

# RESPONSE TO THE CROSSRAIL SPONSORS ON THE PROJECT REPRESENTATIVE SPONSOR SUMMARY REPORT – PERIOD 5 REPORT

**Date of Issue (this paper):** 09 November 2020

**Issued to:** Simon Adams, Head of Crossrail Joint Sponsor Team - Transport for London

**Author:** Liam Hewitt, Head of Reporting – Crossrail. [REDACTED]

**Approved by:** Mark Wild, Chief Executive Officer – Crossrail

## 1. Purpose

- 1.1. The purpose of this paper is to provide the Crossrail Sponsors with Crossrail's response to the Project Representative's ("PRep") Sponsor Summary report. It has been produced in consultation with Crossrail's Subject Matter Experts. A list of consultees is attached as Appendix 1.
- 1.2. The report responded to in this paper is the Period 6 FY2020-21 (23 August 2020 – 19 September 2020) report, issued and received on 12 October 2020.

## 2. Health & Safety (H&S)

- 2.1 Physical and mental Health and Safety continues to be the upmost priority of the Crossrail project. As the national pandemic response develops, the Crossrail Gold Response Team continues provide agile leadership, meeting frequently and coordinating specialist Silver Teams.

## 3. Delivery and Assurance

- 3.1. Plumstead Portal was handed over as planned on 16 October 2020 and Farringdon Station achieved Staged Completion 3 (SC3) on the 23 October 2020, ahead of schedule. Farringdon is the first station to achieve this milestone.
- 3.2. The handover of Eleanor Street Shaft is planned for 10 November 2020. The handover of the remaining two shafts, Limmo Peninsula and Stepney Green is planned for 16 December 2020. The logistics of the handover of two elements at once is yet to be agreed. Lighting works to address the Single Point of Failure issue at the shafts is substantially complete. The schedule impact is known, and the commercial impact is under discussion.

## 4. SIDT, Dynamic Testing, Trial Running

- 4.1. The Project Representative notes that [REDACTED] Trial Running is coming under pressure. This is broadly true and is expected. It is valuable to understand the nature [REDACTED] [REDACTED] [REDACTED] [REDACTED] held by Crossrail in order to correctly assess performance.

- 4.2. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

4.3.

[REDACTED]

4.4. The broad narrative for the baseline-to-Period 06 forecast is that the programme has experienced pressure that, from a [REDACTED] perspective, it deems is entirely mitigatable through a set of discrete interventions. [REDACTED]. The pressure has come from predominantly two sources, with the Plumstead matter being the sole driver [REDACTED] on the Trial Running [REDACTED]:

- Handover of Plumstead Depot: particularly the provision of key handover deliverables such as operation and maintenance manuals, training, and asset data. To mitigate this, a date for the remaining training documentation (access and control) has been agreed, the Delivery Director is intervening with the supply chain to address the quality of asset data completion, a detailed Sprint Plan has been drawn up, the Integrated Delivery Team has been strengthened by Crossrail engineering and by Rail for London, and the matter is now discussed regularly through programme weekly governance; and
- Completion of Safety Justification assurance works for the Routeway: particularly the closure of dependencies and maintaining a high momentum. To mitigate this, a two-step assurance process to endorse the safety argument as soon as possible is being explored, Category A comments on the Safety Justifications are being reviewed to unblock assurance going to RAB-C, and weekly CRRP meetings to review outstanding dependencies and reach a mutually acceptable position on each for Trial Running is being established. This set of interventions was introduced in Period 5 and held in Period 6.

4.5. While there will always be an expectation of pressure [REDACTED], the key test is the manner with which schedule pressure is addressed. These mitigations and interventions illustrate the collaboration across disciplines and organisations to solve schedule pressure issues.

4.6. Regarding the closing-out of blockade works, Element Outstanding Works Lists (EOWLs) have proved more challenging than planned but Crossrail is not in agreement that it has stalled. Of the 821 blockade EOWLs (691+130 added under change control), 628 EOWLs have been closed out with 139 still awaiting closure. Daily scope review sessions continue and are targeted at closing out the eB records for 69 items whilst the remaining 124 items are being re-planned for the November blockade.

4.7. Significant progress has been achieved this period in developing the assurance baseline for Trial Running. A detailed Trial Running configuration has been developed and agreed between Crossrail and RFLI. Also, RAB-C Safety Justification (SJ) endorsements for majority of the Routeway SJs were achieved in the period and the COS-SJ for Trial Running has been drafted and issued to RFLI along with the corresponding Assessment Body (AsBo). This provides the foundation of an assurance baseline consisting of SJs and dependencies to be

closed out prior to final acceptance of the COS SJ and Crossrail Engineering Safety and Assurance Case (CESAC).

- 4.8. Crossrail acknowledges that there is not yet full test coverage for the Trial Running functionality with TR2. There are two tests planned for the weekend commencing 31 October 2020 to complete the testing. In addition to this, eight have failed or only partially passed. A further point release (PR6) and a subsequent Bombardier release of TCMS (7.6.2) is scheduled for January 2021 and it is expected that following these releases, majority of tests will be passed for Trial Running. As a mitigation to this, the Plateau team has devised and agreed operational restrictions and information statements that allow Trial Running to commence to plan without these tests being fully passed in January 2021.
- 4.9. The Plateau team have commenced refinement of the scope and functionality baseline for Trial Operations; this work is scheduled for completion in November 2020. There are currently no integration issues affecting the entry into Trial Running although it is noted that train/signalling performance requires improvement. Recent Operations Scenario Testing (OST) running has flushed out further integration issues which are being reviewed and allocated into software builds for 2021.

## 5. Recovery Plans (Routeway and Stations)

- 5.1. The Station Recovery Plan is now embedded within the ten Central Stations and all cardinal milestones have been delivered either to or better than the base plan, including SC3 at Farringdon, C660 site works complete with available iACs at Farringdon and Custom House. Staged Completion 1 (SC1) at Bond Street will be ready for Enactment in December 2020.
- 5.2. The recent blockade was an opportunity to complete EOWs not only at Farringdon, Paddington, and Tottenham Court Road stations but at all locations to support primarily Trial Running but also SC3, SC1 Enactment, SC3 ROGs and SC2 (at Bond Street). The blockade did not change the Critical Path, which remains, through Farringdon and Paddington as the first stations in the two swim-line approach to LU and RfL Stations.
- 5.3. Schedule adherence has been historically a challenge, but this is now closely monitored by Crossrail's Executive in the above forums and recent weeks have illustrated an improved performance. It should be noted that whilst there has been a level of optimism, the Stations Recovery Plan has been developed with an element of float 'built in', particularly the time between SC3 completion and T-12 commencement.
- 5.4. Collaboration and learning across the stations are embedded within weekly IDTs, the twice-weekly Station Silver Recovery meetings, and the daily Delivery Director meetings including Level 1.5s. The Station Silver team draws on a strategic cross programme collaborative perspective that includes but not limited to Heads of Delivery, LU, RfL, C660, CEG, and Plateau 2 Team membership.
- 5.5. The Plateau 2 Team are resourcing to facilitate a two-station concurrency with detailed commissioning plans being developed in regard to scope requirements for completing [REDACTED] at all stations and undertaking [REDACTED] at Liverpool Street and Woolwich stations.

- 5.6. From a Routeway perspective, Crossrail is not in agreement that delays to individual SJs has impacted the COS SJ. Crossrail's SJ Submission Plan was recast in September 2020, aimed at maximising the workload of RAB-C whilst protecting the timescales for the COS-SJ. Whilst all float has now been used, the COS-SJ submission date to RAB-C has been protected and submission of individual element SJs have simultaneously proceeded to RAB-C endorsement.
- 5.7. The benefits of the two-step assurance process are significant. Crossrail will shortly have the complete safety argument agreed for the COS for Trial Running and will have identified the complete list of dependencies to be closed before the COS SJ can be fully agreed.
- 5.8. Significant levels of alignment have been achieved between Crossrail and RFLI through the SJ review process and recognise the pressure on the assurance and engineering teams. This is reviewed regularly in daily assurance review meetings which have been successful in dealing with the complex coordination of multiple parallel document reviews and submissions whilst balancing individual workloads amongst key team members.
- 5.9. On time handover of Stepney Green and Limmo shafts is dependent on completion of respective comprehensive closure plans, the works associated with the Single Point of Failure is integral to the closure plans. Crossrail and RFLI have jointly agreed a comprehensive scope for the Single Point of Failure for Stepney Green and Limmo shafts. Success will be guaranteed through successful delivery of all aspects of the closure plans for both shafts.

## 6. Organisation Transition

- 6.1. The roll out of the Programme Directorate Organisation has been announced. A key focus for the design is the integration of teams and roles are being filled as a priority within this space. Crossrail is approaching a phase that demands "intense centralised control" and an organisationally "strengthened core" hence a key focus is being made on standing up roles within the integrated teams in the new organisation.
- 6.2. The Programme Integration Team has been brought together to lead on the overall programme integration strategy and ensure effective management and integration of C620, C660 and Route Control Centre. They will work closely with teams across the Programme Directorate including Commercial, and process cross-cutting issues of staged delivery. Significant collaborative work is underway to ensure the Infrastructure Manager (IM) is ready to receive the railway.
- 6.3. A key activity is to define the organisation design, principles and framework to which the organisation pivots towards in the run up to Trial Running and Trial Operations. This work is being developed with Crossrail and RfLI for completion by early November 2020.
- 6.4. The Workforce Plan has been refreshed over the last period to provide a clear and transparent view of organisational requirements, including immediate vacancies needed to deliver the programme now and at Trial Running. These headlines, including progress of specific assurance and technical or operational vacancies are escalated to the Executive team on a weekly basis, at performance reviews, for full visibility.
- 6.5. With regards to the culture aspects of resources being overworked and fatigued, a culture and ways of working workstream is being kicked off on 02 November 2020 to develop and

introduce interventions both now and throughout the remaining stages of the programme to improve wellbeing and support for colleagues.

## 7. Cost and Risk

- 7.1. At Period 6, projects reported increases in [REDACTED]. This was offset by drawdowns on specific programme risks and provisions, such as scope changes. While changes have been comparatively small in value, there remains a significant volume of minor change across the programme. This is concerning because of the potential impact on schedule as well as cost.
- 7.2. The programme and prolongation risks are built bottom-up and quantified using Monte Carlo modelling. The quantification of risk exposure and provisioning for contingency by necessity involves an element of management estimation. However, the levels of risk and provisions is reviewed in detail each period and is considered to be at an appropriate level given the progress of the programme. Not spending risk and contingency provides the best opportunity for delivering under forecast and to the earliest timetable
- 7.3. Risk as a percentage of cost to go is mathematically increasing because drawdowns have not happened at a higher rate than the [REDACTED] drawn down in Period 6.
- 7.4. Investment Authority (IA) limit is now exhausted and currently there are project IA requests in the pipeline of [REDACTED]. This is being managed on a day to day basis by reallocating IA between projects, an approach that is ceasing to become sustainable. If not rapidly resolved it could lead to adverse impacts on cost and schedule.
- 7.5. There have been small underspends compared to forecast in recent periods, for example [REDACTED] in Period 6. This is not a result of changes to the Critical Path of the schedule which remains in line with the DCS 1.1.
- 7.6. Programme risks and provisions have factored in estimating uncertainty and are considered to sufficiently reflect any final pricing adjustments that might occur and other remaining uncertainty. The pressure on indirect costs and supply chain alignment were anticipated and central provisions created which appear to be largely adequate, although Crossrail agrees risk remains. Furthermore, additional controls and interventions have now been instructed on indirect costs.

## 8. Key Issues for Sponsors

- 8.1. The Project Representative raises a Key Issue relating to the Crossrail's strategy to directly address resource shortfalls. The Workforce Plan has been created to provide a clear view of resourcing requirements, identify shortfalls, and provide an organisational status each period. The outputs of the workforce planning headlines will be reviewed and shared at a monthly 'Workforce Planning Group', led by Crossrail's Chief Peoples Officer and Chief Financial Officer to ensure that all necessary resource shortfalls are actively managed and progressed in order to deliver the programme effectively. The overall strategy is broken into two parts: the first is to advertise vacant roles to Crossrail and TfL staff as an initial priority, and subsequently any remaining vacant roles can be filled with PDP/PP resources as a secondary option. The second part of the strategy is to continue to identify opportunities to transition out consultancy-filled roles with TfL staff through advertising roles via the appropriate recruitment channels within TfL. This strategy allows to keep track of shortfalls and fill these vacancies

quickly whilst delivering on cost savings by reducing spend on consultancies where appropriate.

8.2. The Project Representative raises a Key Issues relating to having a functioning change management process for all scope and costs to be change-controlled against the baseline. Currently, the Change Process is still in the proposal phase. A workshop has been set up next period (Period 8) to agree:

- Financial delegated authority levels
- Date change delegated authority levels
- Revised proposal to be presented to the Executive in Period 8
- Present proposal to Elizabeth Line Delivery Group on 12 November 2020
- Implement change process from Period 9

8.3. The Project Representative raises a Key Issues relating to having a definitive baseline scope from which to manage all Station works. The scope to go (EOWs including punch-works, NCRs and VAPs) is now monitored twice a week for the ten stations with input from the Chief Engineers Group. Baselines have been established for both SC3 and SC3ROGs illustrating daily/weekly burn down rates. Additionally, the first three stations in the plan (Farringdon, Paddington and Tottenham Court Road) are monitored on a weekly basis by Crossrail's Executive in a 'blockade style' scrutiny. Furthermore, Bond Street has a 'special' weekly review where Crossrail's Executive monitors SC2 EOWs now that SC1 has been achieved. The plan is that ultimately all ten stations will have weekly Executive reviews particularly during the T-12 countdown to SC3 ROGs. Scope and engineering challenges are discussed at the above forums and this is where both programme wide issues (e.g. items such as Platform End Doors, Escalator Skirt Lighting and Single Point Failure with Emergency Lighting), and issues specific to a station is managed.

**END**

## **APPENDIX 1 – LIST OF CONTRIBUTORS**

### **RESPONSE TO THE CROSSRAIL SPONSORS ON THE PROJECT REPRESENTATIVE SPONSOR SUMMARY REPORT**

Period 6 FY2020-21 (23 August 2020 – 19 September 2020) report, issued and received on 12 October 2020.

Chief Finance Officer  
Chief of Staff  
Chief People Officer  
Chief Programme Officer  
Communications Director  
Crossrail Operations Business Manager  
Deputy Programme Controls Director  
Head of Finance  
Head of Risk  
Lead Reliability Engineer  
Operations Business Manager  
Programme Integration Director  
Reporting and Governance Support Manager