident. The driver of the first HEX train at 10.00 saw 3 staff on the track and braked. The staff were able to get out of the way but the train hit the track trolley and moved it between 50m and 100m. There were no injuries. A number of HEX trains were cancelled, but it was possible to divert some trains. FGW services were not affected. An investigation is underway and NR is taking the matter very seriously.

Matt Steele noted that the ETCS work had transferred to his team and that NR was on schedule to achieve Key Date 13 on time in April 2017. ORR would be meeting in a few weeks time to discuss the Enhanced TPWS submission after which the timescales should be known.

## **6. Any Other Business**

No matters were raised.

**Date of Next Meeting**

OFFICIAL – SENSITIVE COMMERCIAL

The next meeting will be held on 23<sup>rd</sup> February, 2015 from 1530 to 1800, in rooms 2/26 & 2/27, DfT offices, Great Minster House.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/23	<b>Yellow Plant:</b> Provide an update on the review of yellow plant and the associated funding implications.	Andrew Wolstenholme	23/2/15
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	17/4/15
14/43	<b>Enhanced TPWS:</b> Keep Sponsors informed of progress with the enhanced TPWS exemption application, particularly with respect to whether Sponsors can assist with discussions with ORR and TOCs.	Andrew Wolstenholme	23/2/15
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	17/4/15
14/45	<b>Railway Integration Review Point 4:</b> Report to Sponsor Board following completion of Railway Integration Review Point 4.	Chris Sexton	22/5/15
15/02	<b>Draft Minutes of Meeting 66:</b> Add some further context to section 3 of the minutes and re-circulate the minutes.	Sarah Johnson	30/1/15
15/03	<b>Costs and Indicators:</b> Discuss with David Allen preparing for a detailed review of the costs and associated indicators at SACR13.	Sarah Johnson	23/2/15
15/04	<b>HS2 - Wheel Lathe Settlement:</b> Speak to Allison Phillips and [REDACTED] in order to progress the matter within 2 weeks.	Sarah Johnson	2/2/15

**CROSSRAIL SPONSOR BOARD MEETING No.66**

**MINUTES OF MEETING HELD ON**

**MONDAY, 18<sup>TH</sup> DECEMBER, 2014**

**IN ROOM 3/23, GREAT MINSTER HOUSE, 33 HORSEFERRY ROAD,  
LONDON**

Present:

Clare Moriarty*	DfT (Chair)
Allison Phillips*	DfT
Jeremy Rolstone	DfT
Steve Allen*	TfL
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
David Allen	CRL
Simon Wright	CRL
Howard Smith	CRL
Lucy Findlay	CRL
Chris Sexton	CRL

MEETING PART B

**1. Minutes and Actions of Meeting No 65**

The minutes of meeting no 65 (part B) were **AGREED**.

Action 14/23. Sarah Johnson noted that it had been agreed with CRL that the update on yellow plant should be presented at the February meeting of Sponsor Board.

Actions 14/35 and 14/36. Andrew Wolstenholme noted that he had met Anna Walker and Richard Price of ORR to discuss the enhanced TPWS proposal and that he would be meeting Richard Price again in January. Andrew Wolstenholme will report back to Sponsor Board if Sponsors' assistance is required.

**Action: Andrew Wolstenholme.**

## **2. Affirmation of the Opening Strategy**

Sarah Johnson informed CRL that Sponsor Board had approved the affirmation of the Opening Strategy. Andrew Wolstenholme noted that CRL was aware of the requirement to provide Sponsors with notices 2 years in advance of the staged openings.

## **3. Period Report**

Andrew Wolstenholme reported that CRL's performance in period 8 had been predominantly solid with the TBMs, Elizabeth and Victoria, proceeding well. CRL was not proposing to respond to a letter of claim in relation to 19, Princelet Street until both TBMs had passed the property. 0.5km of sprayed concrete lining (SCL) had been achieved in the period against a plan of 0.3km so the gap was closing, and the quality of the SCL was very good. Whilst the Health and Safety KPIs had been stable, sadly there had been a very serious incident at Plumstead after which an operative had a foot amputated; the Health and Safety Executive had visited the site following the incident. The Schedule Performance Indicator had increased to 0.99 and the CPI remained at 0.95, although it was close to 0.94, and it was anticipated that there would be some disappointing CPI results in the next 2 to 3 periods. The AFCDC(P50) and AFCDC(P80) had remained stable at £37m and £13m below IP0 and IP1 respectively. There was a question of whether there was some optimism in the forecasts as the AFCDC was slightly below the EAC low. Progress on the surface works stood at 33% with a big Christmas shutdown associated with the Stockley viaduct track works. Two milestones had been achieved in relation to the Moorgate shaft and the opening of the interim station at Abbey Wood. Andrew Wolstenholme noted that there were some technical issues relating to the plunge columns at Paddington and the removal of the TBMs at Farringdon. Overall there had been a solid performance in 2014 and CRL would be starting 2015 in a good position. CRL was aware of the CPI and SPI trends and would be hoping for the CPI to recover during the fit-out stage.

In response to a query from David Craig, David Allen noted that there would not be a rapid turnaround in cost performance in period 9. CRL had been reviewing the cost performance relating to the stations and currently there were six stations with a cumulative CPI below 0.9. Bond Street and Tottenham Court Road stations had been affected because C300 had not completed its works and there were concerns over other stations. An enormous level of scrutiny had been applied with commercial reviews of all of the stations in conjunction with the station teams and contractors. CRL was tackling the issue, but if the trend continued the position would not become unaffordable.

Clare Moriarty queried whether there was a mechanism to recover costs where one contractor had imposed additional costs on another contractor. Simon Wright reported that costs could only be recovered through liquidated

and ascertained damages (LADs). LADs had not been withheld before completion of the stations because of possible impacts on performance, but there is likely to be an escalation of commercial issues in the next few periods. Andrew Wolstenholme reported that CRL was working with Balfour Beatty to complete Whitechapel station in the economically most sensible way which included investigating whether longer possessions were possible and managing risks collaboratively. The works in the east and the surface works were progressing well and C660 would be commencing works at Canary Wharf 4 months early.

#### **4. Bringing Into Use**

Chris Sexton introduced paper SB 66 – 6, entitled “Integration /Handover /Bringing into Use”. The red RAG rating in the monthly integration status related to the interface between railway systems and stations, and work was going well as CRL reviewed the position of individual rooms at stations. CRL was proposing to create a Crossrail Integration Facility, similar to the Thameslink Simulation Facility, which could simulate multiple trains running at the in-service frequency and crossing the CBTC/ETCS and CBTC/TPWS interfaces.

Simon Wright reported that CRL was negotiating with NR over the use of the Melton (Old Dalby) test track. The plan was to agree the booking in principle by the end of January with the formal agreement following 2 to 3 months later. However there were a number of complexities including issues associated with leases and the S stock which had not been helped by changes in NR personnel. So there was a risk that the agreement would not be closed. Clare Moriarty noted that DfT would be content to assist if CRL considered that would be helpful.

Simon Wright noted that some station and tunnel assets would be completed before handover and those assets would need to be maintained by a care and custody contractor or mothballed.

Howard Smith noted that the scale of authorisations was huge, but the approach would be narrow down those authorisations and to undertake each stage only once. Simon Wright noted that CRL was not yet aware whether the authorisation bodies would have sufficient capacity to deal with the Crossrail project. Clare Moriarty noted that there would also be a lot of activity arising from other projects in 2018. Howard Smith noted that it would be helpful if the question of the capacity of the ORR to process the approvals was raised by Sponsors.

#### **Action: Sarah Johnson**

CRL undertook to report back to Sponsor Board following completion of Railway Integration Review Point 4.

#### **Action: Chris Sexton**

## **5. Operations Update**

Howard Smith gave a verbal operations update. The work of CTOC was going well and good progress had been made with the associated station lease issue in the last few days. Rolling stock work was progressing well and work had started on the depot at Old Oak Common.

Clare Moriarty reported on the discussions between the Secretary of State, the Mayor and Stadium Capital Developments.

## **6. Any Other Business**

Andrew Wolstenholme noted that CRL was close to awarding the Bakerloo Line Link contract. Sarah Johnson noted that Sponsors were content for CRL to let the contract.

Lucy Findlay noted that CRL was awaiting an instruction for 4G. Sarah Johnson noted that the issue would not be addressed before Christmas. Howard Smith noted a decision on WiFi for the rolling stock would be required early in 2015. Simon Wright noted there was also an issue in relation to stations.

## **Date of Next Meeting**

The next meeting will be held on 19<sup>th</sup> January 2015 from 1530 to 1800, in room H5, DfT offices, Great Minster House.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/23	<b>Yellow Plant:</b> Provide an update on the review of yellow plant and the associated funding implications.	Andrew Wolstenholme	23/2/15
14/35	<b>Enhanced TPWS:</b> Keep Sponsors informed of progress with the enhanced TPWS exemption application, particularly with respect to whether Sponsors can assist with discussions with ORR and TOCs.	Matt Steele	Closed
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	17/4/15
14/37	<b>Rolling stock seating layout:</b> Manage the close out of the seating layout.	Sarah Johnson	Closed
14/43	<b>Enhanced TPWS:</b> Keep Sponsors informed of progress with the enhanced TPWS exemption application, particularly with respect to whether Sponsors can assist with discussions with ORR and TOCs.	Andrew Wolstenholme	19/1/15
14/44	<b>ORR Approvals:</b> Raise the issue of the quantity of approvals which will be required in 2018 with ORR.	Sarah Johnson	17/4/15
14/45	<b>Railway Integration Review Point 4:</b> Report to Sponsor Board following completion of Railway Integration Review Point 4.	Chris Sexton	22/5/15



**CROSSRAIL SPONSOR BOARD MEETING No.65**

**MINUTES OF MEETING HELD ON**

**MONDAY, 24<sup>TH</sup> NOVEMBER, 2014**

**IN ROOMS 2/26 & 2/27, GREAT MINSTER HOUSE, 33 HORSEFERRY ROAD, LONDON**

Present:

Clare Moriarty*	DfT (Chair)
Allison Phillips*	DfT
Jeremy Rolstone	DfT
Steve Allen*	TfL
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
██████████	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
David Allen	CRL
Simon Wright	CRL
Howard Smith	CRL
Lucy Findlay	CRL

MEETING PART B

**1. Minutes and Actions of Meeting No 64**

██████████ tabled a further revision to the draft minutes of the last meeting in relation to the discussion of the enhanced TPWS option. David Hughes noted that at the last meeting it was agreed that both plan A (ETCS) and plan B (enhanced TPWS) could be pursued if ORR accepted plan B. Andrew Wolstenholme noted that a decision on the eventual implementation of plan B would need to be made in mid-2015 following completion of the design as there would still not be certainty regarding delivery of plan A. Clare Moriarty agreed with Andrew's statement. Subject to the tabled revision, the draft minutes of the last meeting were **AGREED**.

Action 14/23. Sarah Johnson noted that the yellow plant update had been deferred to the January meeting of Sponsor Board as CRL consideration of the issue would not take place until the end of 2014.

Action 14/35. Sarah Johnson reported that briefing on the enhanced TPWS option had been circulated to Sponsors. The offer of Sponsors' assistance with discussions with ORR remained open.

## **2. SACR 12/Period 7 Report**

Clare Moriarty thanked CRL for submitting the SACR 12 report on time and noted that the report was longer than previously. David Allen noted that the analysis of the previous 6 months performance could be abbreviated and could include more on the current issues facing the project and the priorities for the future. Andrew Wolstenholme proposed that a small working group should be set up if Sponsors were in favour of such changes. Sarah Johnson noted that an initial meeting had been arranged on 12<sup>th</sup> December to discuss this approach.

Clare Moriarty commended CRL on its good Health and Safety performance over the SACR period. Sponsors noted the headroom to Intervention Point 0 (IPO) and the rate of draw down of the contingency, and the fall in schedule confidence which would require action over the next 6 months.

David Allen reported that whilst the headroom to IPO was not a great amount, it had held steady and CRL was taking an active approach to the management of change. CRL was focusing on change which could be eliminated and weekly reports were being submitted to ExCom. A single Commercial and Change Sub-Committee had been formed in order to simplify and quicken the process of reviewing change proposals and a Programme Delivery Board had been introduced in place of the Area Directors Reviews.

Simon Wright reported that change issues were being flushed out as the designs were concluded. There was still a way to go to integrate the designs of ten stations and system-wide which would take most of next year. CRL would be applying greater operational focus to the schedule and was seeking to create an additional 5 month period of dynamic testing, starting on the SE section between Abbey Wood and Custom House, in order to increase confidence in the commissioning and handover process.

Andrew Wolstenholme noted that CRL's QRA system is working well and there are few issues which are not covered by risk allowances. Currently the position is stable and the volume and value of risks are not increasing. The schedule confidence had decreased from 81% to 77% whilst dealing with the issues at Moorgate and Durward Street shafts. The business plan through to stage 5, the operational start up programme and the SACR 12 report were all aligned.

Clare Moriarty raised the pensions issue listed under Sponsor support. Andrew Wolstenholme reported that the work required to understand the risk and the circumstances which would trigger the risk had not been concluded.

Sarah Johnson noted that, with respect to other items listed under Sponsor support, the Bakerloo Line Link issue was being managed, accessibility had been resolved and the ETCS issue had been mentioned. Andrew Wolstenholme noted that the ETCS issue in relation to scope changes to the railway was not within CRL's control and it was still not clear whether this would be a factor. Sarah Johnson undertook to discuss the issue with Matt White and requested that if DfT support is required, then JST should be informed as soon as possible. Clare Moriarty noted that there was a GW integration group in Rail Executive covering electrification, IEP, Crossrail and other projects so there was a forum for considering such issues.

### **3. Operations Update**

Howard Smith reported that the position was holding steady. CTOC was progressing satisfactorily and the rolling stock contract was progressing well though the seating layout issue required resolution. The performance on the existing routes was not good, but NR had provided assurances to RDG.

### **4. Any Other Business**

Clare Moriarty noted that she had received an e-mail from Terry Morgan regarding the rolling stock seating layout. It was noted that future communications regarding Sponsor Board matters should be copied to both sponsors and there was a process for considering potential changes.

Howard Smith reported that there was almost universal agreement at the CRL Board that longitudinal seating was more appropriate. Longitudinal and mixed seating arrangements provided the same number of seats (10 between doors), though there was a greater standing area with the longitudinal arrangement. CRL was almost at the point when a decision had to be made as Bombardier could seek additional money. Terry Morgan's e-mail sought Sponsors' views as to whether they were interested in looking at the issue. If so, CRL could produce a detailed note. Jeremy Rolstone queried how long Sponsors had to take a decision and queried whether the journey distance was an issue given the extension to Reading and the possibility of an extension to Tring. Howard Smith undertook to check the question of timing, but a decision would be required within about 2 weeks.

Clare Moriarty stated that DfT would review the seating layout quickly and Sarah Johnson was asked to manage the issue.

#### **Action: Sarah Johnson**

Clare Moriarty noted that Sponsors would be writing to CRL regarding 19, Princelet Street.

Clare Moriarty noted that there had been a meeting with Stadium Capital Developments regarding their Old Oak Common proposal during week

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commencing 17<sup>th</sup> November. The outcome of the meeting was that a further 4 weeks work would be undertaken with the results being considered at a meeting to be held on 17<sup>th</sup> December. Howard Smith noted that he was content to provide input to the work, but that it was important to be clear about the details of the proposition. Allison Phillips noted that the legal position would need to be reviewed. Clare Moriarty noted that the whole position should be co-ordinated.

**Date of Next Meeting**

The next meeting will be held on 18<sup>th</sup> December 2014 from 0900 to 1200, in room 3/23, DfT offices, Great Minster House.

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**SUMMARY OF ACTIONS**

<b>No.</b>	<b>Action</b>	<b>Responsible</b>	<b>Target</b>
14/22	<b>Frequency of Off Peak Services:</b> Discuss the implications of the Initial Change Appraisal regarding service frequency with Howard Smith.	Sarah Johnson	Closed
14/23	<b>Yellow Plant:</b> Provide an update on the review of yellow plant and the associated funding implications.	Andrew Wolstenholme	19/1/15
14/35	<b>Enhanced TPWS:</b> Keep Sponsors informed of progress with the enhanced TPWS exemption application, particularly with respect to whether Sponsors can assist with discussions with ORR and TOCs.	Matt Steele	To be determined
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	To be determined
14/37	<b>Rolling stock seating layout:</b> Manage the close out of the seating layout.	Sarah Johnson	5/12/14

**CROSSRAIL SPONSOR BOARD MEETING No.64**

**MINUTES OF MEETING HELD ON**

**THURSDAY, 23<sup>RD</sup> OCTOBER 2014**

**IN ROOM 3/23, GREAT MINSTER HOUSE, 33 HORSEFERRY ROAD,  
LONDON**

Present:

Clare Moriarty*	DfT (Chair)
Allison Phillips*	DfT
Jeremy Rolstone	DfT
Steve Allen*	TfL
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
David Allen	CRL
Simon Wright	CRL
Howard Smith	CRL
Matt White	CRL (Item 2 only)
Robbie Burns	NR (Item 2 only)
Matt Steele	NR (Item 2 only)

MEETING PART B

**1. Minutes and Actions of Meeting No 63**

The draft minutes of meeting no 63 were **AGREED**.

Action 14/22. Sarah Johnson noted that CRL is considering a range of service options (including increasing the off-peak service frequency) as part of their on-going timetable development work. If the output of this work indicates that it would be beneficial to increase the off-peak service frequency from that which is specified in the Sponsors Requirements, CRL will bring forward a proposal to Sponsors.

## 2. Surface Works Update

Robbie Burns introduced paper SB 64 – 3 entitled, “Network Rail Crossrail Programme – Crossrail Sponsor Board Update.” The Estimated Final Cost was £30m less than the Anticipated Final Cost and overall the costs and programme were in a good place. Key Date 3 (Stockley Flyover 50% complete) was achieved 4 months ahead of schedule.

Matt Steele noted that the Christmas 2015 and 2016 possessions would require a full blockade of all 4 lines. Robbie Burns said discussions with Heathrow Express were taking place as it had track access rights for 364 days per year.

Matt Steele noted that the Stockley Flyover would be used for the first time in an interim state from 2/1/15. The Easter 2015 works included the Signalling Outer – Slough Relock/Recontrol when control would be moved from the local boxes to Thames Valley; this work is currently on schedule. Robbie Burns confirmed that there were no resource issues in terms of both operatives and plant.

Matt Steele confirmed that the ETCS work had transferred to his team from the national team. Robbie Burns noted that Paul Bates was leading a joint Crossrail and Thameslink ETCS team and Matt Steele confirmed that Paul had adequate resources. NR’s fall back plan was to install additional TPWS loops, which involved hardwiring, rather than data, changes. TPWS and ETCS could be run in parallel. NR was working with CRL in order to make a formal request to ORR for an exemption to the Railway Safety Regulation with respect to enhanced TPWS in 4 weeks time. Matt Steele noted that a minimum of 4 weeks of consultation would follow the application, following which ORR would take a decision. Irrespective of the decision between ETCS and enhanced TPWS on the GW, the priority was to install ETCS on the Heathrow Spur.

Stakeholder groups will wish to be assured that an enhanced TPWS solution is no less safe than the current position. Simon Wright noted that enhanced TPWS may be implemented even if there is confidence with the installation of ETCS as there were other wider industry benefits. A decision whether to proceed with the implementation of enhanced TPWS would be taken next June assuming that ORR had approved the exemption. Robbie Burns noted that the overall installation was estimated to cost between £8m and £15m and Simon Wright noted that the budget to which this cost would accrue had not yet been decided.

David Hughes noted the good progress and that the decision to proceed with enhanced TPWS appeared to be straightforward. Matt Steele noted that NR had a stakeholder engagement plan and support in relation to TOCs would be welcome. Clare Moriarty asked NR to keep Sponsors informed of progress with the enhanced TPWS exemption application, particularly with respect to whether Sponsors can assist with discussions with ORR and TOCs.

**Action: Matt Steele**

Clare Moriarty noted that there would be 2 decisions to be taken in summer 2015. If there was insufficient confidence in the delivery of ETCS, then enhanced TPWS would be required. However, if there was confidence in the delivery of ETCS, then a conscious decision would need to be taken on whether to proceed with enhanced TPWS in order to deliver other benefits. David Hughes noted that there was unlikely to be absolute confidence in the delivery of ETCS by summer 2015 such that the enhanced TPWS option could be switched off. So, given that the cost of enhanced TPWS was in the low millions, the question of whether to proceed with enhanced TPWS could be answered now. This position was supported by Robbie Burns and Simon Wright. Clare Moriarty concluded that nonetheless, a decision would be required in future given that there was a potential financial commitment. The timing of the decision point would be determined by the outcome of the formal ORR review of the enhanced TPWS proposal.

NR would report back to Sponsor Board on signalling matters following the ORR decision.

**Action: Robbie Burns**

Robbie Burns highlighted the dependencies between the successful completion of work during the possessions between 2014 and 2016 and the delivery of Key Date 13 given that only 3 iterations would be possible to test ETCS in the Paddington throat between Christmas 2016 and April 2017.

Jeremy Rolstone queried the outcome of the ETCS GRIP 3 Stage Gate which was held on 14<sup>th</sup> October. Robbie Burns reported that there had been an early review and there was a CP5 renewals cost issue which was under consideration in NR. The schedule was also under review. NR will report back to Sponsor Board on the scale of the renewals cost issue when it reports back on the outcome of the enhanced TPWS exemption application.

**Action: Robbie Burns**

Matt Steele reported the traction power supply work across the whole Crossrail route was on schedule. All of the contracts had been awarded and the delivery of some key equipment had been pulled forward.

**3. Operations Update**

Howard Smith gave a verbal update on Crossrail Operations. MTR mobilisation was going well as it prepared for the introduction of Shenfield to Liverpool Street services in May 2015, though these services would not be branded as Crossrail services. Meetings with Roger Jones were taking place regarding the station leases and progress was being made, though it was important to inform the operators of the outcome in sufficient time. The rolling stock work was slightly ahead of schedule and the TfL interior uplift work was



progressing well. Demolition at Old Oak Common Depot had also progressed well. CRL was working up the process involved with making track access applications to ORR with respect to the 2 off peak services, which had not been included in the Track Access Option, services to Reading and possible increases in off peak services. There were still some issues outstanding with respect to Heathrow – Sarah Johnson undertook to chase Patrick Hallgate.

Howard Smith noted that a decision had been taken to make all of the stations within London accessible. Steve Allen reported that he had received a letter from Clare Moriarty with respect to accessibility of the remaining stations outside of London and that he would reply.

#### **4. Period Report**

Simon Wright reported progress on health and safety, schedule and contractual issues. There were still issues with station design and slippage had occurred, however the issues were under control and CRL was making headway. At Farringdon, sprayed concrete lining (SCL) reception chambers, which were on the critical path, needed to be built to receive the remaining 2 TBMs, and CRL was in a much better position as a result of significant mitigating actions. SCL had proved to be a challenge and production had not been as high as CRL required; Bond Street and Tottenham Court Road were critical given the need to build the platforms in advance of the commencement of the system-wide installation in summer 2015. CRL did not consider that building the NR bomb gap structure at Paddington fell within its remit, though NR could progress the works itself. Martin Buck and Simon Wright will meet David Biggs (NR) to discuss the issue. Allison Phillips offered DfT support, if needed, to resolve the issue. David Hughes noted that he could not see why CRL should undertake the works, nor why Sponsors would support a change to CRL's remit.

David Allen reported progress on financial issues. There had been a slight reduction in headroom due to an increase in the AFCDC and a reduction in the Intervention Points. CRL was taking the quantity of change seriously as, at the current rate, the programme contingency would be exhausted in 3 SACR periods. Clare Moriarty noted that there would be a detailed discussion at the November meeting as the period 6 report formed the basis of the SACR12 report.

#### **Date of Next Meeting**

The next meeting will be held on 24<sup>th</sup> November 2014 from 1030 to 1300 at the DfT offices, Great Minster House.

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**SUMMARY OF ACTIONS**

<b>No.</b>	<b>Action</b>	<b>Responsible</b>	<b>Target</b>
14/22	<b>Frequency of Off Peak Services:</b> Discuss the implications of the Initial Change Appraisal regarding service frequency with Howard Smith.	Sarah Johnson	Closed
14/23	<b>Yellow Plant:</b> Provide an update on the review of yellow plant and the associated funding implications.	Andrew Wolstenholme	24/11/14
14/35	<b>Enhanced TPWS:</b> Keep Sponsors informed of progress with the enhanced TPWS exemption application, particularly with respect to whether Sponsors can assist with discussions with ORR and TOCs.	Matt Steele	To be determined
14/36	<b>Enhanced TPWS &amp; ETCS:</b> Report on signalling matters and the estimated costs of the CP5 renewals issue following ORR's decision on the exemption application.	Robbie Burns	To be determined

**CROSSRAIL SPONSOR BOARD MEETING No.63**

**MINUTES OF MEETING HELD ON**

**WEDNESDAY, 17<sup>TH</sup> SEPTEMBER 2014**

**IN ROOMS 2/26 & 2/27, GREAT MINSTER HOUSE, 33 HORSEFERRY ROAD, LONDON**

Present:

Clare Moriarty*	DfT (Chair)
Allison Phillips*	DfT
Jeremy Rolstone	DfT
Steve Allen*	DfT
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
Lucy Findlay	CRL

MEETING PART B

**1. Minutes and Actions of Meeting No 62**

The draft minutes of meeting no 62, as circulated with tracked changes, were **AGREED**.

Action 14/24. The letter about section 4.6 of SACR11 had been sent to CRL.

**2. Period 5 Report**

Andrew Wolstenholme reported on period 5 progress. The AFR was good and would reduce to 0.19 in period 6 which would be the best outcome for two and a half years. Investigations into the March incident continue.

Progress of 4% had been achieved against a plan of 4.2% with the cumulative CPI and SPI remaining at 0.95 and 0.98 respectively. The AFCDC at P50 and P80 had also remained stable.

## OFFICIAL – SENSITIVE COMMERCIAL

As regards the TBMs, Ellie had re-started and the Y drive TBMs were scheduled to start moving spoil at the beginning and end of November. SCL progress had been less good. The Moorgate and Durward Street shafts had progressed to a satisfactory position and there was now a clear plan for the tunnelling to progress to Farringdon. The plans to remove the TBMs were being finalised. The critical path through the civils works to C610 was under pressure, but was still holding.

In relation to signalling, there had been a meeting with Siemens last week in Hanover and progress with CBTC was satisfactory. A meeting with Mark Carne was planned this week. The CRL Board required a plan B in case ERTMS was not deliverable in time.

The rate of drawdown of contingency suggests that there will be a £55m deficit (against the IP1 budget). There had been a drawdown of £33m of programme contingency in the period to cover re-sequencing of the TBMs. In period 6, a credit would accrue to the contingency as a result of the refinancing gains.

The schedule confidence had been 81% at SACR 11 and it was anticipated that the figure would be slightly lower at the end of period 6, but this would not be significant, nor was it a cause for concern.

Howard Smith reported that the rolling stock aspect of the RSD contract was progressing well, but a milestone payment had been withheld for 3 to 4 weeks due to delays in depot mobilisation.

Andrew Wolstenholme reported the outcome of the C503 adjudication. CRL was discussing the implications.

David Craig noted that PRep had better access to NR reporting and hoped that this would continue and be reflected in future reports. Andrew Wolstenholme reported that planning for the Christmas surface works was progressing well. Surface works progress stood at 29% and £173m headroom remained.

Clare Moriarty noted that the refinancing gains appeared to be larger than anticipated and Sponsor Board would wish to discuss this at the next meeting.

**3. Any Other Business**

Nothing to report.

**Date of Next Meeting**

The next meeting will be held on 23<sup>rd</sup> October 2014 from 0900 to 1200 at the DfT offices, Great Minster House.

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**SUMMARY OF ACTIONS**

No.	Action	Responsible	Target
14/22	<b>Frequency of Off Peak Services:</b> Discuss the implications of the Initial Change Appraisal regarding service frequency with Howard Smith.	Sarah Johnson	15/10/14
14/23	<b>Yellow Plant:</b> Provide an update on the review of yellow plant and the associated funding implications.	Andrew Wolstenholme	24/11/14
14/24	<b>Scope:</b> Sponsors to write to CRL in response to Section 4.6 of SACR 11.	Sarah Johnson	Closed

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.62**

**MINUTES OF MEETING HELD ON**

**WEDNESDAY, 16<sup>TH</sup> JULY 2014**

**IN ROOM 3/23, GREAT MINSTER HOUSE, 33 HORSEFERRY ROAD,  
LONDON**

**Present:**

Clare Moriarty*	DfT (Chair)
Jeremy Rolstone*	DfT
Steve Allen*	TfL
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
██████████	Joint Sponsor Team (Secretary)

\* Voting Members

**By invitation:**

David Craig	Project Representative
Andrew Wolstenholme	CRL
Simon Wright	CRL
David Allen	CRL
Howard Smith	CRL
Martin Buck	CRL
Lucy Findlay	CRL
Matt White	CRL (Item 3 only)
Robbie Burns	NR (Item 3 only)
Matt Steele	NR (Item 3 only)
Fred Drury	PRep (Item 3 only)

Apologies for absence were received from Allison Phillips.

**MEETING PART B**

**0. Introductions**

Andrew Wolstenholme introduced Simon Wright who had replaced Andy Mitchell.

## **1. Minutes and Actions of Meeting No 61**

The draft minutes of meeting no 61 were **AGREED**.

Action 14/4. Sarah Johnson noted that the off peak services frequency issue would be discussed with Howard Smith once the Crossrail Train Operating Company had been appointed.

### **Action: Sarah Johnson**

Action 14/17. The opening strategy affirmation application is to be made in 2014.

Action 14/18. The next Bringing Into Use stock take has been included in the Sponsor Board Forward Look.

Action 14/19. The Liverpool Street Crowding Derogation information had been provided.

Action 14/20. Outstanding compliance issues had been covered in the PRep SACR11 report.

## **2. SACR11 & Period 2 report**

Andrew Wolstenholme introduced the presentation entitled, "SACR 11 Overview and Look Forward to SACR 12." Clare Moriarty noted that SACR11 had been submitted late and contained some errors. Andrew Wolstenholme agreed to address the issue.

Clare Moriarty noted that the schedule confidence level of 81% had been predicated on the addition of a temporary shaft at Farringdon which was not planned to be delivered now and asked what the associated implications were. Simon Wright reported that CRL had reviewed the options for removing the TBMs and that the schedule can accommodate pulling them back to Stepney Green for removal, thereby avoiding the £17m cost of the shaft. Andrew Wolstenholme noted that CRL would not be spending to protect the programme unless there was an economic benefit from doing so.

Clare Moriarty noted that the QSRA assumed that yellow plant and Plumstead Depot could be accommodated within the schedule and queried whether CRL considered these items to be unfunded in schedule or funding terms. David Allen noted that the issue was money as the cost model assumed that the yellow plant would be standard equipment given the standard gauge. Howard Smith noted that work is underway to produce a report by the end of 2014 on which items of plant would be required to maintain Crossrail, whether the plant would be standard or bespoke and the associated procurement lead times. Martin Buck noted that if non-standard plant was required, then the procurement would need to start by the end of the year. CRL will provide an update in either the SACR12 report or at the November Sponsor Board.



**Action: Andrew Wolstenholme**

David Hughes noted the contradictory signs given by the relationship of the AFCDCs with IP0 and IP1, against the rate of contingency drawdown which indicated a potential breach of IP1. Andrew Wolstenholme noted that the contingency drawdown rates were calculated with reference to historical rates of change, but the AFCDC was calculated on a different basis. David Allen noted that the contingency drawdown represented the most pessimistic version of the extrapolation of contingency usage, but it did provide a sensible boundary for a range of outcomes. In response to a question regarding what assessment CRL has made of the likely impact of the pain/gain mechanism on outturn cost, David Allen reported that the maximum gain was currently forecast to be £278m with the maximum pain forecast to be £387m, both of which would be shared 50/50 between CRL and the contractors. Martin Buck reported that the forecasts were calculated before the contractors' fees were taken into account so in the pain scenario contractors would not necessarily make a loss.

David Craig noted that CRL had started to report the Estimated Cost at Completion (ECC) in the period 3 report and asked whether ECC would be included in SACR12. Andrew Wolstenholme noted that the information could be included in SACR12.

Clare Moriarty referred to slide 6 entitled, "There are matters that may require Sponsors' support." There was a disconnect between the first bullet point and the subsequent sub-bullet points. The additional rolling stock was part of the broader issue of how the IFA gains flowed through the system given that there was a cost transfer which resulted in savings to CRL. Sponsors did not recognise the two sub-bullet points. David Allen noted the CRL Board's view that any acceleration in the number or value of unfunded items would be unreasonable. Steve Allen noted that Sponsors had agreed to discuss the principle whereas the slide reads that Sponsors had agreed to follow a process, which was not correct. Clare Moriarty noted that Sponsors would write to CRL setting out their position.

**Action: Sarah Johnson**

Sarah Johnson asked whether Sponsors could help with resolution of the Paddington bomb gap development issue. Martin Buck noted that there may be a DfT locus in encouraging NR to make a timely decision but that the issue was currently being considered by NR Property. Simon Wright reported that CRL was progressing assuming that there would not be a change and that CRL will let Sponsors know if their help is required.

Sarah Johnson reported that there was no intention to issue any changes to the scope of the Bakerloo Line Link at Paddington. The tenders for the work had been received during week commencing 11<sup>th</sup> July.

### **3. Surface Works Update**

Robbie Burns introduced Matt Steele who had replaced Rob McIntosh. Matt Steele introduced the presentation entitled, "Network Rail Crossrail Programme - Sponsor Board Update." All of the key milestones were on track apart from Key Date 6 which had slipped as a result of adding resilience at all of the ROCs. Matt White confirmed that this was not a concern to CRL as the systemwide contracts did not require access until April 2015.

Matt White noted that the CRL risk allowance had held steady for over a year and that it would be subject to revalidation in the light of known variations and other CRL risks.

Robbie Burns noted that the extended Christmas 2014 possession had been negotiated with FGW and HEX. The Easter 2015 possession would require FGW trains to use the Chiltern Line to Paddington or to use Waterloo station. The commissioning would be the largest that NR had ever undertaken. A four day block had been secured at Christmas 2015 and NR required a four day possession at Christmas 2016, the agreement of which with industry colleagues may require support. The implementation of the ETCS overlay was scheduled for January to April 2017, however, NR has a fall back option of implementing an enhanced TPWS system between Paddington and the Heathrow tunnels. ETCS must be implemented in the Heathrow tunnels. If the fall back option is implemented, ETCS must be introduced in 2018 and the associated additional cost would be of the order of £10 to £15m. Nevertheless NR's confidence associated with implementation of ETCS is growing. Robbie Burns noted that there would need to be ETCS/CBTC testing on the live network at a venue to be agreed, for example the Hertford Loop. Howard Smith noted that Crossrail's plan was to use Old Dalby.

Robbie Burns noted that the national ERTMS programme was sponsored by Robin Gisby and the Crossrail-related element would transfer to Matt Steele's team at GRIP 3 subject to there being a robust GRIP 3 programme. The NR Crossrail team was anticipating the handover of the work in October and would switch off the fall back option if it was confident of delivering ETCS on time. Andrew Wolstenholme noted that the CRL Board needed visibility in order to understand the risks to CRL so that it could be absolutely confident with the decision. Robbie Burns noted that NR would be making a submission to ORR on the fall back option at the end of August. If the fall back option was not acceptable to ORR, then NR would need to implement ETCS. Andrew Wolstenholme noted that CRL required a more granular level of detail and that the decision process needed to be clear.

Matt White reported that the PPM was in excess of 95% following the TRAIL modelling which included the extension of Crossrail services to Reading, thereby validating the associated decision. In recent days, the results had improved by a further 0.2%, but some variability (up and down) was expected as a result of future model tests.

#### **4. HS2 Interface Update**

Sarah Johnson introduced paper SB 62 – 5 entitled, “High Speed 2 Update.” It was planned to agree a series of undertakings in respect of outstanding interface issues where HS2 Ltd’s proposals present risks to Crossrail construction and operations. Work was underway on the technical and operational implications of a West Coast Main Line Link and was based on delivery of the link by 2024. HS2 Ltd would like the link to be available by 2024 at the latest, but ideally by 2022. Howard Smith noted that TfL was carrying out the work; CRL had not received a change request.

Jeremy Rolstone noted that NR would shortly be starting some survey work in the vicinity of Old Oak Common and that there would be a meeting on 21<sup>st</sup> July to discuss the associated communications plan.

Sponsor Board **NOTED** paper 62 – 5.

#### **5. Any Other Business**

No issues were raised under this agenda item.

#### **Date of Next Meeting**

The next meeting will be held on 17<sup>th</sup> September 2014 from 1230 to 1530 at the DfT offices, Great Minster House.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
14/4	<b>ICA Service Frequency:</b> Follow up the off peak services option with CRL.	Sarah Johnson	Closed
14/11	<b>ETCS Decision:</b> Report on progress with the ETCS go/no go decision.	Rob McIntosh	Closed
14/17	<b>Opening strategy:</b> To consider when would be the best time to affirm the opening strategy.	Sarah Johnson	Closed
14/18	<b>Bringing Crossrail into Use:</b> To propose the timing of the next stock take following RIRP3.	Sarah Johnson	Closed
14/19	<b>Liverpool Street Station Crowding Derogation:</b> To provide the necessary evidence which showed that the decision had been taken by Sponsors in a timely way.	Chris Sexton	Closed
14/20	<b>Compliance Issues:</b> Undertake a stock take of outstanding compliance issues in the context of SACR11.	Sarah Johnson	Closed
14/22	<b>Frequency of Off Peak Services:</b> Discuss the implications of the Initial Change Appraisal regarding service frequency with Howard Smith.	Sarah Johnson	15/10/14
14/23	<b>Yellow Plant:</b> Provide an update on the review of yellow plant and the associated funding implications.	Andrew Wolstenholme	24/11/14
14/24	<b>Scope:</b> Sponsors to write to CRL in response to Section 4.6 of SACR 11.	Sarah Johnson	1/8/14

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.61**

**MINUTES OF MEETING HELD ON**

**THURSDAY, 8<sup>TH</sup> MAY 2014**

**IN ROOM 3/23, GREAT MINSTER HOUSE, 33 HORSEFERRY ROAD,  
LONDON**

**Present:**

Clare Moriarty*	DfT (Chair)
Allison Phillips*	DfT
Jeremy Rolstone	DfT
Steve Allen*	TfL
David Hughes*	TfL
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

**By invitation:**

Ross Barr	Project Representative
Andrew Wolstenholme	CRL
David Allen	CRL
Howard Smith	CRL
Chris Sexton	CRL
Lucy Findlay	CRL

Apologies for absence were received from Andy Mitchell.

**MEETING PART B**

**1. Minutes and Actions of Meeting No 60**

The draft minutes of meeting no 60 were **AGREED**.

Actions 13/38 and 14/8 were discussed under the relevant agenda items.

Action 14/4. Sarah Johnson will discuss the off peak service frequency issue with Howard Smith.

**2. Systems Integration**

Chris Sexton introduced the presentation entitled, "Bringing Crossrail into Use." Over the last 12 months, CRL had carried out work with the operator and infrastructure managers on bringing the railway into use. The work included railway and systems integration, testing and commissioning and handing over the railway. Chris Sexton tabled the document entitled, "Delivering the Railway."

Sarah Johnson noted that CRL was required to give 24 months notice of each stage of the opening strategy. Only stage 1 had been affirmed following SR10. David Hughes noted that the Variant 2 opening strategy had not been affirmed in order to retain flexibility, but it would now be appropriate to affirm the opening strategy. Sponsor Board **REMITTED** Sarah Johnson to consider when would be the best time to affirm the opening strategy.

**Action: Sarah Johnson**

Ross Barr raised an issue regarding the possible impact of power supply issues on the programme opportunities. Chris Sexton noted that CRL had reviewed the position and had concluded that it was not a high risk. Chris Sexton will discuss the matter with Ross Barr.

Jeremy Rolstone noted that it was very impressive work which had resulted in a helpful tool.

Howard Smith clarified that the CRL Control Centre and the NR ROC were located on adjacent floors of the building at Romford with a back-up facility at Ilford. The challenge was to ensure that the Romford and Didcot Control Centres functioned effectively together when there were technical issues or services had been disrupted. CRL would be testing worst case scenarios in terms of technical issues and the choices with which staff would be faced.

Clare Moriarty noted that a further stock take would be helpful following Rail Integration Review Point 3. Sponsor Board **REMITTED** Sarah Johnson to propose the timing of the stock take.

**Action: Sarah Johnson**

### **3. Changes & Derogations**

#### **Crossrail 2 Safeguarding**

Clare Moriarty noted that Sponsor Board had agreed that Crossrail Line 2 safeguarding would be undertaken by TfL, but that further information on the impacts on resources was required before a decision could be taken on the safeguarding of the Abbey Wood to Hoo Junction section.

#### **Paddington Platforms**

Clare Moriarty noted that when the decision had been taken to reduce the platform lengths during Project Assure, there had been an implicit derogation decision and discussion on the associated mitigation. The issue had also been reported in SACRs. David Hughes noted that Sponsors had asked CRL to obtain information from the rolling stock bidders as to how they would address the problem. Sarah Johnson undertook to work with CRL on closing out the issue.

### **Station Crowding**

Clare Moriarty noted that Liverpool Street station crowding would be an issue from the commencement of services and queried whether this had been discussed with Sponsors at the time. Chris Sexton undertook to provide the necessary evidence which showed that the decision had been taken by Sponsors in a timely way.

### **Action: Chris Sexton**

Clare Moriarty noted that CRL should seek derogations from Sponsors at the point when potential non-compliances emerge. Chris Sexton noted that the CRL Quality Sub-Committee reviewed the position on a quarterly basis, so CRL had absolute clarity on any non-compliances. Clare Moriarty requested a stock take of outstanding compliance issues and Sarah Johnson undertook to carry out the exercise in the context of SACR11.

### **Action: Sarah Johnson**

## **4. Period 13 Report**

Clare Moriarty noted that Sponsor Board's key issues related to progress with investigations into the fatality incident, cost concerns, the number of Notified Compensation Events (NCEs) and deteriorating contractor performance as evidenced on page 23 of the CRL Period Report.

Andrew Wolstenholme reported on progress with investigations by HSE, by BFK and by Hugh Norie, Chair of the Engineering Expert Panel, on behalf of CRL. David Allen responded to the cost concerns and contractor performance issues. Whilst the headroom to IPO had reduced in the period, CRL's P50 forecast had remained very stable over a period of three years. Three of the four contracts under which performance had deteriorated were at very early stages.

David Allen noted that the amount of change in Period 13 was a concern in CRL with most changes occurring in the technical/delivery category rather than the Infrastructure Manager and Sponsor Change categories. There was a pipeline of changes which was estimated at £96.6m and unresolved trends of £196m. The change value of the unresolved trends would usually be lower than the quoted figure and all of the trends had been provided for in the estimates.

Andrew Wolstenholme noted that there was evidence of a lot of changes arising from the design and build station contracts. Chris Sexton noted that there was a gateway process to sign off the station designs and a second bow wave of NCEs was expected. Decisions had to be made taking into account the requirement to deliver a world class railway, life cycle costs and affordability constraints. Steve Allen stated that decisions on the trade-offs between project and life cycle costs should be transparent. Andrew Wolstenholme noted that the amount of change arising from the Infrastructure Managers and Sponsors was healthily low. David Allen noted that CRL needed to carry out further work on change including the whole life cost decision-making process.

## **5. Art Programme**

Sponsor Board **NOTED** paper SB 61 – 7, entitled “Art Programme Funding Update.”

## **6. Any Other Business**

Following the meeting, Andrew Wolstenholme provided a briefing on the next CRL Programme Director, Simon Wright.

## **Date of Next Meeting**

The next meeting is currently scheduled for 13<sup>th</sup> June at the DfT offices, Great Minster House, but this may be subject to cancellation.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
13/38	<b>Art Programme:</b> Report back after the January Art Programme event with trajectories for 3 funding scenarios against which progress could be assessed.	Andrew Wolstenholme	Closed
14/4	<b>ICA Service Frequency:</b> Follow up the off peak services option with CRL.	Sarah Johnson	16/7/14
14/5	<b>CRL Period Report:</b> To provide greater detail in the ONW report, particularly in relation to cost and schedule trends.	Matt White	Closed
14/8	<b>Systems Integration:</b> Add item to the agenda for a future Sponsor Board meeting for CRL to present its approach to systems integration.	Sarah Johnson	Closed
14/11	<b>ETCS Decision:</b> Report on progress with the ETCS go/no go decision.	Rob McIntosh	13/8/14
14/17	<b>Opening strategy:</b> To consider when would be the best time to affirm the opening strategy.	Sarah Johnson	13/6/14
14/18	<b>Bringing Crossrail into Use:</b> To propose the timing of the next stock take following RIRP3.	Sarah Johnson	13/6/14
14/19	<b>Liverpool Street Station Crowding Derogation:</b> To provide the necessary evidence which showed that the decision had been taken by Sponsors in a timely way.	Chris Sexton	13/6/14
14/20	<b>Compliance Issues:</b> Undertake a stock take of outstanding compliance issues in the context of SACR11.	Sarah Johnson	13/6/14

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.60**

**MINUTES OF MEETING HELD ON**

**FRIDAY, 14<sup>TH</sup> MARCH 2014**

**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**

David Hughes*	TfL (Chair)
Julian Ware	TfL
Becky Wood*	DfT
Allison Phillips*	DfT
Sarah Johnson	Joint Sponsor Team
██████████	Joint Sponsor Team (Secretary)

\* Voting Members

**By invitation:**

Ross Barr	Project Representative
Andy Mitchell	CRL
David Allen	CRL
Matt White	CRL (Item 4 only)
Howard Smith	CRL
Lucy Findlay	CRL
Martin Buck	CRL
Rob McIntosh	CRL (Item 4 only)

Apologies for absence were received from Steve Allen, Clare Moriarty and Andrew Wolstenholme.

**MEETING PART B**

**0. Health & Safety**

Andy Mitchell reported on the fatal incident which occurred on 7<sup>th</sup> March including the support that was being given to the bereaved family. Andy Mitchell also reported on an incident on 13<sup>th</sup> March involving a lorry working on C310 (Thames Tunnel) which resulted in a very serious injury to a cyclist.

**1. Minutes and Actions of Meeting No 59**

The draft minutes of meeting no 59 were **AGREED**.

Action 13/34. Andy Mitchell tabled a note and schedule setting out the anticipated construction status of Crossrail, London Underground and Network Rail projects affecting London stations in mid 2017 and mid 2018. The issue was being handed to the Systems and Operations Steering Group, chaired by Howard Smith, to address. David Hughes noted that Geoff Hobbs, TfL, should be involved in the work.

Action 14/8. Lucy Findlay noted that the CRL action was concerned with system integration rather than performance measurement.

## **2. Schedule Opportunities**

Andy Mitchell introduced paper no SB 60 – 3 entitled, “Master Control Schedule MCS-06 Development Update” and gave a presentation. CRL has worked with C610 to identify proposals to enable earlier access to the tunnels to commence track installation. The aim was create to create a 5 month float buffer rather than to open the railway earlier. MCS-06 would be used as the basis of SACR11. David Allen noted that some of the identified opportunities had been taken into account in the SACR10 schedule confidence assessment so if they were not pursued, the schedule confidence would fall, given the additional schedule challenges which had arisen.

Ross Barr queried whether a cost benefit analysis had been carried out. Andy Mitchell noted that the CRL Excom paper referred to costs of about £33m which would offset, to an extent, schedule overrun risks of £200m. Therefore it would be the correct decision to invest in order to close down a number of risk items. David Hughes noted that the proposal was an issue for CRL, but that, if Excom adopted the proposal, CRL should set out its thinking and the trade off of costs and benefits in SACR11. If the proposal was adopted, Andy Mitchell considered that the next highest risk related to the production rates of the track installation and the associated logistics.

Andy Mitchell noted that there had been less than 10 Notified Compensation Events arising from signalling software development and that progress was satisfactory, although the work was at an early stage.

## **3. HS2 Update**

David Hughes noted that paragraph 12 of the paper had been discussed in part A of the meeting. The paper was taken as read and Sponsor Board **NOTED** the paper.

## **4. Surface Works Update**

Rob McIntosh gave the presentation entitled, “Network Rail Crossrail Programme – Sponsor Board Update (14<sup>th</sup> March 2014)”. There had been a

step forward in safety performance when 67,000 man hours had been worked over Christmas 2013 with no accidents. NR had declared cost efficiencies of £30m against the Overall Target Price. The London end layout at Shenfield had been agreed by the Route, CRL, TOC and FOC; the associated costs had risen by £5m to £10m and these would be addressed through further cost efficiencies.

Rob McIntosh reported on the key issues noting that the challenge was to double the 2013/14 output in 2014/15 in a safe manner and without disrupting train services. Further discussions would be required with HEX regarding the planned all line blockade on Christmas and Boxing Days. Good progress was being made with Local Authorities in closing out the Schedule 7 approvals which were required for stations.

Rob McIntosh reported that the timely raising of national power cables was a significant issue for the GW Electrification Programme. This was less of an issue for the Crossrail works, but some slippage had occurred. Any assistance to progress this issue would be appreciated by NR. Electrical testing of the OHLE system had commenced at the Old Dalby Test Site on 18<sup>th</sup> February and a Class 395 Javelin train had run at 140 mph, which was a major achievement in relation to a Crossrail dependency.

Rob McIntosh reported that the ETCS go/no go decision was planned for October in the roadmap, although discussions would commence in July and August. Detailed reviews of progress with the ETCS and Plan B GRIP3 designs, which were held on 12<sup>th</sup> March, had demonstrated that both were on schedule. Rob McIntosh was **REMITTED** to report to Sponsor Board on progress with the ETCS go/no go decision in July/August.

**Action: Rob McIntosh**

Matt White reported on progress with the timetable work and TRAIL modelling. Both the Iteration 5 timetable and the initial TRAIL run had been completed on target on the 20<sup>th</sup> December 2013 and by the end of February 2014 respectively. A number of TRAIL runs were planned some of which involved the latest maintenance strategies, RSD data and lower freight forecasts.

## **5. Canary Wharf Development Agreement**

Martin Buck introduced paper no SB60 – 6, entitled, “Canary Wharf Station Building Development Agreement – Amendment” and noted that CRL has assessed the risk qualitatively, and is confident that the cost saving that comes from the proposed deal is worth the theoretical increase in risk to the project that arises from doing the deal.

Sponsor Board **NOTED** the further negotiation of an amendment by CRL which, once complete, would be subject to approval by DfT and TfL as signatories to the Development Agreement via the JST.

## **6. Period 11 Report**

The Period 11 reporting pack was taken as read.

## **7. Any Other Business**

Becky Wood noted that Clare Moriarty would take on the role of Chair of Sponsor Board from April and it was the intention to hold the meetings at Great Minster House. Jeremy Rolstone would be taking over Becky Wood's role whilst she was on maternity leave.

## **Date of Next Meeting**

The next meeting will be held on 15<sup>th</sup> April 2014 from 10.00 to 13.00 at the DfT offices, Great Minster House.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
13/32	<b>Schedule Opportunities:</b> Report progress to Sponsor Board.	Andrew Wolstenholme	Action closed
13/33	<b>Cost Performance:</b> Submit information to demonstrate the CPI figure which would be required to outturn at IPO.	David Allen	Action closed
13/34	<b>Railway Operations:</b> Share the analysis that has been carried out through the Crossrail Programme Board about the impact of the Crossrail project on rail passenger services in London.	Andy Mitchell	Action closed
13/38	<b>Art Programme:</b> Report back after the January Art Programme event with trajectories for 3 funding scenarios against which progress could be assessed.	Andrew Wolstenholme	15/4/14
14/4	<b>ICA Service Frequency:</b> Follow up the off peak services option with CRL.	Sarah Johnson	16/7/14
14/5	<b>CRL Period Report:</b> To provide greater detail in the ONW report, particularly in relation to cost and schedule trends.	Matt White	31/3/14
14/8	<b>Systems Integration:</b> Add item to the agenda for a future Sponsor Board meeting for CRL to present its approach to systems integration.	Sarah Johnson	15/4/14
14/11	<b>ETCS Decision:</b> Report on progress with the ETCS go/no go decision.	Rob McIntosh	13/8/14

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.59**

**MINUTES OF MEETING HELD ON**

**THURSDAY, 27<sup>TH</sup> FEBRUARY 2014**

**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Clare Moriarty*	DfT
Becky Wood*	DfT
Sarah Johnson	Joint Sponsor Team
██████████	Joint Sponsor Team (Secretary)

\* Voting Members

**By invitation:**

David Craig	Project Representative Team
Andrew Wolstenholme	CRL
David Allen	CRL
Lucy Findlay	CRL

Apologies were received from Ross Barr.

**MEETING PART B**

**1. Minutes and Actions of Meeting No 58**

The draft minutes of meeting no 58 were **AGREED**.

Action 13/34. CRL will submit the railway operations analysis by the next meeting of Sponsor Board.

**2. NR Interim Financing Agreement**

David Allen introduced paper SB59 – 3 entitled, “Extension of the Interim CRL Funding Payments Agreement with Network Rail”. Becky Wood noted that the issue would need to be considered by the Permanent Secretary in order to comply with HM Treasury requirements. Clare Moriarty noted that a case would be made for the proposal within DfT.

Sponsor Board **AGREED** to CRL's proposal to extend the Interim CRL Funding Payments Agreement with Network Rail subject to receipt of TfL and DfT approvals.

### **3. Future Cost Performance to Maintain Affordability**

David Allen introduced paper SB59 – 4 entitled, "Future cost performance to maintain affordability." The calculation of the future Cost Performance Index (CPI) to outturn at Intervention Point 0 was dependent on 6 key assumptions which could be represented as a decision tree leading to a large number of CPI scenarios with a wide range of breakeven future CPIs. CRL maintained a number of cost measures and controls to validate the AFCDC and could use a traffic light system against the indicators. CRL's view was that none of the crosschecks indicated that the AFCDC was misstated.

Clare Moriarty noted that the decision tree scenarios could be revisited in a year's time which should demonstrate how the parameters have narrowed in the period. Clare Moriarty queried what would be the early warning indicators in future given that the project would be going through a transition from a mining project to a railway project. David Allen noted that the forecast was a forward indicator and all the indicators determined whether there was confidence in that forecast. CRL would be undertaking a separate piece of work to identify the leading indicators for the project and would be content to share the output when completed.

Steve Allen asked whether there would be changes to the indicators as the project moved to the systems and operations phases. David Allen noted that CRL had split out the risk by work type and could express the performance metrics by type of work. Andrew Wolstenholme noted that the CRL Board had been shown some work about how CRL could measure progress against less tangible items such as systems integration and bringing the railway into operations. Andrew Wolstenholme offered to share the work with Sponsors and JST will reflect this on an agenda for a future Sponsor Board meeting.

#### **Action: Sarah Johnson**

David Craig noted that a number of indicators, such as the EAC High and Low, the independent EAC, and the AFCDC had converged over the last year. The CPI since SACR 10 had been above the prediction which was required to outturn at IP0. The current measures indicate an outturn at IP0. Becky Wood noted that it would be helpful if teams could discuss this issue in more depth at SACR11.

### **4. Any Other Business**

There was no other business.



**Date of Next Meeting**

The next meeting will be held on Friday, 14<sup>th</sup> March 2014 from 10.30 to 12.30 at the New Stepney Room, East Wing, 2<sup>nd</sup> Floor, 55 Broadway.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
13/32	<b>Schedule Opportunities:</b> Report progress to Sponsor Board.	Andrew Wolstenholme	14/3/14
13/33	<b>Cost Performance:</b> Submit information to demonstrate the CPI figure which would be required to outturn at IPO.	David Allen	Action closed
13/34	<b>Railway Operations:</b> Share the analysis that has been carried out through the Crossrail Programme Board about the impact of the Crossrail project on rail passenger services in London.	Andy Mitchell	14/3/14
13/38	<b>Art Programme:</b> Report back after the January Art Programme event with trajectories for 3 funding scenarios against which progress could be assessed.	Andrew Wolstenholme	15/4/14
14/4	<b>ICA Service Frequency:</b> Follow up the off peak services option with CRL.	Sarah Johnson	16/7/14
14/5	<b>CRL Period Report:</b> To provide greater detail in the ONW report, particularly in relation to cost and schedule trends.	Matt White	14/3/14
14/8	<b>Systems and Operations Performance Measurement:</b> Add item to the agenda for a future Sponsor Board meeting for CRL to present its approach to systems and operations performance measurement.	Sarah Johnson	15/4/14

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.58**

**MINUTES OF MEETING HELD ON**

**FRIDAY, 17<sup>TH</sup> JANUARY 2014**

**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Clare Moriarty*	DfT
Becky Wood*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

**By invitation:**

Ross Barr	Project Representative
Andrew Wolstenholme	CRL
Andy Mitchell	CRL
Howard Smith	CRL
David Allen	CRL
Martin Buck	CRL
Lucy Findlay	CRL
Matt White	CRL

**MEETING PART B**

**1. Minutes and Actions of Meeting No 57**

The draft minutes of meeting no 57 were **AGREED**.

Action 13/34. Railway Operations. The analysis will be submitted to the next meeting of Sponsor Board.

Action 13/37. Crossrail – Reading Opportunity. The Initial Change Appraisal was discussed under the relevant agenda item.

Action 13/39. NR Interim Funding Agreement. David Allen reported progress with the NR Interim Funding Agreement discussions noting that it had not been possible to agree terms. The reclassification of NR had also

complicated the matter. The current agreement ceases on 31 March 2014 and, in the absence of another agreement, NR will repay £450m to CRL on 19 May 2014. Becky Wood noted that she would be meeting with Clare Moriarty and NR on 20 January 2014 and would raise the issue. DfT also needed to explore the change to the NR classification. Andrew Wolstenholme undertook to telephone David Higgins to discuss the issue during week commencing 20 January 2014. Steve Allen noted that there was not much time in terms of the governance process in order to implement an agreement.

## **2. RSD Update**

Martin Buck gave a verbal update on progress with the RSD procurement. Sarah Johnson reported that the associated communications workstream was under control. Sponsor Board would need to approve the award of the contract and it was envisaged that this would be done through a written resolution. However the prior approval of both Sponsors would be required.

## **3. Initial Change Appraisal – Reading**

Matt White introduced paper no SB 58-1 entitled “Initial Change Appraisal – Extending Crossrail Services to Reading” and highlighted the key issues. CRL legal advisers, NR legal advisers and HQ Planning agreed that a TWAO was not required in respect of either the works or to disapply powers. NR had confirmed that its Permitted Development Rights could be used for the works as they were of benefit to the western route as a whole and not just to Crossrail. Steve Allen stated that it was for Sponsor Board to note the ICA and consider whether to instruct the change. David Hughes noted that the timescales for making the decision were clear so the commercials needed to be worked through with the governance process to follow, which would be challenging. Sarah Johnson noted that, in order to issue the change instruction by 31<sup>st</sup> March, there were about 2 weeks to resolve Sponsors’ issues.

In response to a query from Becky Wood, Matt White noted that there was absolute certainty that the proposal would benefit performance as had been accepted by the Crossrail Reading Group and the Crossrail Capacity and Performance Group. FGW also supported the proposal which demonstrated that there would be benefits to the route as a whole. Howard Smith noted other advantages of the proposal in avoiding overlapping services and the need for additional connections, and saving money.

## **4. Initial Change Appraisal – Service Frequency**

Howard Smith introduced the Initial Change Appraisal (ICA) entitled, “Feasibility Study Service Frequency.” The key aspects were included in paragraph 4.1 and the two matrices on pages 11 and 18. Initial work indicated that there would be significant benefits in increasing the frequency

of off peak services. This option was largely tactical using existing resources and avoiding significant changes to the Track Access Option. However increasing the frequency of peak services would be a big issue involving checking technical solutions and raising a lot of queries in relation to track access rights. CRL proposed that the off peak services option should be pursued, but that the peak services option should be studied in 2016 whilst the option to procure additional rolling stock was still available. David Hughes agreed that this was a sensible approach given the links to HS2, Old Oak Common and restrictions at Paddington. JST will follow up the off peak services option with CRL.

**Action: Sarah Johnson**

Becky Wood queried the risks arising from freight services. Howard Smith noted that this was a key constraint and NR would be undertaking an audit to ascertain which freight rights were taken up.

## **5. Initial Change Appraisal – Accessibility**

Howard Smith introduced the ICA entitled, “CRL Initial Change Appraisal SCN 0016 Accessibility at Crossrail Stations”. The estimated costs were now lower than when the Crossrail Bill was going through Parliament and were in line with the Access for All (AFA) application, though there were uncertainties with possessions. A decision on the powers to be used would be decided on a station by station basis. The next step was to await the outcome of the AFA application.

Sarah Johnson noted that it would be helpful to share a summary of the work, excluding the costs information, with Transport for All. Howard Smith was content with this approach, but considered that a reference to costs might be desirable. Becky Wood noted that Baroness Kramer would need to be aware of the proposed summary.

## **6. Period 9 Report**

Andrew Wolstenholme introduced this agenda item. CRL had introduced a new style report in Period 9 and, whilst CRL was not proposing to change the report, comments could be incorporated. There has been a good run into the Christmas break with productivity remaining high and CRL had been aiming for a safe start to the New Year. CPI had increased from 0.94 to 0.95 in Period 9, the AFC headroom had increased and overall it had been a very productive year. Andy Mitchell noted that TBM rates remained good with 617m having been achieved in the previous week. In addition, Ada had achieved a record 38 (1 metre) rings the previous day and an overall 29.17km of TBM tunnelling had been achieved. Sprayed Concrete Lining rates were also picking up. With respect to safety, the AFR had remained at 0.34 in Period 10 with Lost Time incidents down to 0.55 from 0.58.

Andrew Wolstenholme reported that there were still issues with the construction of the Whitechapel and Moorgate shafts. CRL was investigating 7 opportunities in relation to the C610 contract and was aiming to start the railway systems build 5 months earlier than planned. Becky Wood requested greater detail in the ONW reporting, particularly in relation to cost and schedule trends. Matt White agreed that the additional information could be provided.

**Action: Matt White**

## **7. Any Other Business**

Nothing to report.

## **Date of Next Meeting**

The next meeting will be held on Thursday, 27<sup>th</sup> February 2014 from 16.00 to 17.00 in CRL's Offices, Canary Wharf (Meeting to be confirmed).

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
13/32	<b>Schedule Opportunities:</b> Report progress to Sponsor Board.	Andrew Wolstenholme	27/2/14
13/33	<b>Cost Performance:</b> Submit information to demonstrate the CPI figure which would be required to outturn at IPO.	David Allen	20/2/14
13/34	<b>Railway Operations:</b> Share the analysis that has been carried out through the Crossrail Programme Board about the impact of the Crossrail project on rail passenger services in London.	Andy Mitchell	20/2/14
13/37	<b>Crossrail – Reading Opportunity:</b> CRL to submit the ICA in time for consideration at the January Sponsor Board meeting.	Matt White	Action closed
13/38	<b>Art Programme:</b> Report back after the January Art Programme event with trajectories for 3 funding scenarios against which progress could be assessed.	Andrew Wolstenholme	20/2/14
13/39	<b>NR Interim Funding Agreement:</b> Seek approval at the January Sponsor Board meeting (subject to the conclusion of negotiations with NR).	David Allen	Action closed
14/4	<b>ICA Service Frequency:</b> Follow up the off peak services option with CRL.	Sarah Johnson	16/7/14
14/5	<b>CRL Period Report:</b> To provide greater detail in the ONW report, particularly in relation to cost and schedule trends.	Matt White	14/3/14

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.57**

**MINUTES OF MEETING HELD ON**

**TUESDAY, 10<sup>TH</sup> DECEMBER 2013**

**AT THE JOHNSTON ROOM, 55 BROADWAY, LONDON**

**Present:**

Steve Allen*	TfL (Chair)
Julian Ware*	TfL
Clare Moriarty*	DfT
Becky Wood*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

**By invitation:**

Ross Barr	Project Representative
Andrew Wolstenholme	CRL
Andy Mitchell	CRL
Howard Smith	CRL
David Allen	CRL
Martin Buck	CRL
Lucy Findlay	CRL
Matt White	CRL

**Apologies**

David Hughes	TfL
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**MEETING PART B**

**1. Actions and Minutes for Meeting No 56**

The draft minutes of meeting no 56 were **AGREED**.

None of the actions were due. The due date for action 13/33 (cost performance) was deferred to February 2014.



## **2. RSD Update**

Martin Buck gave a verbal update on progress with the RSD procurement.

## **3. Crossrail – Reading Opportunity**

Steve Allen noted that a Sponsor Change Notice would be issued requiring CRL to produce an Initial Change Appraisal (ICA) for extending Crossrail services to Reading. A quick response was required in order to avoid nugatory expenditure by NR. Following submission of the ICA and subject to Sponsors' consideration, the Sponsors' governance processes would follow.

Matt White noted that CRL planned to submit the ICA in time for consideration at the 17<sup>th</sup> January Sponsor Board meeting. At this stage, CRL would only be able to state a range of costs.

### **Action: Matt White**

Sarah Johnson confirmed that Sponsors had not yet taken a decision on the proposal. The decision would be based on the ICA to be submitted by CRL.

## **4. HS2 Update**

Sarah Johnson introduced paper SB 57 – 4 entitled, "High Speed 2 Update". HS2 is interested in understanding whether CRL could undertake work to relocate a Thames Water sewer which crosses the Old Oak Common depot and the GW railway. Matt White noted that CRL was tracking this as a risk on the HS2 risk register. The position with respect to powers was complex and CRL would be content to collaborate if HS2 wished to carry out the sewer diversion early, but CRL would not carry out the work.

Sarah Johnson noted that protective provisions for the depot will be included in the HS2 Protective Provisions Agreement (PPA) which is being agreed between TfL and DfT. It is TfL's intention that the HS2 interface issues should be dealt with under the PPA, including interfaces with Crossrail operations. A new JST team member would become the JST contact for this issue. Howard Smith noted that, if it was necessary, TfL would petition against the Bill rather than CRL. The PPA should protect Crossrail operations in the same way as other operational railways are treated. Clare Moriarty noted that there was a collective incentive to resolve the position and the issues would need to be discussed. Matt White noted that NR was involved as it sought to protect the national railway and there could be a Crossrail element to this work.

## **5. Period 8 Report**

Andrew Wolstenholme introduced this item. CRL has trialled a new style of report and the CRL Board was content to adopt the new report from January.

CRL was content to receive Sponsors' suggestions on the content, rather than the appearance, of the report. Sarah Johnson had received a copy of the new report and would discuss it with Steve Elliott on 12<sup>th</sup> December.

Andrew Wolstenholme presented the headlines from the period 8 report which included safety, SPI and CPI improvements. CRL was now 6 weeks behind programme which was down from 9 weeks behind 4 periods ago. Andrew Wolstenholme had met Ross Barr to discuss CPI issues. Ross Barr requested the associated figures.

## **6. Art Programme**

Andrew Wolstenholme introduced paper SB 57 – 5 entitled, “Crossrail Art Programme Progress Report”, tabled a presentation entitled, “Crossrail Art Programme Progress” and summarised the funding status.

Steve Allen noted that Sponsor Funding was not to be used to fund the Art Programme. Andrew Wolstenholme confirmed that Sponsor Funding was not being used for the Art Programme, nor was the management team being deflected by the issue.

Clare Moriarty asked how CRL would assess whether progress was being made at a review point in 6 month's time. Andrew Wolstenholme undertook to report back after the January Art Programme event with trajectories for 3 scenarios against which progress could be assessed.

### **Action: Andrew Wolstenholme**

Sponsor Board **NOTED** the contents of paper SB 57 – 5.

## **7. Any Other Business**

### Network Rail Interim Funding Agreement

David Allen introduced a paper entitled, “Network Rail Interim Funding Agreement.” The existing agreement was due to expire on 31<sup>st</sup> March 2014 and there was potentially a benefit of around £60m from implementing a new agreement, though NR is seeking a share in the benefits. The paper had been submitted to Sponsor Board as CRL would be committing more than £1.3bn of cash if the new agreement ran to 31<sup>st</sup> March 2016.

Steve Allen noted that TfL did not believe that interest rates would follow a downward trend as stated in the paper, but he did not believe that this was material to the consideration of the paper.

Sponsor Board **AGREED** that CRL could negotiate with NR within the parameters set out in the paper. CRL will need to come back to Sponsor Board for approval before entering into an agreement.

Becky Wood noted that HMT approval would be required in addition to Sponsors' approval and therefore CRL would need to allow sufficient time. David Allen noted that it was CRL's intention to seek approval at the next Sponsor Board meeting.

**Action: David Allen**

Other Business

Sarah Johnson gave an update on the draft NAO report.

**Date of Next Meeting**

The next meeting will be held on Friday, 17<sup>th</sup> January 2014 from 09.30 to 12.30 in the New Stepney Room, East Wing, 2<sup>nd</sup> Floor, 55 Broadway, London.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
13/32	<b>Schedule Opportunities:</b> Report progress to Sponsor Board.	Andrew Wolstenholme	28/2/14
13/33	<b>Cost Performance:</b> Submit information to demonstrate the CPI figure which would be required to outturn at IPO.	David Allen	20/2/14
13/34	<b>Railway Operations:</b> Share the analysis that has been carried out through the Crossrail Programme Board about the impact of the Crossrail project on rail passenger services in London.	Andy Mitchell	7/1/14
13/37	<b>Crossrail – Reading Opportunity:</b> CRL to submit the ICA in time for consideration at the January Sponsor Board meeting.	Matt White	10/1/14
13/38	<b>Art Programme:</b> Report back after the January Art Programme event with trajectories for 3 funding scenarios against which progress could be assessed.	Andrew Wolstenholme	20/2/14
13/39	<b>NR Interim Funding Agreement:</b> Seek approval at the January Sponsor Board meeting (subject to the conclusion of negotiations with NR).	David Allen	10/1/14

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.56**

**MINUTES OF MEETING HELD ON**

**TUESDAY, 26<sup>TH</sup> NOVEMBER 2013**

**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Clare Moriarty*	DfT
Matt Lodge*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

**By invitation:**

Gordon Masterton	Project Representative
Ross Barr	Future Project Representative
Andrew Wolstenholme	CRL
Andy Mitchell	CRL
Howard Smith	CRL
David Allen	CRL
Martin Buck	CRL
Lucy Findlay	CRL
Matt White	CRL (Item 5 only)
Rob McIntosh	NR (Item 5 only)

**Apologies**

Becky Wood	DfT
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**MEETING PART B**

**1. Actions and Minutes for Meeting No 55**

The draft minutes of meeting no 55 were **AGREED**.

Action 13/26, Performance Management, was discussed under the SACR10 agenda item.

Action 13/27, RSD Procurement, had been closed out in part A of the meeting.

## **2. SACR10**

Andrew Wolstenholme introduced the presentation entitled, "SACR 10 Overview" and Andy Mitchell introduced the presentations entitled, "Half Time Reviews: Update" and "C610 Schedule Opportunities: Update".

Andrew Wolstenholme noted that CRL would need to understand the cost of the C610 schedule opportunities and the associated value to the programme. Andy Mitchell noted that C610 considered that the cost would be £40m to £50m, but CRL considered it would be a lot less. Andrew Wolstenholme noted that, whilst it felt intuitively like the right approach, the business case for each opportunity needed to be robust, particularly in terms of delivering clear value for money. CRL agreed to bring the issue back to Sponsor Board in February or March. David Hughes noted that the desired outcome was not opening the railway early, but addressing the cost pressures.

### **Action: Andrew Wolstenholme**

David Allen noted that if CRL continued to deliver at the SACR10 CPI of 0.93, the outturn cost would be likely to be under IP0. There had not been a fundamental shift in the position since SACR9.

Gordon Masterton noted that whilst CRL has robust QRA and QSRA processes to generate the AFCDC (P50), PRep does not agree that a CPI of 0.93 would lead to an IP0 outturn. Figure 3-G of the PRep report, which was based on hard data, showed that an improvement in cost performance was necessary in order to achieve an IP0 outcome. David Allen did not agree with this analysis as assumptions had to be made about risk and the budget available. Andrew Wolstenholme confirmed that CRL was cautiously confident that the outturn cost would be as stated. Clare Moriarty noted that Sponsors' view was that the cost position was not as strong as the schedule position and it would be helpful to see an additional level of detail. There was a concern that the cost position was not at the top of the list for future actions. David Allen noted that the primary driver for the resource intensive half time reviews was cost. David Allen agreed to submit information to Sponsor Board which would demonstrate the CPI figure which would be required to outturn at IP0.

### **Action: David Allen**

Andy Mitchell noted that the result of the half time reviews would be consolidated into the cost forecasts in February in time for SACR11. In relation to pursuing schedule opportunities, Andy Mitchell noted that a better schedule would lead to greater cost certainty.

In relation to the matters requiring Sponsors' support, Sponsors requested information on the Canary Wharf payment milestones issue and Andy Mitchell confirmed that CRL was continuing to follow plan A for the delivery of the Bakerloo Line Link at Paddington.

### **3. Period 7 report**

The issues were discussed under agenda item 2.

### **4. RSD Procurement (Verbal update)**

Martin Buck gave a verbal update on progress with the RSD procurement.

### **5. Surface Works Update**

Rob McIntosh introduced the presentation entitled "Programme Update" regarding the On Network Works.

Howard Smith noted that having a plan B for signalling implementation was the right approach in order to achieve reliable operations. It would not be acceptable to adopt the ETCS solution if the decision was finely balanced. Rob McIntosh confirmed that if it was necessary to adopt plan B, then this would only be an interim solution.

Matt Lodge questioned the impact on London's railway of concurrent works including works at London Bridge and Waterloo, and Crossrail works. Andy Mitchell noted that CRL had carried out some work looking at impacts on railway operations and agreed to send this to JST for Sponsors to add information relating to other projects.

#### **Action: Andy Mitchell**

Matt White introduced the timetable modelling section of the presentation. The first output of the TRAIL modelling is due at the end of February which will be followed by more work to update the inputs and consultation with the rail industry through TTRG.

### **6. Any Other Business**

Steve Allen noted that it was the last meeting of Sponsor Board that Gordon Masterton would attend and thanked Gordon for his contribution to the Crossrail Project.

**Date of Next Meeting**

The next meeting will be held on Tuesday, 10<sup>th</sup> December 2013 from 14.00 to 17.00 in the Johnston Room, North Wing, 5<sup>th</sup> Floor, 55 Broadway, London.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
13/26	<b>Performance Management:</b> Define acceptable CPI and SPI envelopes, together with forecast lines, and report back to Sponsor Board.	Andrew Wolstenholme/ Gordon Masterton	Closed
13/31	<b>RSD Procurement:</b> Investigate through the RSD working group whether there was a risk that DfT or TfL could be joined in any litigation in relation to the RSD procurement.	Sarah Johnson	Closed
13/32	<b>Schedule Opportunities:</b> Report progress to Sponsor Board.	Andrew Wolstenholme	28/2/14
13/33	<b>Cost Performance:</b> Submit information to demonstrate the CPI figure which would be required to outturn at IPO.	David Allen	7/1/14
13/34	<b>Railway Operations:</b> Share the analysis that has been carried out through the Crossrail Programme Board about the impact of the Crossrail project on rail passenger services in London.	Andy Mitchell	7/1/14

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.55**

**MINUTES OF MEETING HELD ON**

**FRIDAY, 6<sup>th</sup> SEPTEMBER 2013**

**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Clare Moriarty*	DfT
Matt Lodge*	DfT
Sarah Johnson	Joint Sponsor Team
	Joint Sponsor Team (Secretary)

\* Voting Members

**By invitation:**

Gordon Masterton	Project Representative
Andrew Wolstenholme	CRL
Andy Mitchell	CRL
Howard Smith	CRL
David Allen	CRL
Martin Buck	CRL (Items 1 to 3 only)
Simon Adams	CRL

**Apologies**

Becky Wood	DfT
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**MEETING PART B**

**1. Actions and Minutes for Meeting No 54**

The draft minutes of meeting no 54 were **AGREED**.

Action 13/26 was discussed under the period 4 report agenda item.

Actions 13/27 and 13/28 had been closed.

## **2. RSD Progress Update & Approvals Programme**

Martin Buck reported good progress with the evaluation of the RSD bids and noted that the approvals programme attached to paper SB 55-6 (Crossrail Rolling Stock and Depot Governance and Approvals) represented a good baseline programme although it might be possible for CRL to deliver its recommendation in advance of the currently scheduled date. The acquisition of land around the OOC depot entrance had been concluded and the depot connection agreement was well advanced with TOC/FOC consultation about to commence.

Sarah Johnson noted that the working group would work up alternative plans to address an earlier or later recommendation and undertook to speak to Howard Carter to ask whether the TfL Board could delegate the decision to the Finance & Policy Committee.

Clare Moriarty queried whether there was a risk that DfT or TfL could be joined in any litigation in relation to the procurement. Martin Buck stated that he was content to provide input and Sarah Johnson agreed to take the issue forward at the next meeting of the working group.

**Action: Sarah Johnson**

## **3. Surface Stations Update**

Howard Smith introduced the presentation entitled, "Crossrail Surface Stations – Update". The dates in the presentation had been updated since the last report to Sponsor Board and the schedule 17 consultation had commenced. Accessibility accounted for £26m of the estimate, £23m related to Romford and Maryland and pure station ambience accounted for £72m.

Steve Allen noted that no TfL funding had been allocated to the surface stations work and queried how the proposal would reach a decision point. David Hughes noted that TfL would ask JST to raise a Sponsor Change Notice for the accessibility provisions and that Access for All funding should be pursued in parallel. The expectation was that the Sponsor Change would result in the funding being added to the RAB which would involve a lengthy process due to the possible changes to the NR Protocol including the DfT Intervention Amount. A paper would be submitted to the Rail and Underground Board in relation to the £72m funding required for the station ambience provisions, but if this proved unsuccessful, there was a potential option of adding the funding to the RAB but this would be subject to further discussions.

## **4. Period 4 Report**

Andrew Wolstenholme introduced this item noting that CRL would address both period 4 and period 5 issues. Andy Mitchell introduced the presentation

about progress. TBM progress had peaked at 804m per week and settled within the range of 550m to 650m per week, although the last 3 weeks had been quiet due to planned stoppages and mechanical breakdowns. The forecast curve meets the early curve in April 2014, which would mean that the TBMs would be back on schedule, and this was credible. Therefore CRL was comfortable with the TBM production rate. The SPI had improved from 0.95 to 0.96 and CRL was still assessing progress at 9 weeks behind schedule despite the TBM slow down. Andrew Wolstenholme noted that 3 months ago progress was 2% behind schedule and was now 1.8% behind schedule, similarly 3 months ago earned value was £134m behind plan and was now £122m behind. Two of the milestones planned to be completed in October had already been completed.

Andy Mitchell reported that there had been 6 major injuries in period 5, predominantly in the BBMV and DSJV contracts, and summarised the contract and programme wide initiatives that CRL was taking to improve safety.

Andy Mitchell noted that the On Network Works schedule was comfortable and the Overall Target Price figures were not changing. There were ONW issues as track layouts on the GE had been rejected and there was dialogue on the capacity of Ealing Broadway station. The timetabling work was taking account of the option of running Crossrail services to Reading. In addition NR was working on staging plans to validate the possession planning.

David Allen introduced the presentation entitled, "Sponsor Board – Performance Envelope (action 13/26)", noting that CRL measures performance against the contractor's target cost, not the CRL budget that contains contingency provisions. Therefore a CPI of less than 1.0 should not automatically be a concern. There was a cost variance between the contract actual cost of work performed and the contract budgeted cost of work performed of £199m at the end of period 4. CRL had introduced an Estimate at Completion (EAC) methodology with the EAC Low only using the cost variance and an EAC High which also applied the schedule variance. CRL's forecast sat within the EAC range which added credibility to the forecast, but as it sat towards the top of the range, CRL should be able to target efficiencies. Gordon Masterton noted that CRL was using a project basis for the EAC whereas PRep had been using a high level approach.

Andrew Wolstenholme noted that the gap between CRL's and contractor's forecasts would reduce as a result of the half time reviews and, as a result, CRL might be able to re-calibrate its view of the forecast outturn. Clare Moriarty noted that the level of detail which had been discussed had been very helpful and that the CPI/SPI envelope question remained outstanding.

## **5. Any Other Business**

No business was raised under this agenda item.

**Date of Next Meeting:**

The next meeting will be held on Tuesday, 29<sup>th</sup> October 2013 from 14.00 to 17.00 in the New Stepney Meeting Room, 55 Broadway, London.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
13/26	<b>Performance Management:</b> Define acceptable CPI and SPI envelopes, together with forecast lines, and report back to Sponsor Board.	Andrew Wolstenholme/ Gordon Masterton	15/10/13
13/27	<b>Surface Stations Proposal:</b> Present the next steps, including timescales, to the September meeting of Sponsor Board.	Howard Smith	Closed
13/28	<b>RSD Procurement:</b> Produce an outline plan on the governance and approvals process and present to the September meeting of Sponsor Board.	Sarah Johnson	Closed
13/31	<b>RSD Procurement:</b> Investigate through the RSD working group whether there was a risk that DfT or TfL could be joined in any litigation in relation to the RSD procurement.	Sarah Johnson	15/10/13

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.54**

**MINUTES OF MEETING HELD ON**

**TUESDAY, 9<sup>th</sup> JULY 2013**

**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**

David Hughes*	TfL (Acting Chair)
Clare Moriarty*	DfT
Michael Hurn*	DfT
David Goldstone*	TfL
	Joint Sponsor Team
Sian Evans	Joint Sponsor Team – Acting Secretary

\* Voting Members

**By invitation:**

Gordon Masterton	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
David Allen	CRL
Martin Buck	CRL
Simon Adams	CRL

**Apologies**

Steve Allen	TfL (Chair)
Andy Mitchell	CRL
Sarah Johnson	CRL

**MEETING PART B**

**1. Actions and Minutes for Meeting No 53**

The draft minutes of meeting no 53 were **AGREED**.

Action 12/71 was closed at the meeting under agenda item 5.

Action 13/09 was discussed at the meeting under agenda item 4.

Action 13/15 and 13/16 were closed at the meeting under agenda item 2.

Actions 13/17 and 13/19 had been closed.

Action 13/18 - The first meeting of the Capacity and Performance Group would be held on 16<sup>th</sup> July 2013.

## **2. Performance Management**

David Allen introduced paper SB54-04 "Crossrail Performance" and gave an overview of the key performance measures that Crossrail use to monitor progress, noting the importance of using a range of measures to capture a complete overview of Crossrail performance. The earned value figures in period reports are based on the contract target price and do not reflect any additional budget which CRL may hold against the workstream for changes.

David Allen noted that in many cases the contract target price was extremely competitive and some contractors might be subject to pain arrangements under the contract. A CPI less than one might not be an issue if all the other performance measures are positive as performance may be understated as a result of contractor behaviour.

Clare Moriarty recognised that there were issues with using the contractor's target price but queried the point at which the CPI measure becomes a concern for CRL. Andrew Wolstenholme proposed that CRL should work with PRep to define acceptable CPI and SPI envelopes, together with forecast lines, and report back to Sponsors.

### **Action : Andrew Wolstenholme & Gordon Masterton**

David Allen noted that the important issue related to the trends in the earned value indicators; SPI had been improving, but CPI had been deteriorating. CRL teams are taking corrective actions to address cost performance issues as referenced in the table in section 5 of the paper. David Allen tabled a presentation entitled "Performance" which provided an overview of how Crossrail is monitoring contractor performance and reporting on the position of key contracts to support management decisions for intervention and action.

## **3. Period 2 Report**

Andrew Wolstenholme tabled a presentation entitled "Sponsor Update – July 2013" which included an update on TBM and SCL progress. Overall TBM progress is slightly below plan but the average weekly rate of tunnelling has increased and CRL has overcome some major issues which had affected tunnelling. SCL is between plan and forecast and continues to progress well.

Andrew Wolstenholme noted that the emerging period 3 performance management results were maintaining the position reported at period 2 which is the third period of stability. The impact of the corrective actions with contractors is expected to be seen by period 8.



#### **4. RSD Update**

Martin Buck reported that Siemens had now withdrawn from the RSD procurement and confirmed that an extension of 2 weeks had been granted to the deadline for the return of tenders, with bids expected in mid August and evaluation completed by mid October. Martin Buck suggested that a small group should be established to address governance and communications issues. Sponsor Board **REMITTED** Sarah Johnson to produce an outline plan of the RSD governance and approvals process and present it to the September meeting of Sponsor Board.

#### **Action: Sarah Johnson**

Martin Buck noted that CRL recognised the contamination risk that existed between the round one and round two bids, and was taking all possible actions to mitigate the risk. Such actions included a requirement for new bids rather than a mark-up, a new evaluation plan, moderators to be alert to signs of read across and changes to key PWC, Ashurst and Quasar personnel.

#### **5. Surface Stations Update**

Howard Smith introduced the presentation SB54-05 entitled "Crossrail Surface Stations" which provided an overview of a proposal to improve the customer proposition at surface stations. The range of improvements to the stations that are under consideration include accessibility, station facilities, staffing and systems, reliability and safety. The proposal is currently unfunded. Howard outlined the ticketing proposal which requires delegation of schedule 17 responsibilities. Howard Smith concluded that the next steps are currently being developed for agreement within TfL.

Clare Moriarty noted that there was a wider debate on ticketing and the relationship with franchises needed to be understood. Clare Moriarty noted that a proposition which joined up the various elements would need to be considered by the DfT Rail Board.

David Hughes noted that, if the proposal is funded, then TfL will need to discuss the implications at stations used by TOCs with DfT.

Sponsor Board requested a follow up presentation, including timescales, at the September meeting of Sponsor Board.

#### **Action: Howard Smith**

#### **6. Any Other Business**

David Hughes confirmed to CRL that Sponsor Board had agreed in Part A of the meeting to the release of the Sponsor Change Confirmation Notice for the fit-out of Woolwich station subject to conditions including the conclusion of the

funding agreement with Berkeley Homes (BH). BH had linked the conclusion of the funding agreement with the conclusion of the Box Deed Variation and it was necessary for the funding agreement to be concluded to enable a Written Ministerial Statement by 16<sup>th</sup> July.

Claire Moriarty noted the delay in providing updated costs and the impact that this has had on the approvals process within the Sponsor organisations. Sponsor Board **REMITTED** PRep to review the cost estimates for the fit-out and through running.

**Action: Gordon Masterton**

David Hughes noted that this was Michael Hurn's last meeting and Sponsor Board thanked him for his contribution. Becky Wood will attend the next meeting.

**Date of Next Meeting:**

The next meeting will be held on Tuesday, 6<sup>th</sup> September 2013 from 14.00 to 17.00 in the New Stepney Meeting Room, 55 Broadway, London.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
12/71	<b>Surface Stations:</b> Provide an update on TfL's proposals.	David Hughes	Closed at the meeting
13/09	<b>RSD Procurement Approvals Process:</b> Produce the Sponsor governance process to support contract award in Mid April 14.	[REDACTED]	Closed
13/15	<b>Performance Measurement:</b> Submit a paper on CRL's performance measurements.	Andrew Wolstenholme	Closed at the Meeting
13/16	<b>Performance Measurement:</b> Present examples of how contractual changes can impact CPI and SPI and actions CRL is undertaking to improve overall performance.	Andrew Wolstenholme	Closed at the meeting
13/17	<b>SACR 9:</b> Write to CRL noting Sponsor Board's position regarding the SACR9 references to Sponsors' instructions.	David Hughes	Closed – letter sent 18 <sup>th</sup> June
13/18	<b>Timetabling:</b> Arrange the first meeting of the Capacity and Performance group to meet the 12 July core assumptions timetable deadline.	Michael Hurn	Closed meeting arranged for 16 <sup>th</sup> July
13/19	<b>Investment Model interest rates:</b> Write to CRL confirming that the appropriate TfL Treasury interest rates are to be applied when the investment model is updated for future SACR reports.	Sian Evans	Closed – letter sent 18 <sup>th</sup> June 09/07/13
13/26	<b>Performance Management:</b> Define acceptable CPI and SPI envelopes, together with forecast lines, and report back to Sponsor Board.	Andrew Wolstenholme/ Gordon Masterton	06/09/2013
13/27	<b>Surface Stations Proposal:</b> Present the next steps, including timescales, to the September meeting of Sponsor Board.	Howard Smith	6/09/2013
13/28	<b>RSD Procurement:</b> Produce an outline plan on the governance and approvals process and present to the September meeting of Sponsor Board.	Sarah Johnson	06/09/13

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.53**

**MINUTES OF MEETING HELD ON**

**TUESDAY, 11<sup>th</sup> JUNE 2013**

**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**


David Hughes*	TfL (Acting Chair)
Clare Moriarty*	DfT
Michael Hurn*	DfT
Julian Ware*	TfL
Sian Evans	Joint Sponsor Team
Stewart Hayden	Joint Sponsor Team – Acting Secretary

\* Voting Members

**By invitation:**

Gordon Masterton	Project Representative
Andrew Wolstenholme	CRL
Howard Smith	CRL
David Allen	CRL
Martin Buck	CRL
Matt White	CRL (Item 5 only)
Rob McIntosh	NR (Item 5 only)

**Apologies**

Steve Allen*	TfL (Chair)
	Joint Sponsor Team
Andy Mitchell	CRL
Sarah Johnson	CRL

**MEETING PART B**

**1. Actions and Minutes for Meeting No 52**

The draft minutes of meeting no 52 were **AGREED**.

Actions 13/03, 13/ 04 had been closed.

Action 13/11 was closed at the meeting under agenda item 5.

Action 12/71, TfL's Surface Station proposals, will be discussed at the July Sponsor Board meeting.

## **2. SACR9**

Andrew Wolstenholme provided an overview of the headlines reported in SACR9 which included an increase in the QSRA confidence level of 75% which was up from 65% in SACR8.

David Hughes noted that SACR 9 reported delays to the schedule and that to close the gap there needs to be an improvement in productivity. Clare Moriarty asked how CRL were planning to recover the 9 weeks programme slippage.

Andrew Wolstenholme tabled a presentation on TBM progress which illustrated that actual progress is exceeding the current mean which will help to recover the slippage. Gordon Masterton noted that overall performance was not showing the same level of improvement as tunnelling.

Andrew Wolstenholme noted that the C300 and C410 contracts were delivering poor value for money. Within the CPI measure, no earnings are included for Notified Compensation Events which have not been implemented. CRL agreed to submit a paper on CRL's performance measurements to the July Sponsor Board.

### **Action: Andrew Wolstenholme**

David Hughes noted that Sponsors wished to understand when improved productivity would be reflected in the performance measurements. CRL agreed to present examples of how contractual changes can impact CPI and SPI at the July Sponsor Board and actions CRL is undertaking to improve overall performance.

### **Action: Andrew Wolstenholme**

David Hughes noted Sponsor Board did not agree that the SACR9 references to Sponsors' Instructions were valid and that he would write to CRL accordingly.

### **Action: David Hughes**

David Hughes noted that the SACR9 interest rate assumptions were not up to date. Sponsor Board had agreed an approach to address the issue and would write to CRL confirming that the appropriate TfL Treasury interest rates are to be applied when the investment model is updated for future SACR reports.

### **Action: Sian Evans**

### **3. RSD Update**

Martin Buck reported that the ITT programme was on track and that an addendum had been released with points of clarification requested by the bidders. Four bidders remain and there has not been a formal request for an extension to the response deadline. The target contract award date remains as April 2014.

### **4. Period 1 Report**

There is nothing specific to report as the subject was covered under agenda item 2.

### **5. Surface Works Update**

Matt White introduced the presentation entitled "Crossrail Timetabling" regarding the progress made since the June Sponsor Board. This highlighted the need for the Capacity and Performance Group to agree the assumptions to be used within the timetabling modelling. The first meeting has not yet been scheduled and input on the key assumptions is required by 12 July to maintain the programme. Michael Hurn agreed to prioritise the meeting arrangements.

#### **Action : Michael Hurn**

Rob McIntosh presented an update on the progress achieved with respect to the Crossrail Surface Section works and the path to achieve the proposed work programme over Christmas 2013.

### **6. Any Other Business**

Nothing to report.

#### **Date of Next Meeting:**

The next meeting will be held on Tuesday, 9<sup>th</sup> July 2013 from 14.00 to 17.00 in the New Stepney Meeting Room, 55 Broadway, London.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
12/71	<b>Surface Stations:</b> Provide an update on TfL's proposals.	David Hughes	July Sponsor Board – 9/07/2013
13/03	<b>Surface Works Update:</b> Arrange the next update at the Sponsor Board meeting in May and thereafter on a quarterly basis.	David Hughes	Action Closed
13/04	<b>Performance Modelling:</b> Provide an update in April and arrange a substantive discussion at Sponsor Board in May.	Andy Mitchell/ David Hughes	Action Closed
13/09	<b>RSD Procurement Approvals Process:</b> Produce the Sponsor governance process to support contract award in Mid April 14.	[REDACTED]	30/07/13
13/10	<b>Timetabling:</b> Produce a chart illustrating the freight paths currently being taken up on the route.	Matt White	Action now allocated to the Capacity and Performance Group.
13/11	<b>Timetabling:</b> Provide an update on the progress of the timetabling work at the June Sponsor Board.	Matt White	Action Closed
13/15	<b>Performance Measurement:</b> Submit a paper on CRL's performance measurements.	Andrew Wolstenholme	09/07/2013
13/16	<b>Performance Measurement:</b> Present examples of how contractual changes can impact CPI and SPI and actions CRL is undertaking to improve overall performance.	Andrew Wolstenholme	09/07/2013
13/17	<b>SACR 9:</b> Write to CRL noting Sponsor Board's position regarding the SACR9 references to Sponsors' instructions.	David Hughes	21/06/2013
13/18	<b>Timetabling:</b> Arrange the first meeting of the Capacity and Performance group to meet the 12 July core assumptions timetable deadline.	Michael Hurn	14/06/2013
13/19	<b>Investment Model interest rates:</b> Write to CRL confirming that the appropriate TfL Treasury interest rates are to be applied when the investment model is updated for future SACR reports.	Sian Evans	09/07/13

**END**

**COMMERCIAL – IN CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.52**

MINUTES OF MEETING HELD ON

TUESDAY, 14<sup>th</sup> MAY 2013

AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON

Present:

Steve Allen*	TfL (Chair)
David Hughes*	TfL
Clare Moriarty*	DfT
Michael Hurn*	DfT
	Joint Sponsor Team
Sian Evans	Joint Sponsor Team – Acting Secretary

\* Voting Members

By invitation:

David Craig	Project Representative
Andrew Wolstenholme	CRL
Andy Mitchell	CRL
Howard Smith	CRL
David Allen	CRL
Martin Buck	CRL (Items 1 to 4 only)
Sarah Johnson	CRL
Matt White	CRL ( Items 3 to 6 only)

Apologies

Gordon Masterton	Project Representative
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MEETING PART B

**1. Actions and Minutes for Meeting No 51**

The draft minutes of meeting no 51 were **AGREED**.

Action 13/04 has been closed.

Action 12/71, TfL's Surface Station proposals, will be discussed at the June or July Sponsor Board.



Action 13/03, Surface Works update, will be given at the June Sponsor Board meeting.

## **2. HS2 Update**

Sarah Johnson introduced the paper SB 52-2 entitled “High Speed 2 Update” which provided the latest position on CRL’s engagement with High Speed 2 Limited and CRL’s current view on potential risks to the Crossrail programme arising from the interface with HS2.

Michael Hurn noted that the timescale to agree early works that may result in a Sponsor change in advance of the submission of the Bill in October 2013 was very tight.

Claire Moriarty asked if the early works opportunities outlined in the paper were essential. Sarah Johnson stated that the Thames Water sewer diversion was recognised as a good proposal but the others two options were still being developed.

Steve Allen noted that at a meeting of the Mayor and the Secretary of State, it had been agreed that there was no prospect of moving the Old Oak Common depot before Crossrail opening.

## **3. RSD Update**

Martin Buck tabled a presentation entitled “ Rolling Stock and Depot update” and the current Procurement Programme. CRL has had 2 meetings with each of the 4 bidders and there is another set of meetings scheduled for week commencing 20 May 2013. One bidder has already registered a concern regarding the 3 month response time specified within the revised ITT. CRL is considering an extension to the response time and is evaluating how that can be incorporated into the programme without increasing the risk to achieving the contract award date. Bids are due back by 29 July 2013, if no extension is granted.

Martin Buck updated Sponsor Board on the streamlining of the evaluation process and noted that the technical evaluation still remains a challenge. The shortlisting of bidders will be completed internally and no public announcement will be made. Claire Moriarty noted that CRL would need to have a robust process for managing the shortlisting and internal down selecting of bidders.

The Sponsors’ governance process to support contract award in mid April needs to be clearly identified.

**Action** [REDACTED]

#### **4. Period 13 Report**

Andrew Wolstenholme presented the Crossrail Period 13 report. The programme slippage has reduced from 10 weeks to 9 weeks and contract administration is improving. The period 13 AFCDC is £20.8m below IPO and the SACR9 confidence in achieving the target delivery date has increased from P65 to P75.

Andrew Wolstenholme reported that the emerging results for period 1 are not as encouraging as the figures reported at period 13 and the focus in CRL is to how to increase the productivity levels. There were particular concerns about the SPI and CPI in the West.

Andy Mitchell updated Sponsor Board on the TBM progress. Breakthrough at Woolwich and Canary Wharf is expected before the end of May 2013. The best daily performance so far is 150m and whilst the typical weekly average has been 500-600m recently, CRL anticipate a potential maximum rate of 750m from time to time.

Claire Moriarty queried the cost implications of increasing the schedule confidence. David Allen responded that the schedule straight edge exercise had identified £120m of cost to recover programme slippage. This spend is primarily on works at stations. Of the £120m cost identified, £40 - £60m has been committed through CRL's approval process. Implementation of the straight edge exercise was estimated to cost £120m to £150m, based on site teams estimates, but the approved amount was expected to be less. SACR9 will include a breakdown of the estimate.

Andrew Wolstenholme noted that CRL's intent at SACR10 is to have an improved programme with a confidence level of over P80 to achieve the target delivery date.

#### **5. Crossrail Timetabling**

Matt White introduced the presentation entitled "Crossrail Timetabling" regarding the progress being made with NR in relation to timetable development. Based on the analysis undertaken, the risk to Crossrail performance is at its highest during the off peak period. This is primarily due to the number of train paths allocated to freight. There is very little resilience on the graph to accommodate any incident and maintain performance.

Sponsor Board noted that the current usage of freight paths is believed to be much lower than specified in the Track Access Option and requested details of freight paths taken up.

**Action : Matt White**

The modelling needs to be completed for inclusion in the CTOC ITT to be issued in September 2013. A high level working group (Crossrail Capacity and Performance Group) is being set up to ensure engagement (DfT, TfL, CRL, NR) at a senior level in order to resolve the issues.

Sponsor Board agreed that ORR should be kept apprised of the timetabling issues but were not required to be active members of the working group.

A further update on these issues is to be provided at the June Sponsor Board.

**Action : Matt White**

**Date of Next Meeting:**

The next meeting will be held on Tuesday, 11<sup>th</sup> June 2013 from 14.00 to 17.00 in the New Stepney Meeting Room, 55 Broadway, London.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
12/71	<b>Surface Stations:</b> Provide an update on TfL's proposals.	David Hughes	July Sponsor Board – 9/07/2013
13/03	<b>Surface Works Update:</b> Arrange the next update at the Sponsor Board meeting in May and thereafter on a quarterly basis.	David Hughes	June Sponsor Board – 11/06/2013
13/04	<b>Performance Modelling:</b> Provide an update in April and arrange a substantive discussion at Sponsor Board in May.	Andy Mitchell/ David Hughes	Action Closed
13/09	<b>RSD Procurement Approvals Process:</b> Produce the Sponsor governance process to support contract award in Mid April 14.	██████████	30/07/13
13/10	<b>Timetabling:</b> Produce a chart illustrating the freight paths currently being taken up on the route.	Matt White	July Sponsor Board - 9/07/2013
13/11	<b>Timetabling:</b> Provide an update on the progress of the timetabling work at the June Sponsor Board.	Matt White	June Sponsor Board – 11/06/2013

**END**

**COMMERCIAL-IN-CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.51**

**MINUTES OF MEETING PART B HELD ON**

**TUESDAY, 19<sup>TH</sup> MARCH 2013**


**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**

Clare Moriarty*	DfT (Chair)
Michael Hurn*	DfT
Steve Allen*	TfL
Howard Smith*	TfL

\* Voting Members

**In attendance**

David Hughes	Joint Sponsor Team
	Joint Sponsor Team – Secretary

**By invitation:**

Gordon Masterton	Project Representative
Matt Lodge	DfT
Andrew Wolstenholme	CRL
Andy Mitchell	CRL
David Allen	CRL
Sarah Johnson	CRL
Steve Elliott	CRL

**PART B**

**1. Action and Minutes of Meetings No 49**

The draft minutes of part B of meeting no 49 were **AGREED**.

Action 12/53. David Hughes noted that Surface Works updates would be given on a quarterly basis. The first update would given to the Sponsor Board meeting to be held in May.

**Action: David Hughes**

Action 12/71. TfL's Surface Stations proposals will be added to the agenda for the May Sponsor Board meeting.

Action 12/72. Discussed under the Period 11 report agenda item.

Action 12/73. Andrew Wolstenholme noted that there wasn't an industry standard approach to measuring float and, within the programme, there were a huge number of days of float, some of which were critical and some which were not. Gordon Masterton noted that an example had been included in the PRep report and that PRep was content with the QSRA being carried out on a six monthly basis. Andrew Wolstenholme noted that CRL had replied in writing.

## **2. Period 11 Report**

Andy Mitchell introduced a presentation entitled, "Sponsor Board – Status Update & Outlook – March 2013" covering the current status and a short term look ahead to 2013/14. The probability of achieving the December 2018 completion date would be reported in SACR 9. The only SACR 8 mitigation measure which had not been completed related to the Whitechapel diaphragm walls and this would be resolved by June. CRL had set their target as the early start S curve and still remained within the early start/late start envelope. Looking ahead, CRL expected to maintain a tunnelling rate of 600 metres per week (though more than 700 m/week was achievable) and expected to be back on plan, in terms of tunnelling linear metres achieved as set out in the April 2011 plan, by period 5 or 6 of 2014/15. Contract C610 (Systemwide) presented a number of opportunities, some which CRL hoped to take up by SACR 10 and, if not, by SACR 11. CRL had broken the back of the Sprayed Concrete Lining (SCL) pilot tunnels and steady SCL progress was planned.

Andy Mitchell reported that the revised spoil handling system would be installed at Wallasea Island in early May. Tunnelling progress would not be affected by the spoil issues at Wallasea Island, but some material would not be deposited there as a result.

David Allen noted that the contingency was roughly in balance and it was too early to reduce the contingency. Andy Mitchell noted that there would not be much change in the cost of the mitigation measures which had been estimated at £120m. Andrew Wolstenholme noted that CRL would deliver the end dates within the funding envelope.

## **3. RSD**

Sarah Johnson reported progress on the RSD procurement. There had been good collaborative working between the teams following the announcement on March 1<sup>st</sup>. CRL was intending to reduce the numbers of bidders from 4 to 1 in a single stage, though it reserved the right to initially reduce the bidders to 2. The ITN was planned to be released in mid/late April with bids being returned in July and award taking place in June 2014 though with a target of April 2014. A reduction to 2 bidders would take place in late 2013 if that approach was adopted.

Andrew Wolstenholme noted that the SACR QSRA confidence figures were based on the assumption that rolling stock would be delivered on time. It might be possible to incorporate the rolling stock risks in the SACR 10 assessment.

#### **4. Performance Modelling**

Andy Mitchell introduced the paper entitled, "Timetable – Summary Update". Howard Smith noted that there were issues for Sponsors as well as CRL; for example, in relation to decisions on GW capacity. There were also some infrastructure issues and confidence in the performance could not be assessed until the issues had been resolved, some of which required input from DfT. Clare Moriarty requested an update on the issues in April with a substantive discussion at Sponsor Board in May.

**Action: Andy Mitchell/David Hughes**

#### **5. Any Other Business**

Clare Moriarty thanked Howard Smith and David Hughes for their contributions on behalf of Sponsor Board as they would be moving to new roles.

#### **Date of next meeting**

The next meeting will be held on Tuesday, 14<sup>th</sup> May 2013 from 14.00 to 17.00 in the New Stepney Room, 2<sup>nd</sup> Floor, 55 Broadway, London.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
12/50	<b>RSD Third Rail Provision:</b> Write to JST to confirm the position regarding the rolling stock third rail passive provision.	Andrew Wolstenholme	Action closed
12/51	<b>RSD HNIF:</b> Report to JST regarding CRL requirements for testing at HNIF and when the facility would be available.	Andy Mitchell	Action closed
12/53	<b>Surface Works update:</b> Arrange a regular Surface Works Update to Sponsor Board.	David Hughes	Action closed
12/71	<b>Surface Stations:</b> Provide an update on TfL's proposals.	David Hughes	14/5/13
12/72	<b>Earned Value:</b> forecast the improvement in SPIs and CPIs at project level for all 3 areas over the next 6 month period.	David Allen	Action closed
12/73	<b>Schedule Float:</b> Investigate whether an indicator of float could be included in periodic reports.	Andrew Wolstenholme	Action closed
12/74	<b>Train Timetabling and Performance:</b> Provide report with a clear timetabling and performance modelling programme and a note of any key issues which CRL still have to resolve, having agreed the position with JST.	Andy Mitchell	Action closed
13/03	<b>Surface Works Update:</b> Arrange the next update at the Sponsor Board meeting in May and thereafter on a quarterly basis.	David Hughes	14/5/13
13/04	<b>Performance Modelling:</b> Provide an update in April and arrange a substantive discussion at Sponsor Board in May.	Andy Mitchell/ David Hughes	19/4/13

**End**



**COMMERCIAL-IN-CONFIDENCE**

**CROSSRAIL SPONSOR BOARD MEETING No.49**

**MINUTES OF MEETING PART B HELD ON**

**THURSDAY, 17<sup>TH</sup> JANUARY 2013**

**AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON**

**Present:**

Clare Moriarty*	DfT (Chair)
Michael Hurn*	DfT
Steve Allen*	TfL
Howard Smith*	TfL

\* Voting Members

**In attendance**

David Hughes	Joint Sponsor Team
	Joint Sponsor Team – Secretary

**By invitation:**

Gordon Masterton	Project Representative
Andrew Wolstenholme	CRL
Andy Mitchell	CRL
David Allen	CRL
Martin Buck	CRL
Sarah Johnson	CRL

**PART B**

**1. Action and Minutes of Meetings Nos 46 & 48**

The draft minutes of part B of meeting nos 46 and 48 were **AGREED**.

Actions 12/50 and 12/53 are outstanding.

Action 12/51. CRL will respond within around 4 weeks.

Action 12/52. Howard Smith reported that TfL has been refining its ideas on surface stations. TfL will decide at the end of February whether there is anything which it might wish to change and, if so, will share its proposals with DfT. An update will be provided in March.

## **Action: David Hughes**

Actions 12/54 and 12/65 to 12/69 have been closed.

## **2. SACR 8**

Gordon Masterton introduced this item. In SACR 8 the QSRA confidence level was 65%, down from 82% in SACR 7. Whilst this was not a surprise as a result of the discrete adverse events, it also reflected a general underperformance as indicated in the SPIs. Gordon Masterton queried what was being done to overcome the fairly consistent underperformance so that the SPIs would increase from the average of around 0.95 to 1.0 or better. An update on the £120m investment attached to the 65% confidence rating and the likely position at SACR 9 was requested.

Andrew Wolstenholme noted that there were 3 relevant elements; the SPIs and CPIs, the current position relative to programme and the confidence looking forward. There were 7 items which were reflected in the reduction in the confidence level; 3 to 4 were now positive and CRL was still working on two. This would result in the confidence level increasing beyond 65%. Furthermore CRL was still forecasting an outcome below IP0. Five TBMs were now operational and CRL was focused on recovering the 6 to 8 week delay so that the 2015 handover date for systemwide installation would be achieved or bettered.

Andy Mitchell noted that the remaining 2 TBMs would be operational by the summer and, whilst there had been issues with the sprayed concrete lining (SCL) design, these had been broadly resolved which would lead to a significant increase in SCL progress. The tunnelling rates were such that, within a year, it was more likely that the tunnelling would be ahead of programme rather than behind. Productivity improvements should be evident within the next 8 weeks.

Andrew Wolstenholme noted that there had been 19 main elements which made up the £120m investment; this had increased to 20 given the need to address the Wallasea Island conveyor issues. Of the 20 elements, 5 had been addressed, 10 would be resolved by March and it was not the right time to consider the remaining 5 elements so these would be assessed towards the end of 2013. Consequently the completion of most of the elements would feed into the SACR 9 QSRA.

Andy Mitchell noted that there had been issues with the performance of the BFK consortium including its health and safety record. CRL had frequently engaged with BFK's CEOs and BFK's contract organisations had now been merged. CRL had reflected the changed structure in its own organisation which would be strengthened.

Andrew Wolstenholme confirmed that, since SACR 8, the confidence level had increased from 65%, CRL was expecting the SPIs to increase and the investment would be delivered within the £120m envelope. In the next quarter, the SPIs and CPIs would increase in the west. CRL would forecast the improvement in SPIs and CPIs at project level over the next 6 month period, though David Allen noted that the improvement would not feed through until period 12. Steve Allen noted that the

forecast should cover all 3 areas as there were also issues in the central and eastern areas. Clare Moriarty noted that the forecast would be very helpful.

**Action: David Allen**

Gordon Masterton noted there was a gap in the performance indicators in relation to the loss of float and it would be helpful to include such an indicator in the periodic reports. Andrew Wolstenholme agreed to ask Steve Elliott whether an indicator of float could be included in the reports.

**Action: Andrew Wolstenholme**

### **3. HS2 Update**

Sarah Johnson introduced Sponsor Board paper SB 46-7 entitled, "High Speed 2 Update." However, it was understood that the HS2 design in relation to the HS2/Old Oak Common interface had changed since the paper and CRL would be meeting HS2 in the next week or so to discuss the revised design, following which CRL would review the associated risks. CRL had discussed the HS2 Safeguarding Direction with DfT and TfL. It had been agreed that it would be sensible for CRL to respond to the consultation and CRL will share its paper with Sponsors before doing so.

### **4. OP/PPM Models Update**

Howard Smith introduced this item. The relevant parties appeared not to share a common view of progress and Matt White had arranged a meeting to discuss the issue. The timetable and the associated modelling needed to be firmed up to give an indication of the performance of the railway without interventions. Andy Mitchell noted that, whilst NR had held to their programme from 6 months ago, there was no schedule beyond February. In addition, there was the issue of the GW timetable post-2018 which could result in a party losing some access or in poor performance. Sponsor Board **REMITTED** Andy Mitchell to report to the March meeting of Sponsor Board with a clear timetabling and performance modelling programme and a note of any key issues which CRL still had to resolve, having agreed the position with JST. Howard Smith noted that key decisions could not be taken until the timetable and modelling information was available.

**Action: Andy Mitchell**

### **5. RSD Update**

Clare Moriarty introduced this item and noted that it would be helpful to understand CRL's concerns around the current approach in the light of the balance sheet classification discussions. Martin Buck reported good progress with the evaluation of the tenders. The CRL process was due to be completed on 8/3/13 with bidders due to be informed of the outcome before the Easter recess.

The tender documents for round 2 of the bidding, including the current financing strategy, were discussed with the focus on how the risk around the balance sheet classification would be handled.

## **6. Any Other Business**

David Hughes noted that JST would be discussing the RSD communications strategy with Sponsors' and CRL's communications teams. Whilst it was planned to hold the next Sponsor Board meeting in March, a provisional meeting date had been arranged in February in case a further discussion was required. There would be a 5 working day period between the CRL RSD down-selection decision and bidder notification for briefing purposes.

### **Date of Next Meeting**

The date of the next meeting is to be advised.

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
12/50	<b>RSD Third Rail Provision:</b> Write to JST to confirm the position regarding the rolling stock third rail passive provision.	Andrew Wolstenholme	31/1/13
12/51	<b>RSD HNIF:</b> Report to JST regarding CRL requirements for testing at HNIF and when the facility would be available.	Andy Mitchell	14/2/13
12/52	<b>Surface Stations:</b> Progress issues in relation to customer experience at Surface Station with JST.	Howard Smith	Action closed
12/53	<b>Surface Works update:</b> Arrange a regular Surface Works Update to Sponsor Board.	David Hughes	14/2/13
12/54	<b>Sponsor Board Agenda:</b> Add SACR 8, HS2/OOC update and OP/PPM models update items to the agenda for the Sponsor Board meeting to be held on 17 <sup>th</sup> January 2013.	David Hughes	Action closed
12/65	<b>RSD:</b> Amend the drafting of the RSD summary paper to reflect the discussion on the P50 confidence level for programme risk and the dependence of the option A programme risk on the bidder.	David Hughes	Action closed
12/66	<b>RSD:</b> Investigate whether further mitigations exist in relation to the option A programme risk if lessons learnt from other projects are taken into account.	Martin Buck	Action closed
12/67	<b>RSD:</b> Investigate whether the DfT governance process can be brought forward from 23/1/13.	Michael Hurn	Action closed
12/68	<b>RSD:</b> Investigate whether any small changes could be made to option A (given that it is likely to be on-balance sheet), which would not require a new ITT, with a view to improving value for money whilst optimising from a programme risk perspective.	Martin Buck	Action closed
12/69	<b>RSD:</b> Extend the RSD agenda item for the next Sponsor Board.	David Hughes	Action closed
12/71	<b>Surface Stations:</b> Provide an update on TfL's proposals.	David Hughes	19/3/13

12/72	<b>Earned Value:</b> forecast the improvement in SPIs and CPIs at project level for all 3 areas over the next 6 month period.	David Allen	14/2/13
12/73	<b>Schedule Float:</b> Investigate whether an indicator of float could be included in periodic reports.	Andrew Wolstenholme	31/1//13
12/74	<b>Train Timetabling and Performance:</b> Provide report with a clear timetabling and performance modelling programme and a note of any key issues which CRL still have to resolve, having agreed the position with JST.	Andy Mitchell	19/3/13

**End**

## CROSSRAIL SPONSOR BOARD MEETING No.48

### MINUTES OF MEETING PART B HELD ON

FRIDAY, 11<sup>TH</sup> JANUARY 2013


AT THE NEW STEPNEY ROOM, 55 BROADWAY, LONDON

#### Present:

Michael Hurn*	DfT (Chair)
Clare Moriarty*	DfT
Steve Allen*	TfL
Howard Smith*	TfL

\* Voting Members

#### In attendance

David Hughes	Joint Sponsor Team
	Joint Sponsor Team – Secretary

#### By invitation:

Kate Mingay	DfT
Mike Binnington	TfL
Martin Buck	CRL
Glen Snowden	CRL

### PART B

#### **1. Rolling Stock & Depot: Status Summary**

Michael Hurn introduced this item noting that Sponsor Board would review the key aspects of SB Paper – 48/01, entitled “Crossrail – Rolling Stock and Depot Financing”. Michael Hurn noted that based on ESA95 the Crossrail RSD was very likely to be on-balance sheet. Based on ESA10, whilst the risk was diminished, an on-balance sheet classification would remain more likely than not.

Steve Allen noted that the reference to the P50 confidence level for programme risk implied a greater knowledge of the risk profile than actually existed. The position was that both options were capable of being delivered within the timetable, but there was a different profile with respect to the tail. It was noted that the option A programme risk was bidder dependent. Sponsor Board **REMITTED** David Hughes to amend the drafting. Michael Hurn noted that DfT has not completed its legal analysis and therefore the assessment of the likelihood of legal challenge could change with associated impacts on the initial stage of option B.

**Action: David Hughes**

Michael Hurn noted that further mitigations might exist in relation to the option A programme risk if lessons learnt from other projects were taken into account. Martin Buck agreed to investigate.

**Action: Martin Buck**

Sponsors had discussed vfm and noted that no further work had been carried out so the difference of views remained the same.

Michael Hurn noted the next steps:-

1. David Hughes to amend the paper. The revised paper can be shared with HMT on an informal basis;
2. The QC conference was scheduled take place on 15<sup>th</sup> January and the paper would be updated to reflect the outcome of the meeting;
3. A meeting of Philip Rutnam and Sir Peter Hendy was scheduled to take place on 15<sup>th</sup> January
4. The DfT Board would consider the issue at its meeting on 23<sup>rd</sup> January and the formal submission to the Secretary of State would follow. Discussions with HMT officials and the Secretary of State would take place in parallel.

The timing of the DfT governance process was discussed and Michael Hurn will investigate whether the process can be brought forward.

**Action: Michael Hurn**

Steve Allen noted that any change to Sponsors' Requirements would be considered by the TfL Board, which should not cause a delay, and the Mayor would be briefed in parallel.

Sponsor Board **REMITTED** Martin Buck to investigate whether any small changes could be made to option A (given that it is likely to be on-balance sheet), which would not require a new ITT, with a view to improving value for money whilst optimising from a programme risk perspective.

**Action: Martin Buck**

Michael Hurn requested that the RSD agenda item for the next Sponsor Board should be extended.

**Action: David Hughes**

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## SUMMARY OF ACTIONS

No.	Action	Responsible	Target
12/65	<b>RSD:</b> Amend the drafting of the RSD summary paper to reflect the discussion on the P50 confidence level for programme risk and the dependence of the option A programme risk on the bidder.	David Hughes	14/1/13
12/66	<b>RSD:</b> Investigate whether further mitigations exist in relation to the option A programme risk if lessons learnt from other projects are taken into account.	Martin Buck	31/1/13
12/67	<b>RSD:</b> Investigate whether the DfT governance process can be brought forward from 23/1/13.	Michael Hurn	14/1/13
12/68	<b>RSD:</b> Investigate whether any small changes could be made to option A (given that it is likely to be on-balance sheet), which would not require a new ITT, with a view to improving value for money whilst optimising from a programme risk perspective.	Martin Buck	31/1/13
12/69	<b>RSD:</b> Extend the RSD agenda item for the next Sponsor Board.	David Hughes	17/1/13

**End**