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██████████
Project Representative
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17 May 2021

Dear ██████████,

Re: Crossrail PRep Project Status Report 149 – Period 13

I am writing in response to the P13 PRep Sponsor Summary cover letter.

Crossrail has successfully achieved the transition into an environment regulated by ROGS – this is a pivotal moment for the delivery of the Elizabeth line, representing the point where we work under the rules of an operational railway rather than those of a construction site.

As noted in your letter dated 30 April 2021, and as always expected, there have been significant changes to CRL's ways of working since RfLI took control of the railway as Infrastructure Manager on 27 March 2021. Subsequently, RfLI and CRL undertook a Controlled Introduction Period which intended to complete maintenance activities that would allow the transition from CRL's 'blockade-style' maintenance to RfLI's periodic maintenance. It was initially planned that this period would take ██████████, following which the 4TPH timetabled trial running would commence on ██████████. However, these maintenance activities were more challenging to execute than originally planned and took an additional ██████████ to complete, with 4TPH Trial Running successfully commencing on ██████████. Positive outcomes came from the extension of this period, for example more learning achieved through rehearsals, trials and undertaking key activities such as taking possessions and isolations and the deployment of competencies. We are not complacent and are working hard to ensure no further delays.

With the ██████████ DCS1.1 baseline (i.e. the shortest path to completion) predicated on the commencement of 4TPH at the ██████████, there is ██████████ pressure on the achievement of the ██████████ Trial Operations date resulting from this delay. It is important to note, however, that the commencement of 4TPH Trial Running on ██████████ supports the ██████████, which underpins the opening of the Elizabeth line in the first half of 2022. Work is currently undergoing to optimise the Trial Running plan. This includes the ramp-up to 8TPH and 12TPH, and the plan for delivering remaining CRL works across the infrastructure. Alongside the revised access strategy resulting from the Access Review, this will provide a basis for mitigating the impact resulting from the Controlled Introduction Period as much as possible on the commencement of Trial Operations.

It is right to note that CRL has paused elements of its business as usual programme governance cycle to enable its talented people to work on the programme baseline refresh exercise (including the DCS1.2) and the management of the Controlled Introduction Period.

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While the Project Representative's report considers the Period 13 situation, a similar approach of prioritisation was utilised in Period 01. Although some of the key business as usual forums have been cancelled, weekly reporting of actual schedule performance and the unassured weekly forecasts continues to the CRL Senior Leadership Team through the Weekly Performance Reviews. Additionally, both the Period 13 and Period 01 packs for the EPPR and ELDG include updated forecasts for all Cardinal Milestones and the burndown of milestones for the remainder of the programme, along with position against key dates. The DCS1.2 development sessions have offset any impact of not having the regular governance meetings, with the period reporting narrative and milestone forecasts both incorporating the reviews of programme performance. Progressing in this way will only allow the continuation of integrated performance reviews and provide stability to the programme.

Further, I would like to highlight that since becoming London's Transport Commissioner, Andy Byford has made securing a long term funding settlement and the successful opening of Crossrail his top priorities until both are resolved. Such is the importance of the Crossrail project to the Commissioner, he has been holding a daily progress and direction call with the Crossrail CEO, Project Director and the Elizabeth Line COO and is actively involved with reducing issues.

With regards to the Project Representative's concerns on the timing of the DCS1.2, it is key to understand that the DCS1.2 is the aggregation of the schedule impact of key decisions which need to be taken, such as the staging strategy for the Trial Running period, software dates and CRL blockades. As the resolution of these questions is inherently fundamental in the progress towards Trial Operations, the process of producing the DCS1.2, and not just the product, is of real value to the programme. As these key decisions are resolved, they are being communicated to the relevant projects to implement. Updating the schedule to reflect the revised thinking is critically necessary for the schedule reporting to be meaningful and it will be an iterative evolution as understanding progresses.

It is important to me that we recognise the Project Representative's concern that they have not been invited to some meetings. We have, and will always, operate on an access all areas approach for the Project Representative. The urgency with which some meetings have been arranged has resulted in the accidental omission and this is being addressed by reiterating the importance of the team's attendance. I would like to reassure the Project Representative that it was merely an oversight.

I hope you are assured by my summary of the measures enacted to address the specific issues you highlighted. A substantive response focussed on the contents of the Sponsor Summary report will be issued as an Appendix to this letter.

Kind regards,

A solid black rectangular box used to redact the signature of Mark Wild.

Mark Wild
CEO, Crossrail

Appendix – CRL Response to Period 13 PRep Report

Programme Response Category	PRep Period 13 Sponsor Summary Content	CRL Period 13 Response
<p>Observations in the Period</p>	<p>CRL and RfLI achieved transition into ROGS on 27 March 2021 at 00.01hrs, marking a significant milestone in the opening of the Elizabeth Line. This moves the Programme focus from construction to an operational railway, with RfLI taking the responsibility for System Operator and Infrastructure Manager under the RfLI ROGS Rule Book. With the GWML interface commissioned as planned, the Trial Running period started on 29 March 2021; a critical initial [REDACTED] period of asset maintenance (known as the Maintenance Bridging Plan) was implemented during the Controlled Introduction Period. However, since ROGS transition, CRL and RfLI have been unable to carry out the maintenance works on the scale proposed. This may have significant impact upon the achievement of future key milestones.</p>	<p>In line with the Project Representative’s comments, the transition to ROGS moves the railway from CRL to RfLI control under RfLI ROGS Rule Book.</p> <p>The status of the infrastructure, including the achieved maintenance during the first [REDACTED], was reviewed as part of the ITAP risk review to enact Trial Running at four trains per hour (4tph). The risk review was accepted at ITAP on [REDACTED] and 4tph commenced on [REDACTED]. RfLI is re-planning their maintenance to deal with the reduced level of bridging maintenance achieved in the first [REDACTED]. This will be delivered over the period leading up to the Trial Operations phase. The achievement of the maintenance plan including statutory maintenance will be reviewed as part of the safety assurance process for Entry into Trial Operations (EiTO).</p>
<p>Headline Concerns</p>	<p>With details still emerging, it appears from the first few weeks of the Trial Running period that the revised arrangements jointly agreed between CRL and RfLI in the weeks immediately prior to ROGS transition, which allowed the [REDACTED] to be achieved, have resulted in inefficient working. Issues include practical and procedural problems with safe site access under the RfLI ROGS Rule Book, a lack of trained and competent safety supervisory resource, and difficulties with use of unapproved maintenance plant. While we are aware that these issues are being slowly resolved, schedule</p>	<p>In order to mitigate the potential impact from the ramp up period challenges, CRL and RfLI have carried out several workshops to assess the Trial Running plan. These plans include reviewing various combinations, with four initial options discussed, and a view to propose an optimal plan for implementation. The review covered all requirements for 4tph/8tph/12tph running, RfLI ramp up, MTR driver certification, software updates, construction access and reliability activities.</p>

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	<p>impacts upon subsequent critical activities will be difficult to avoid.</p> <p>For example, the delayed implementation of Timetable Running and the start of 4tph trials will impact the ramp-up to 12tph. This, in turn, is expected to reduce train mileage growth and learning opportunities for fault finding and fixing. Taken together with related issues such as extended periods for establishing possessions and isolations, and difficulties with access to the routeway and to station equipment rooms, there is now more work to be carried out than was intended, in an already compressed Trial Running period. It is important that CRL and RfLI retain the close working relationships developed prior to ROGS transition, to deal with the programmatic challenges mounting already, ahead of Trial Operations. The speed and decisiveness of leadership direction, together with the deployed interventions, will determine whether continued schedule slippage can be prevented.</p> <p>There is little evidence of improvement in stations delivery to support the start of Trial Operations on [REDACTED]. Delays are being identified at Paddington, Bond Street and Canary Wharf Stations that have the potential to impact the schedule for Passenger Service.</p>	<p>As stated above, workshops have been carried out to assess, finalise and implement a revised Trial Running plan that covers all requirements for the initial and subsequent ramped up Trial Running phases.</p> <p>Limited access has been the overriding factor in production issues at the stations. However, at the present time, the plan to deliver Paddington, Bond Street and Canary Wharf stations aligns with Trial Operations readiness. Furthermore, stakeholder engagement is aligned on the strategy to complete assurance activities and station transfer.</p>
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	<p>Initial planning for programme completion and the development of DCS v1.2 is underway. The Central Section is now under the control of RfLI, and the delivery of works in an operating railway environment is more complicated and challenging. CRL must ensure that DCS v1.2 takes full account of the processes and agreements necessary for works access and implementation; this is also the case for assets under the control of the other IMs (i.e. LU, MTREL and NR). Planning of the major delivery milestones will be influenced by clear scope definition, assumptions, constraints and productivity basis, with schedules and delivery solutions underpinned by the supply chain. Finalisation of DCS v1.2 by ██████████, as currently targeted by CRL, represents a significant challenge. Sponsors will need assurance from CRL that all issues have been fully considered, co-ordinated and agreed with stakeholders, and that realistic and achievable dates for Trial Operations and Passenger Service are confirmed.</p> <p>The significance of these issues gives rise to the following summary concerns:</p> <ul style="list-style-type: none"> • Focus on short term milestones resulting in a lack of strategic planning. 	<p>Central planning and development of the DCS is on-going and the Project Representatives is accurate to point out the complexity and challenges in delivery of works since control of the railway has transitioned to RFLI. It is anticipated that while several key updates to the DCS will be incorporated into the ██████████ updates, a number of areas will require further development and be incorporated in ██████████. This will enable targeted engagement with stakeholders during ██████████.</p> <p>In response to the Project Representatives summary concerns, CRL responds as follows:</p> <p>CRL and RFLI continue to work collaboratively to ensure any emerging concerns are reviewed and mitigations and actions implemented to support the programme achieving its key deterministic milestones as planned.</p>
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	<ul style="list-style-type: none"> • Implications of delay to the start of Timetable Running, from its original date of [REDACTED], are still emerging and are yet to be fully understood by CRL. • Start of Timetable Running on the [REDACTED] [REDACTED] is at risk and is more likely to occur in [REDACTED]. • There is a high risk of missing [REDACTED] [REDACTED] the start of Trial Operations of [REDACTED]. • Until the drivers of cost are finalised in DCS v1.2, the AFCDC forecast cannot be reliably underpinned. 	<p>As stated above, CRL continues to work with RFLI to address any emerging concerns that may arise regarding the timetabled Trial Running phase.</p> <p>On [REDACTED], CRL successfully signed TR2 PR7 into use which enables the operator to undertake a route proving train and commence 'Trial Running' at four trains per hour. CRL and RFLI continue to work collaboratively to support the safe operation and maintenance of operating the Elizabeth line railway.</p> <p>CRL and RFLI continue to work collaboratively to ensure emerging concerns are reviewed, actions arising are closed out and mitigations are implemented to support the programme achieving the key deterministic schedule milestones as planned.</p> <p>CRL notes the concern raised by the Project Representative regarding the correlation between the drivers of cost and the AFCDC forecast. In parallel to the development of the Block Plan and the DCS1.2 schedule, much activity on cost and risk continues. A targeted assurance review of the cost to go is a critical activity in supporting the determination of the robustness of the cost to go. Review and challenge of risk registers, mitigations and identified cost pressures are driving a reduction in exposure. These activities coupled with targeted deep dive reviews are aimed at improving the confidence in the cost to go which will be carried into the DCS1.2 cost update.</p>
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	<ul style="list-style-type: none"> • Until DCSv1.2 is finalised, a change to CRL’s forecast [REDACTED] is unlikely. 	<p>As part of the update to the DCS, a detailed Quantitative Schedule Risk Assessment will be conducted. This will subsequently undergo internal CRL review before the DCS is finalised.</p>
<p>Health & Safety</p>	<p>Two High Potential Near Misses and one Lost Time Incident occurred in Period 13. While the Safety Performance Indicator decreased slightly, the overall indicators remain within those set by the Programme. A steady decline in Covid-19 cases across sites is being realised.</p>	<p>The Project Representative’s comments regarding Health and Safety performance in Period 13 are accurate. However, the Lost Time Case was also a RIDDOR reportable accident as a result of a fractured ankle. CRL agrees with the Project Representative’s comments in relation to declining numbers of COVID-19 cases across sites.</p>
<p>Programme Overview:</p> <p>Schedule</p>	<p>The forecast [REDACTED] for start of Trial Operations on [REDACTED] and Passenger Service on [REDACTED], are being held this Period.</p> <p>Period 13 represents a transition period for the Programme, as CRL and RfLI resolve the issues which are preventing progress following entry into Trial Running. Attention is also focussed on</p>	<p>The Project Representative’s comments regarding the commencement of Trial Operations and entry into Passenger service are accurate. CRL is fully aware of the challenges this may present and continues to work collaboratively with RFLI to ensure any emerging concerns are reviewed and mitigated to support the programme achieving its deterministic milestones as planned. The DCS refresh is being developed and the initial output is planned for [REDACTED].</p> <p>The Project Representative’s assessment of CRL’s transition presented in Period 13 is accurate. Changes to reporting for Period 13 and Period 1 has focussed efforts on the critical</p>

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	<p>the development of DCS v1.2. No formal change to the reported [REDACTED] or risk assessment [REDACTED] is expected, while the DCS reviews are in progress and until DCS v1.2 is finalised and issued. We are concerned that this approach will make it difficult to assess the level of progress being made towards the start of Trial Operations.</p> <p>Schedule planning workshops have taken place, but we have not been invited, nor had visibility of outputs. We are concerned that CRL may develop a revised schedule that presents an overly optimistic position that is target date driven and constrained by stakeholder expectation.</p>	<p>scope, schedule, cost and risk activities already underway and aligned with the DCS 1.2 activities.</p> <p>CRL notes the Project Representative's comments regarding the revised schedule position and acknowledges the Project Representatives concerns. Workshops were scheduled at pace and, unfortunately accidental omissions occurred about invitees and lessons have been learnt. These sessions proposed changes to modules of the Programme Baseline which include scope and staging plan. Key outcomes from workshops were tabled at the Programme Baseline Executive Steering Group, which has the Project Representative in attendance. In parallel working level planning meetings have continued. These meetings focus on the key aspects of the schedule in development. Assurance LOD1 reviews are due to commence in the week beginning 17 May 2021. These reviews will focus on key aspects of the baseline including assumptions, productivity and stakeholder engagement. The targeting of these LOD1 activities intends to incorporate previous observations made by LOD2 and the Project Representatives. LOD2 and Project Representatives will be invited to this process in</p>
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<p>Commercial and Risk</p>	<p>CRL continues to target [REDACTED] for the start of Timetable Running. The full implications of the Controlled Introduction Period are yet to be fully understood. But, with several previously identified Programme level risks now materialising as issues, initial indications suggest that at least [REDACTED] delay to the 4tph trials will affect the ramp-up to higher service levels and will reduce planned train mileage growth. The impact on the start date for Trial Operations is still being evaluated, and interventions and trade-offs are likely, in order to maintain the [REDACTED].</p> <p>Our Period 13 analysis is principally based on our observations from the CRL Period 13 IPR and subsequent Period 13 EPPR report. Notwithstanding cancellation of its Period 13 PDRs, CRL presented its subsequent IPR data based on Period 12 schedule dates which it reports have been held pending completion of its schedule review. CRL's revised schedule, DCS v1.2, which was reported will be completed in [REDACTED] has slipped to [REDACTED]. Consequently, we consider that the AFCDC is not underpinned until it is aligned with the schedule update.</p>	<p>parallel with the more formal LOD2 and Project Representative's activities.</p> <p>The four trains per hour Trial Running phase was successfully implemented on [REDACTED]. A revised Trial Running plan has been developed with all stakeholders in order to mitigate pressure to the [REDACTED] Trial Operations start date at [REDACTED], but it is recognised that the programme will be tight and challenging. This will be ratified [REDACTED] in due course.</p> <p>The Project Representative is accurate in stating the pausing of the periodic performance reviews, however, weekly reporting of schedule performance continued at the Executive level. This included an update on the upcoming cardinal milestones until the end of July 2021. The Period 13 EPPR and ELDG included updated forecasts for all cardinal milestones, burndown of milestones for the remainder of the programme, along with position against key dates. The DCS1.2 is the aggregation of schedule impact of key decisions which need to be taken. These decisions include staging strategy and software dates. In order to enter Trial Operations these key decisions need to be resolved and communicated to the relevant projects to implement. Updating</p>
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	<p>CRL reported an AFCDC of ██████ for Period 12, a ██████ increase from the previous period. CRL's Period 13 AFCDC was subsequently revised during the EPPR review4 to ██████, with the addition of ██████ for ██████ ██████ at Bond Street Station to deliver SC3 ROGS in ██████. The EPPR AFCDC assumes that the proposed risk and provisions drawdowns are approved by the ELDG, and consequently may be subject to change or variation.</p>	<p>the schedule to reflect the revised decisions is critically necessary for the schedule reporting to be meaningful. To prevent unnecessary delay in incorporating revised strategy, as soon as they are confirmed at Executive level, they will be processed into the schedule.</p> <p>CRL notes the Project Representative's comments regarding Period 13 cost analysis. The Period 13 AFCDC update reflects known changes and revised cost estimates in the delivery of the current schedule. Schedule updates are made periodically and the AFCDC is aligned with these updates. Whilst the Period 13 schedule saw little to no change from that of Period 12, the AFCDC incorporated forecast changes such as those at Bond Street and Paddington stations. It is agreed that the AFCDC must be underpinned by the schedule.</p> <p>The financial updates presented at the Period 13 EPPR incorporated several updates such as an AFC increase at Bond Street station to reflect the ██████. These ██████ were already included within the AFCDC presented. There were several other movements to the AFCDC in Period 13 including ██████ of reductions made through the numerous cost and risk activities focussed on driving certainty into the forecast and reducing the AFCDC. Options were presented at the Period 13 EPPR and in keeping with the strategy to continue to rebuild the Unknown Unknowns Provision. It was agreed that the ██████ savings identified should be retained</p>
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	<p>CRL completed its review and challenge on the cost pressures, which has resulted in a reduction to ██████ this period, from ██████ last period; however, this continues to be excluded from the AFCDC. It is expected that these cost elements will be ultimately included in DCSv1.2 and AFCDC. However, an additional number of as yet un-costed scope items have been identified, that may exert further cost pressures.</p> <p>The CRL QCRA for the Period 13 IPR was based on Period 12 schedule dates, which have proved to be unreliable. An update to programme risk from QCRA is not available although, in its AFCDC assessment, CRL has reduced programme risk by ██████ and prolongation risk by ██████. Misalignment between</p>	<p>and transferred to the CEO Reserve. It is this ██████ movement that accounted for the revision in the EPPR. It is noted and agreed that AFCDC includes costs associated with Bond Street station ██████ ████████████████████ ████████████████████ ████████████████████. These are forecast as the latest delivery plan and will be taken through the change control process cycle for approval.</p> <p>The continued focus on driving certainty into the estimates and challenging costs is seeing reductions in the cost pressures not included in the AFCDC. In Period 12 there were ██████ of cost pressures reduced to ██████ after allowing for specific risk and provisions. By Period 13, the ██████ had reduced to ██████ and as work continues the post-Period 13 number reported in the EPPR was ██████. These are the gross numbers before any offset against specific risk and provisions. This demonstrates the progress being made against the known emerging cost pressures. Reviews are in progress against the emerging scope book work with an assessment of emerging scope pressures not yet completed.</p> <p>As a result of the uncertainty associated with the transition into ROGS, commencement of Trial Running and Programme Baseline Update, Prolongation and Programme risk components of the QCRA were not updated for Period 13. In order to maintain visibility of project movements resulting from approved change some offsets were made and these are referenced here. In the</p>
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<p>Organisation</p>	<p>schedule and risk evaluation indicates that such risk retirement is premature.</p> <p>The uncertainty of the cost and risk forecast is a consequence of CRL undertaking its scope, schedule, risk and resource reviews necessary to inform DCS v1.2 development. Until the drivers of cost are fully identified and the process is completed, the cost forecast cannot be reliably underpinned or given any view of assurance.</p> <p>The first Passenger Service Steering Group (PSSG) meeting was held immediately after ROGS transition. The PSSG will review the issues and performance metrics associated with the 10 key workstreams, identified by CRL as necessary to achieve Trial Operations and Passenger Service.</p> <p>In line with its Workforce Plan, the end of March 2021 brought a reduction in CRL’s headcount, as a number of its direct resources left the Programme, with some central activities being shared with TfL. With CRL having largely</p>	<p>context of the broader development of scope and schedule, these movements should not be considered as risk retirement.</p> <p>CRL notes and agrees with the Project Representatives comments regarding uncertainty of the cost and risk forecast which will be informed by the ongoing developments to DCS1.2. Much work is underway to review, challenge and assure the current assumptions and basis for the cost to go. The output of this work and any improvements will be carried into the DCS1.2 estimate to be underpinned by the DCS1.2 schedule and confirmed scope to go.</p> <p>The Project Representative correctly states that the Passenger Service Steering Group (PSSG) has held its first meeting. The meeting took place on 31 March 2021. Subsequently, PSSG has been meeting weekly to review dashboards on the ten key workstreams listed in the Terms of Reference to address key issues, resolve conflicts, and determine priorities to facilitate completion of all works for Trial Operations. The Project Representative has been in attendance of all PSSG meetings thus far.</p> <p>Since the last period update, the [REDACTED] has been resolved. The Workforce Plan will be revised once the DCS refresh has taken place. This will feed into [REDACTED] where and when required across the Programme.</p>
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<p>Stage 3 Trial Running, Trial Operations and Passenger Service</p>	<p>resolved the risks [REDACTED], the effort moving forwards will be maintaining focus on delivery and completion of activities for entry into Trial Operations. Slippage in schedule delivery dates will probably require [REDACTED], [REDACTED], to complete works ahead of the planned start to Trial Operations in [REDACTED].</p> <p>The Trial Running period started on 29 March 2021, following commissioning of the GWML interface, and the GEML interface commissioning was completed on 26 April 2021. Re-submission of RfLI's TRRAC for acceptance by ITAP is necessary before 4 TPH trials can start. The TRRAC relies upon the sufficient completion of maintenance works, delivery of asset data and the closure of EOWs. Given CRL and RfLI's poor performance during the Controlled Introduction Period, the TRRAC and the updated CESAC have not been completed, and the start of 4 TPH Timetable Running has been delayed.</p> <p>The Maintenance Bridging Plan was developed late in the run-up to ROGS transition, and implementation has been hampered by a shortfall in RfLI and CRL competent resources to</p>	<p>As previously stated, on [REDACTED], TR2 PR7 was successfully Signed Into Use by CRL enabling The Operator to undertake a route proving train and commence 'Trial Running' at four trains per hour. CRL and RFLI continue to work collaboratively to support the safe operation and maintenance of operating Elizabeth line railway.</p> <p>As a result of the challenges encountered during the Controlled Introduction Period, the scope for Trial Running requirements and the access strategy which underpins the Trail Running Plan is being revised to mitigate any potential delays to EiTO. As mentioned previously, mitigation actions that are underway include reviewing requirements from all parties needing railway access, prioritising of test and trials activity, reviewing the blockade strategy and exploring opportunities for concurrent testing.</p> <p>CRL notes the challenges that were encountered during the initial stages of the Maintenance Bridge. The status of the infrastructure including the achieved maintenance during the first four weeks was reviewed as part of the ITAP risk</p>
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<p>safely supervise works. Consequently, the first two weeks of the initial [REDACTED] Controlled Introduction Period has necessitated a cut back to 20% of the planned maintenance bridging works. While RfLI and CRL address these issues, maintenance works on the scale proposed immediately prior to ROGS transition are not being achieved. This may have significant impact upon the achievement of future key milestones.</p> <p>With the railway designed for an ultimate capacity of 24 TPH, RfLI and CRL are evaluating the requirements and operational limitations to demonstrate a 24 TPH service. In the immediate short term, CRL is revising the Trial Running Plan to address the [REDACTED] delay due to the Controlled Introduction Period.</p> <p>CRL's delivery of all asset data and input into RfLI's management system remains outstanding, and a completion deadline has been set 8 weeks after transition to ROGS. Although over 90% of data has been delivered, RfLI's ability to plan maintenance activities appears to be impaired. Agreement with NR on access arrangements for maintenance activities on both the North East and South East Spurs is proving challenging.</p>	<p>review to enact Trial Running at four trains per hour. The risk review was accepted at ITAP on [REDACTED] and four trains per hour commenced on [REDACTED]. RFLI are re-planning their maintenance works to deal with the reduced level of bridging maintenance achieved in the initial [REDACTED]. This will be delivered over the period leading to Trial Operations. The achievement of the maintenance plan including statutory maintenance will be reviewed as part of the safety assurance process for EiTO.</p> <p>CRL agrees with the Project Representatives comments regarding ultimate train capacity per hour and demonstrable service to reflect this. CRL and RFLI have developed an optimised plan from the workshop carried out on 4 May 2021 which maintains the programme key milestones. Potential clashes with MTR rostering drivers is under review so as to attain a positive resolution with all relevant stakeholders.</p> <p>Asset data supplied to RFLI and uploaded to Crossrail Enterprise Asset Management Solutions, RFLI's data migration database, is currently at 97% for Routeway elements and 95% for stations excluding Bond Street station. The South East Spur and North East Spur asset data has been provided in sufficient detail for RFLI to maintain the assets and is on course for completion. The access requests are generally being granted, with a successful survey carried out over the May Bank Holiday weekend to confirm the North East Spur asset data on site.</p>	
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	<p>Much attention will be required from RfLI in Period 1, to ensure that access planning systems meet the conflicting needs of parties that are still required to carry out a large volume of outstanding works on the Central Section – for example, access to RfLI secure rooms and systems in stations is a particular concern. The planning lead times are appropriate for a fully operational railway but are prohibitively long for one which still requires access for Programme works. A pragmatic approach between both CRL and RfLI is essential while the railway transitions to fully operational status.</p> <p>Following the demanding few months leading up to ROGS transition, a significant number of resources took annual leave. Their absence, combined with the difficulties associated with access and negligible maintenance productivity, has caused delivery to lose momentum. It is important that CRL and RfLI establish a 'joint planning authority' to address the crucial need for a strategic, rather than a short-term, approach to planning for Programme completion.</p> <p>Entry into Passenger Service is currently based on CRL's [REDACTED] from DCS v1.1. Until DCS v1.2 is fully developed and approved,</p>	<p>A joint CRL and RFLI structure and staffing configuration is being agreed to assure reliable planning and consistent administration for future access requirements.</p> <p>CRL has commissioned a review into access planning to report back to the Executive team on improvements to be made to facilitate safe and effective access going forward. This will report on interim findings by 14 May 2021, with follow up recommendations finalised by 21 May 2021.</p> <p>As stated above, a review of access planning has been commissioned with the intention to improve safe and effective future access. Additionally, PSSG has been set up to oversee the combined effort of CRL and the Infrastructure Managers to achieve EiT0 as planned in the DCS refresh. The success of which will allow [REDACTED]. As reported in last period's update, PSSG focus is on issue resolution, strategic interventions and timely decision making.</p> <p>CRL agrees with the Project Representative's assessment of the critical role the DCS will play in the delivery of the railway through to Trial</p>
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<p>Stations Commissioning and Handover</p>	<p>this date is unlikely to change. Stakeholder support to the future operational planning dates incorporated into DCS v1.2 will be important for the success of the opening stages beyond Trial Operations.</p> <p>Liverpool Street Station entered its T-12 process just after period-end. While Tottenham Court Road Station successfully passed its Safety Justification under the new RfLI Technical Assurance Panel, its date for BIU in early May 2021 is under pressure due to incomplete Asset Data. Poor progress with Paddington Station has resulted in a slippage to [REDACTED] for its BIU date, and is likely to slip further, with Asset Data and assurance the key factors affecting progress.</p> <p>Momentum has also yet to be developed for Bond Street Station to achieve [REDACTED], and for recovery at Canary Wharf Station, despite acceleration through additional resources and extended work patterns. Delays are being compounded by difficulties with assurance delivery, and access problems associated with carrying out work after ROGS transition. In particular, Canary Wharf and Bond Street Stations are experiencing delays with access to key areas and to systems managed or controlled by RfLI. The impact is initially a 2-week delay but is likely to increase as time is taken to resolve access issues, with the potential to delay the</p>	<p>Operations and the subsequent stages that follow.</p> <p>On 5 May 2021, Tottenham Court Road station achieved SC3ROGS as [REDACTED] planned while achievement of SC3ROGS at Paddington station is now scheduled for [REDACTED] which was CRL's backup sequence given the challenges to meet Asset Data assurance and the finalisation of the Safety Justification. This is currently on plan for [REDACTED].</p> <p>Access issues remains the main hinderance to production progress. There is a blockade approach in the works that would support delivery but will require interventions on the assurance and transfer process to support Canary Wharf station which is in progress. Bond Street station will require an intervention of the assurance which is currently being reviewed.</p>
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<p>Assurance</p>	<p>SC3 ROGS date. Delays arising from frustrated access at stations are unlikely to be recovered.</p> <p>While CRL considers [REDACTED] Bond Street Station to be achievable, stakeholder support will be essential. We remain of the view that there remains a risk with a drive to SC3/BIU that could detract from the primary objective of achieving [REDACTED], which is the minimum required to enable the railway to enter to Passenger Service.</p> <p>While CRL and RfLI made a significant effort to close the required 633 Dependencies, 97 remained open at the time of transition into ROGS. CRL and RfLI will be working to close 41 Dependencies by the end of April 2021. The majority are associated with shafts and portals, Plumstead Maintenance Facility, Custom House Station and Civils works. Completion of the 167 outstanding StEJ commitments is split across those required for the start of 4 TPH trial services and those required for entry into Trial Operations.</p> <p>Safety Assurance delivery will continue through to Trial Operations and Passenger Service. Key areas of focus in the Trial Running period include Energy, ELR100 software, TVS and Communications and Control. The ITAP Plan for</p>	<p>It is CRL's view that SC3 shall be completed in parallel with [REDACTED] scope. The two readiness elements share the same space and route. To reiterate as this has been mentioned in previous periods – CRL cannot complete the cladding works without completing both work streams. [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>The remaining open 97 SJ Dependencies were at a status of 'Mitigated for Entry into Trial Running' as agreed through the Structured Engineering Judgement (StEJ) panels. These dependencies and any related St.EJ commitments continue to be tracked to full closure alongside the tracking of SJ Dependencies applicable to EiTO, as reported weekly to The PSSG.</p> <p>CRL notes and agrees with the Project Representatives comments in the period regarding safety assurance delivery and the key focus areas.</p>
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<p>Future Stages</p>	<p>moving from ROGS transition to the start of Passenger Service indicates that the railway must be managed through 5 major Configuration States; this will require significant integration activity across Stations, SCADA and Train and Signalling software. It is important that lessons are learnt from experience with the assurance process up to ROGS transition. We are aware that CRL, RfLI and LU are undertaking a review of the assurance process, and streamlining, where possible, will be vital to allow earlier dates to be met. A revised approach is targeted for incorporation into DCS v1.2.</p> <p>Assurance activities in April and May 2021 include planned interventions by ORR and AsBo to review RfLI’s processes related to the safety of people at work, reflecting the change in emphasis to an operational railway.</p> <p>Stage 4A is scheduled to start in [REDACTED], with a mixed fleet of FLUs, RLUs and Class 315 units. The key risks to the FLUs being available are the timeliness of train approvals and the availability of the Central Section for access to</p>	<p>CRL notes the Project Representatives comments in the period regarding planned interventions of RFLI processes in relation to safety of people in the working environment. A meeting took place on [REDACTED] between RFLI and ORR to confirm that RFLI were ready to exit the Controlled Introduction Period. Subsequently, RFLI’s Trial Running Railway Acceptance Case and Risk Statement were signed off and accepted by the General ITAP in order for four trains per hour Trial Running to commence on [REDACTED].</p> <p>[REDACTED] is scheduled to commence in [REDACTED], with a mixed fleet of FLUs, RLUs and Class 315 units. The key risks to the FLUs being available is the timeliness of train approvals and the availability of the Central Section for access to the Great Eastern Main Line. A minimum of</p>
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	<p>the Great Eastern Main Line. A minimum of ■ FLUs will support passenger services up to and during the planned August 2021 Blockade. Replacement of RLUs and Class 315s is planned for implementation after the Blockade. Delivery of physical infrastructure at Liverpool Street Station was completed over the Easter 2021 period and delivery of the ONFR scope, which is critical for Stage 4A, is on schedule.</p> <p>The proposed replacement of ■ ■ ■ is the subject of CRL's Change Notice (CCN 0026), which is expected to be submitted to Sponsors by the end of ■ ■ ■. We would expect it to compare the risks and benefits of ■ ■ ■. The process should explain why ■ ■ ■ will not constitute an unacceptable risk to the delivery of Elizabeth Line and main line timetable operations when implemented.</p>	<p>■ ■ ■ FLUs as opposed to ■ ■ ■ FLUs as stated by the Project Representative, will support passenger services up to and during the planned August 2021 Blockade. Replacement of RLUs and Class 315s is planned for implementation after the August Blockade. Delivery of physical infrastructure at Liverpool Street station was completed over the Easter 2021 period and delivery of the ONFR scope, which is critical for ■ ■ ■ is on schedule as planned.</p> <p>The proposed replacement of ■ ■ ■ ■ ■ is the subject of CRL's Change Notice (CCN 0026), which was submitted to The Sponsors on ■ ■ ■. As noted by the Project Representative, CRL expects it to compare the risks and benefits of ■ ■ ■ as well as the process explaining why ■ ■ ■ will not constitute an unacceptable risk to the delivery of the Elizabeth line and main line timetable operations when implemented.</p>
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