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17 March 2021

Dear ██████████,

Re: Crossrail PRep Project Status Report 147 – Period 11

I am writing in response to the P11 PRep Sponsor Summary cover letter.

As noted in your letter dated 5 March 2021, countdown readiness reviews to Trial Running are underway ██████████. The programme is holding the ██████████ of ██████████ for entry into a ROGS environment, a precursor to the commencement of Trial Running. The move into ROGS is a significant step, providing experience of using the new Rule Book and the opportunity for operational and maintenance staff to manage a “live railway”.

Once the railway is in a ROGS environment, RfLI will take control as Infrastructure Manager, and then manage the railway as we move into Trial Running. The Great Western Fringe is planned to be commissioned on ██████████ and the start of the six-month Trial Running period will commence on ██████████. A ramp up at the start of Trial Running has always been planned and the 4 Trains Per Hour initial service will now start after the Great Eastern Fringe commissioning in ██████████. This initial period in ██████████ will be used to exercise ‘live’ competencies under ROGS and transition from ‘blockade’ delivered maintenance under Construction to periodic maintenance under RFLI. The Period 12 ██████████ forecast will reflect CRL’s latest position. CRL, along with RfLI, remain focussed on the commitment to delivering a safe operational railway.

Farringdon station was successfully handed over to London Underground, a significant achievement and in line with the deterministic schedule. The Stations closeout process is in progress in collaboration with Procurement, Legal and Delivery teams to establish sufficient timelines and final documentation submissions. Farringdon station will be the first station in the closeout process.

CRL acknowledges the Project Representative’s comment regarding the pressure placed upon safety assurance delivery in readiness for Trial Running. All Safety Justifications (SJs) have been accepted by CRL’s Assurance Panel, RAB-C, except for the COS SJ, for which acceptance is anticipated at the RAB-C meeting scheduled for ██████████. This relies on

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successful Structured Engineering Judgement (StEJ) sessions on [REDACTED] and [REDACTED] and processing and acceptance of sufficient StEJ forms before RAB-C meet on the [REDACTED]. A risk assessment document is being prepared to support the meeting, highlighting the residual risks of outstanding works and the mechanism for closure prior to the entry into ROGS.

CRL does not recognise the concept of an assurance freeze. The freeze recognisable to CRL was a point in time where RFLI took stock of assurance progress and evaluated the critical gaps affecting the completion of their own assurance deliverables. Assurance is an ongoing process and will continue through to the opening of the Elizabeth line. CRL has established an assurance baseline for the Declaration of Control of Risk (DoCoR) and is engaged in daily StEJ meetings to review any outstanding assurance evidence and formally record and agree residual actions. These meetings will continue until all remaining dependencies are either closed with evidence or a documented mitigation has been agreed.

The Project Representative expresses concerns in relation to upward cost pressures. However, the [REDACTED] AFCD is currently [REDACTED] above the additional funding of £825m and this is consistent with previous periods. At higher levels of probability, the estimate of up to £1.1bn [REDACTED] is also consistent with previous estimates. New risks and opportunities are broadly in balance and CRL continues to work towards securing additional opportunities which could assist with reducing the AFC towards the £825m additional funding position.

Two points have been identified as requiring further action or explanation. These cover the transparency of emerging cost pressures in relation to the risk management process and how CRL demonstrates confidence that Trial Operations will not be impacted by residual workload to complete Trial Running. Responses to these two points are listed below:

1. How will CRL ensure emerging cost pressures are fully transparent and accounted for in the risk management process?

Emerging cost pressures are accounted for in risk or base cost budgets forecast by each project. These are transparently reviewed every four weeks. All new reported risks and opportunities are checked against existing lists of issues where a cost budget or provision is already in place.

2. How can CRL demonstrate confidence that the start date of Trial Operations is not impacted by the outstanding workload to complete post entry into Trial Running?

CRL accepts the associated risk this may present particularly working in a new ROGS environment with a new Operator, however, interventions are being developed. The Trial Running Mobilisation Board (TRMB) currently in place will transition to the Passenger Service Steering Group (PSSG) at the beginning of [REDACTED]. A Terms of



Reference for PSSG is being developed with a clear set of line [REDACTED] it inclu[REDACTED]
[REDACTED] monitoring of outstanding work required for Trial Operations configuration and any
[REDACTED] al work with a completion plan. Crossrail acknowledges the complexity and
challenges this presents.

Once Trial Running is underway, the remaining workload concerns lay with stations achieving SC3ROGS. Farringdon station has successfully achieved SC3ROGS, and Tottenham Court Road and Paddington stations are well into in their T-12 countdown process. CRL is confident that all stations can achieve SC3ROGS by [REDACTED]
[REDACTED] except for Bond Street station which will achieve SC2 as planned. A 22-day blockade is scheduled for the end August 2021 to allow any remaining trace affecting works to be completed.

I hope that this response provides a useful summary of the measures that are in place to address the specific issues you have highlighted. A more substantive response focussed on the contents of the Sponsor Summary report will be issued as an Appendix to this letter.

Kind regards,

[REDACTED]

Mark Wild
CEO, Crossrail

[REDACTED]

Appendix – CRL Response to Period 11 PRep Report

Programme Response Category	PRep Period 11 Sponsor Summary Content	CRL Period 11 Response
<p>Key Observations in the Period</p>	<p>All stations have now achieved SC1 Enactment required for Trial Running, and final testing of software configuration TR2 Point Release 6 has confirmed the correct operation of Automatic Route Setting across the GWML interface; all signalling functionality agreed for entry into Trial Running has now been completed. CRL’s and RfLI’s commitment to achieving ROGS and entry into Trial Running by [REDACTED] is evident in the commencement of joint T-minus countdown readiness meetings; however, CRL performance indicators suggest this might be optimistic. The movement of the [REDACTED] date to [REDACTED] indicates CRL has an increased level of confidence, if the current Trial Running target date is missed, that the Trial Running milestone may still be achieved within a 5-week period of the [REDACTED].</p> <p>We expect a judgement to be made in [REDACTED] [REDACTED] which balances the benefits of Trial Running “achievement” on [REDACTED] against those of a later date, which is driven by the practical difficulties of completing outstanding pre-Trial Running works under ROGS, the safety-assured state of the railway and the true readiness of all organisations to take on their new roles. Given the many and varied influences on the commitment decision, the outcome is difficult to predict.</p> <p>The T-minus countdown started at T-[REDACTED] on [REDACTED] [REDACTED], with further meetings planned at [REDACTED].</p>	<p>As mentioned previously, the T-minus process is on-going as planned with [REDACTED] [REDACTED] [REDACTED].</p> <p>The remaining actions are being collaboratively addressed by CRL and RFLI with a view to carry out the Declaration of Control of Risk (DoCoR) meeting, RAB-C and Office of Road & Rail (ORR) Readiness Review Meeting on [REDACTED] [REDACTED] respectively. The programme is committed to achieve the [REDACTED] to achieve SCROGS at the [REDACTED].</p> <p>In addition to what has been stated previously, Trial Running does not form the Critical Path leading into Trial Operations and there is a ten week period from current forecast completion of Trial Running and commencement of Trial Operations [REDACTED] of [REDACTED] [REDACTED]. The four-week ramp up period at the start of Trial Running was always scheduled as an opportunity for all parties to acclimatise to the new rule set in a safe and controlled way. This decision has been arrived at through the collaborative T-Minus process.</p>

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	<p>T-█ and T-█; these will be supported by intermediate ‘deep-dive’ meetings to resolve actions. Good collaboration is evident between CRL and RfLI, and topics covered include CRL’s responsibilities for HSQE, Assurance, People and Delivery, and RfLI’s responsibilities for Operations, Maintenance, Fleet, MTREL and Business Management.</p> <p>Completion of the safety assurance process remains the key activity for entry into Trial Running and the process has become more complicated since the last Period. Both CRL and RfLI assurance teams have a significant task to complete Safety Justifications (SJs), clear Dependencies and resolve open issues, for final CESAC Acceptance by RAB(C) on 11 March 2021. Issues affecting completion include CRL’s later completion of Safety Justifications, and a slower than planned Dependency closure rate as a result of a decline in the rate of evidence-processing; this has led to an erosion of the remaining week of schedule float. Similarly, CRL’s late completion of its ECHR continues to exert pressure on RfLI’s assurance process and documentation for its RCAC/EAC and TRRAC,</p>	<p>As noted by the Project Representative, CRL and RfLI continue to work collaboratively on assurance and capability readiness activities. Collaboration is set to intensify over the next two weeks due to submission and subsequent acceptance of the following items to RAB-C:</p> <ul style="list-style-type: none"> -the Final Dependency risk argument, -Routeway Systems & non- Traction Power Element Acceptance Case -the COS SJ -Trial Running Readiness Acceptance Case (TRRAC) -Crossrail Engineering Safety & Assurance Case (CESAC) for which the Office of Rail and Road (ORR) will be in attendance. <p>This will be followed by the DoCoR meeting, RAB-C and the ORR Readiness Review Meeting.</p> <p>CRL is not in agreement with the Project Representative that the assurance process has become more complicated. However, CRL does agree that timescales have been compressed and CRL is required to find alternative routes to dependency closures through a programme of Structured Engineering Judgements (StEJ). A good closure rate of dependencies has been maintained since November 2020, although CRL accepts that it has been affected by the completion of formal assurance evidence from the projects. In response, CRL initiated the StEJ programme from January 2021 which has now concluded its second round of reviews against all dependencies. A final round will commence on</p>
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	<p>due for 11 March 2021. With continued slippage, there is increasing risk of concurrency with safety assurance documentation production leading up to Trial Running in [REDACTED].</p> <p>Critical issues and actions arising from the T-4 review indicate that there are still significant works for both CRL and RfLI to complete that will require an intense co-ordination effort in a short period. Both parties are working to reach agreement on key items related mainly to process and procedures for working under ROGS, ahead of the T-4 'Go/No-Go' review. These include: resolution of electrical interfaces between Stations and Routeway, clarity on the process for isolations and possessions, and agreed plans for commissioning and maintenance of the NR interfaces. Other areas of concern include: training of contractor resources in sufficient quantities to cover safety supervisory roles, as well as ensuring alignment of supply chain procedures with RfLI's Rule Book. The ability of both parties to reach an acceptable position on the outstanding issues will determine if transition into ROGS is achievable on [REDACTED], and whether [REDACTED] remains a viable date for the start of Trial Running. As works on the railway are restricted in the first four weeks of Trial Running to allow RfLI mobilisation, this may provide valuable time for CRL to mitigate the situation.</p> <p>We are concerned that the outstanding programme of works to complete is increasing in volume as a consequence of Dependency and</p>	<p>[REDACTED] to conclude a position for ROGS on all Trial Running dependencies.</p> <p>As stated previously, [REDACTED] [REDACTED]. Of the 234 [REDACTED] readiness review questions and 20 RFLI risk themes, there were 19 questions for escalation to ELDG, held on 4 March 2021. The remaining questions were verified as closed or in progress to be closed; ongoing daily monitoring is in place to track these to closure. The four-week mobilisation period will be an opportunity for all parties, not solely RFLI, to mobilise capability to safely maintain, operate and upgrade the Elizabeth line under a new rule set.</p>
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	<p>The implementation and enforcement of CRL's Change Management process in the period is a positive development. Further refinement to include a Change Control Panel is likely and may need at least a further period to embed into Project teams before the process starts to yield scope and cost benefits.</p> <p>We are encouraged that CRL's Executive Management completed a systematic review of the Programme Level 1 risks. This will provide a robust view of its risk mitigation plans, clarity on emerging issues, minimisation of unknown items and a realisation of potential risk money through retirement of risks. A similar exercise is also required for the Level 2 risks.</p> <p>At Period 11, CRL is reporting an excluded cost pressure to the AFC, reduced from a potential [REDACTED] to [REDACTED]; [REDACTED] of this has been identified by CRL as potential offsets, leaving an estimated pressure of [REDACTED] to the Programme AFCDC. CRL's Executive recommended to hold the ADFDC at £15,885m for Period 11, while it continues to address the emerging issues and validate to a point of maturity. The uncertainty of</p>	<p>It is welcome that the Project Representative considers the refresh of CRL's Change Management process a positive one. The process is being evolved week commencing 15 March to refine approaches towards change assessment, including an updated form based on organisation feedback, a varied approach to budget transfers, and the introduction of an Executive-led Programme Change Panel. The Panel will rule on programmatic approaches to scope, schedule and cost changes, assure the business cases of proposed changes (scope and non-scope related), and review how change is being instructed to the projects. Another communications round will be implemented.</p> <p>Level 1 risks will continue to be given a very high level of focus each period through Trial Running. A series of additional reviews, known as Star Chambers, of Level 2 and Level 3 risks are planned for the end of March and early April, with a view to retiring or confirming ongoing risk volumes and values.</p> <p>The challenge faced on costs is well recognised and is of a high priority. CRL has continued to raise the transparency of financial performance and introduce additional measures to ensure tighter scrutiny and control. At Period 11, the residual unallocated costs of [REDACTED] and</p>
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	<p>provisions, increased pressure on the CEO contingency and the [REDACTED] cost pressures not included in the Period 11 AFCDC, indicate that the forecast may be understated.</p>	<p>opportunities not included within the AFC of [REDACTED] were broadly in balance. Whilst we have raised the challenges of the residual unallocated costs, opportunities can be realised through mitigating actions to our risks. Both pressures and opportunities are under close review and we continue to take actions to provide greater certainty into the costs to go. Several initiatives and control measures have been put in place to further increase scrutiny on costs.</p> <p>Star Chambers are being held to provide Executive review and scrutiny of both our remaining risks and provisions and the residual unallocated costs. These sessions will be independently chaired and provide further certainty to the Cost to Go as well as challenge for opportunities to reduce costs and replenish our provision for unknown unknowns.</p> <p>Further to this a change panel is being introduced to enhance the new controls and commitments regime. The Change Panel will provide a forward challenge and review of potential change as well as emerging trends, enabling the best decisions to be made as early as possible.</p> <p>To ensure continued transparency and management of emerging cost pressures and opportunities, the Crossrail Trends Programme is being reinvigorated and will provide a single and consolidated place for raising such items. These will gain periodic review through the Change Panel and our existing performance reviews.</p>
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<p>Health & Safety</p>	<p>Four High Potential Near Misses occurred in Period 11 and, while the Safety Performance Indicator increased slightly, the overall indicators remain within those set by the Programme. SHEL101 in March 2021 will reset the Programme to reflect the change in focus from construction to operations and maintenance. CRL continues to be vigilant during the Covid-19 'third wave', ensuring delivery resilience through the safeguarding of key resources and critical operational assets.</p>	<p>The Project Representative's comments regarding Health and Safety performance in Period 11 are noted and agreed as accurate.</p>
<p>Recovery Plan and Schedule</p>	<p>The DCS v1.1 [REDACTED] continues to be used for CRL Programme performance measurement and is occasionally modified to reflect mitigations which seek to maintain current target dates. A schedule refresh initiative is expected in Period 1, resulting in DCS v1.2, which is anticipated to include lessons from the Routeway assurance process and Stations commissioning, as well as resource management inputs, critical signalling software updates and RfLI's new ITAP change process.</p> <p>The Critical Path to Trial Running remains within the safety assurance process and [REDACTED] will be pivotal for the achievement of ROGS. CRL's key critical activities relate to the clearance of Dependencies, and the handover of Element Completion Handover Reports (ECHR), which are necessary for RfLI to complete its Routeway Chapter Acceptance Case and Element Acceptance Case (RCAC/EAC) and</p>	<p>As previously stated, a high level assessment of potential impacts of further consideration associated with Trial Running, future access planning, the forecast and assurance of SJ updates, remaining works in the form of dependencies, EOWs and Infrastructure Manager readiness is being carried out and will be reflected in DCS1.2 schedule refresh.</p> <p>The Project Representative's comments on the criticality of the safety assurance process to Trial Running is noted and agreed. Integral to a move from project to railway, there is a need to complete the assurance and handover process. Early versions of the COS SJ and CESAC have been published and reviewed by the CRL's assurance panel, RAB-C. Anticipated acceptance of the COS SJ by RAB-C is dependent upon</p>

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	<p>Trial Running Readiness Assurance Case (TRRAC). The delivery by CRL of the COS SJ and CESAC in mid-February 2021 is heavily reliant on the status of the supporting Safety Justifications and their associated Dependency close-out. Thereafter, the Duty Holders must demonstrate, through the Declaration of Control Risk (DOCOR), their readiness for transition into ROGS and entry into Trial Running.</p> <p>Only Bond Street and Canary Wharf Stations have yet to receive SC3. Paddington was the last station to receive SC1 Enactment on 15 February 2021, and all stations are now ready for entry into Trial Running. The Critical Path to Trial Operations remains through the completion of SC2 at Bond Street Station, and the assurance of signalling software configuration ELR100, with a final update to COS SJ, CESAC and DoCoR, to take account of the completion of SC3 ROGS at the RfLI and LU Stations.</p>	<p>successful StEJ sessions prior to RAB-C meeting on [REDACTED].</p> <p>Bond Street and Canary Wharf stations have SC3 strategies in place and are delivering to these strategies. All stakeholders are engaged and supportive of the strategies to transfer into ROGS. Although details are still be refined and concluded, there are no obstacles to further progress at present.</p>
<p>Handover Delivery and Assurance</p>	<p>The Plateau 2 team is working well to implement the Stations Commissioning Strategy, and commissioning and BIU processes continue. Farringdon Station was assessed at T-4 to be on target for SC3 ROGS handover to LU on [REDACTED]; similarly, Custom House Station handover to RfLI is scheduled for the end of March 2021. Tottenham Court Road Station passed its T-12 assessment and, with Liverpool Street Station, is currently maintaining schedule for BIU commissioning activities.</p>	<p>In the period, Farringdon station successfully achieved SC3 ROGS handover to LU. Custom House has been handed over to RFLI; the next step is Bringing into Use the Communications and Control system and linkage to the Romford Control Centre. This is scheduled for March 2021. The Plateau 2 team has produced a Masterplan for Bringing into Use all the Stations. This has allowed CRL to undertake future planning for additional resources required. This has been baselined in the DCS.</p>

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	<p>CRL has removed Woolwich West, Bond Street West and Liverpool Street Station Shafts from the declared configuration state for the start of Trial Running. This will allow implementation of [REDACTED], prior to the start of Trial Operations. In the meantime, slow progress with PIRs and delays in the submission of final noise reports to the Local Authorities are a concern.</p> <p>With a change in the schedule logic implemented by CRL to avoid Asset Data Drop completing in April 2021, the handover status of Plumstead Maintenance Facility is unclear. CRL and RfLI are yet to fully mitigate and agree the state of readiness of handover against its assurance status.</p>	<p>CRL acknowledges the Project Representative's comments regarding removal of Woolwich West, Bond Street West and Liverpool Street Station Shafts from the declared configuration state for the start of Trial Running. [REDACTED]</p> <p>For clarification in line with the Project Representative's comment regarding the handover status of Plumstead Maintenance Facility – Plumstead Maintenance Facility is on track to be handed over to RFLI on the 19 March 2021 following the Commissioning of the Headshunt which is on schedule as planned.</p>
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<p>SIDT, Dynamic Testing, Trial Running and Trial Operations</p>	<p>Preparations for Trial Running readiness have highlighted the criticality of supply chain resource and RfLI maintenance team training, particularly given the risk of Covid-19; maintenance readiness is linked to the availability of Asset Data, which RfLI teams use to assign work schedules. Preparations for Trial Operations continue, and the Passenger Service Mobilisation Board and the Passenger Service Readiness Team are expected to come into effect immediately after the start of Trial Running.</p> <p>The performance data produced from both OST and SIDT has provided enough evidence to show that the entry into Trial Running criteria for reliability have been met. With SIDT scheduled to run until mid-March 2021, it continues to provide early beneficial opportunities for the resolution of unforeseen operational issues and the building of RfLI operator confidence. Currently, the timetabled operation of up to 8 trains is achieving approximately 90% of planned mileage; while software updates have resolved two faults, the resolution of extended sectional run times remains outstanding. An important area of progress is the transition to Trial Operations and the requirements, readiness and structure for the Passenger Service Steering Group that will oversee the Passenger Service Readiness Team. The Group will form on commencement of Trial Running.</p> <p>Stage 4A Steering Group provided a 'Go' with identified risks for Stage 4A in [REDACTED].</p>	<p>Training burn down status is monitored daily and any critical activities discussed during the TRMB meetings are being escalated accordingly. The PSSG readiness team will be in place at the beginning of April 2021. The Terms of Reference is in the process of being finalised as previously stated.</p> <p>Current SIDT Configuration, except for PR6+ commissions scheduled for [REDACTED], has been loaded on to the railway in readiness for Trial Running.</p>
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	<p>MTREL will operate the Stage 4A timetable to coincide with the [REDACTED], following a review of configuration options for start of service. Access for maintenance to Old Oak Common Depot through the Central Section will restrict initial passenger operations to 4 FLUs, and alternative rolling stock transfer arrangements are under investigation.</p>	<p>Following on from the last Stage 4a Steering Group in February 2021, a provisional 'Go' for Stage 4a in [REDACTED] is still maintained based on the conditional balise solution being developed by Siemens who plan to commission the balises over the weekend of the [REDACTED].</p>
<p>Stage 2B Operations</p>	<p>FLUs operating on the GWML have maintained an adequate performance, arising from fewer ETCS faults. The second software release is due to be deployed by the end of February 2021, at which point there will be service capability to operate 4TPH to Heathrow.</p>	<p>FLUs operating on the GWML have maintained an adequate performance arising from fewer ETCS faults. The second software release is due to be fully deployed by the end of March 2021, at which point there will be service capability to operate 4TPH to Heathrow, although there are no immediate plans to do so.</p>

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<p>Organisation Transition</p>	<p>ELDGs approval of a [REDACTED] increase to the Indirect Cost Forecast since the DCS v1.1 baseline was established represents an increase of [REDACTED] for the latest [REDACTED]; this enables CRL to fund the Indirect resource costs through to [REDACTED]. This additional Programme and Project Authority will also allow CRL to secure key knowledge, skills and experience for the remainder of Programme delivery. CRL recognises the importance of efficient communication of contract extensions to provide confidence and minimise departures. In parallel, CRL is also finalising its risk exposure with those key resources that are likely to be impacted by the enforcement of IR35 rules in early April 2021. It is currently working with its supply chain to identify key resources who might be impacted, and establishing mitigation plans as necessary. This represents a key threat to delivery.</p> <p>CRL’s endorsement of the Workforce Plan and ELDG’s approval of funding allows the start of management and administration transfer to TfL, for completion by the end of March 2021. TfL needs to maintain transparency on resource requirements through to Passenger Service.</p>	<p>CRL agrees with the Project Representative’s comments that efficient and timely communication of contract extensions to [REDACTED] is vital. This has been cascaded to the CRL workforce to provide clarity on proposed end dates. CRL is also aware that changes to IR35 rules in April 2021 may impact individuals, thus, significant engagement has been undertaken with impacted individuals working closely with all relevant employers including the Project Delivery Partner and Programme Partner. Reviews are underway, and where issues have arisen, these are being worked through with the relevant employers and individuals. Through managing this process swiftly, majority of individual cases have been resolved at the time of writing this response and further work is underway to address the few outstanding cases and mitigate any risk to the remainder of the programme.</p> <p>CRL acknowledges that the endorsement of the Workforce Plan and ELDG’s approval of funding allows for the start of gradual transition of CRL functions back to TfL, however, this is not intended to be completed by March 2021. Rather, the gradual transition of CRL functions to TfL may start in late spring where agreed between CRL and TfL; most of the activity is likely to take place around the start of Trial Operations. TfL will remain a guiding mind for this activity, working closely with appointed CRL leads to ensure an effective and transparent transfer of resources will take place.</p>
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<p>Stage 3 – SIDT, Trial Running, Reliability Growth and Trial Operations</p>	<p>Following further refinement of schedule logic, a change in process and a second StEJ round, and the complex assurance process, Period 12 is now expected to be a defining period in completing the safety assurance for the railway. There remains significant stress in the assurance process, particularly in forming the CESAC submission for 19 February 2021. Closure rate of Dependencies and the slow rate of supporting evidence information is affecting CRL's and RfLI's ability to complete assurance documents. With the process requiring intense co-ordination and management focus, a Programme assurance 'freeze' was held on 12 February 2021 to assess the status of the various components required to support pending key documents for CESAC and TRRAC, and for joint assessment at the T-5 review.</p> <p>The T-4 'Go/No-Go' meeting is expected to confirm the viability of achieving the targeted Trial Running start date of [REDACTED]; however, CRL performance indicators suggest this might be optimistic. The movement of the [REDACTED] date to [REDACTED] indicates CRL has an increased level of confidence, if the current Trial Running target date is missed, that the Trial Running milestone may still be achieved within a 5-week period of the [REDACTED].</p> <p>The Blockade planned for August 2021 is driven by the need to install and test software configuration ELR100 for entry into Trial Operations. There will be significant pressure</p>	<p>Following the successful programme deep dive, the Programme has undertaken the T-4 'Go/No Go' meeting with a provisional 'Go' decision reached. Daily updates on the remaining SJs are in place and the current position programme is in line with the DCS.</p> <p>As stated above, a provisional 'Go' decision has been achieved at T-4. CRL and RFL are working through the remaining items and any identified for escalation are being addressed with ELDG support. The programme remains committed to get into SCROGS on [REDACTED].</p> <p>ELR100 assurance strategy has been drafted and is currently under review for endorsement. Current SIDT Configuration, except for PR6+ commissions planned for the 14 March 2021, has</p>
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	<p>during the Trial Running period, but particularly in [REDACTED], to deliver final assurance for the signalling software, build reliability and identify any unexpected issues that might affect entry into Trial Operations.</p> <p>Poor EOWL completion at stations, combined with the emergence of new items, has resulted in a significant number (approximately 4,500) yet to be completed between the start of Trial Running and Trial Operations. The EOWL closure rate related to Routeway, Shafts and Portals is also a concern, which will require outstanding works to be completed during the Trial Running period. This is in addition to previously reported works associated with TVS modifications, PSD rectification and Possession and Isolations management systems. While CRL is establishing a plan for completion ahead of Trial Operations, we remain concerned the impact that this significant volume of work may have on the Trial Running period. Finalisation of scope is also required for clarity on the contract close-out strategy and timing of the departure of the Tier 1s that will also benefit the Programme financial position.</p>	<p>been loaded on to the railway in readiness for the start of Trial Running.</p> <p>EOWLs exercise is ongoing to clarify scope and further granular details. Ongoing planning and technical support is being provided to help drive EOWLs closure and mitigate any potential conflicts between construction and assurance. The detailed scope surgery currently underway will be included in the DCS1.2 refresh.</p>
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<p>Stations Assurance and Commissioning for Trial Operations</p>	<p>Schedule adherence has marginally improved in the period for the RfLI and LU Stations, except for Liverpool Street and Tottenham Court Road Stations. Paddington Station schedule adherence is generally poor and, while it entered its T-12 process, its BIU is at risk of delay. Close management attention is necessary to minimise impact on the delivery of the subsequent stations. Additional stations that are of concern include: Whitechapel Station to finalise definition of scope post-SC3 ROGS; Canary Wharf Station to complete its schedule to SC3 ROGS, and Bond Street Station to conclude a detailed schedule to achieve SC2 Enactment. Four new contracts for Bond Street Station are also required for award by end of Period 12. Until then, it is unclear whether the schedule is fully underpinned by the supply chain and, while station schedule is a risk, its AFC is also threatened. Woolwich Station has shown a worrying trend of a period-on-period increase in AFC. This is anticipated to be subject to further increase due to ongoing additional scope requests and the resolution of noise issues, which have yet to be designed and costed.</p>	<p>Schedule adherence is limited in accuracy based on what drives the program at this stage. CRL accepts that the stations' commissioning works are challenging and while Farringdon has been a major success, the [REDACTED] contains time and cost risk allowance considered to be a realistic risk profile. However, CRL continues to strive for the planned deterministic dates. Five out of the eight stations are in their T-minus process, this currently sets the priorities rather than the DCS 1.1. The first of the remaining stations, Canary Wharf, has an EOWL program and strategic plan to deliver SC3ROGS. The second station, Bond Street, is progressing to SC2 which will need to be aligned with DCS1.2 refresh to truly measure its Schedule adherence. The third station, Whitechapel, is being rescoped based on post revenue scoping that will improve the project AFC through overhead and profit impacts to holding the contractor longer than necessary. All three projects currently have different priorities to what was captured in the DCS1.1. However, DCS 1.2 refresh will align the stations priorities going forward. Bond Street station has an in-depth review through the Early Contractor Involvement and is working through five separate sprint charts that outline the scope required to achieve SC2. The programme is recovering since the mobilisation of Lindner. Tottenham Court Road station is past its T-8 process and continues to push through the issues to get to SC3ROGS with no slippages anticipated. At Paddington station, there have been issues with Asset DATA and AC/SJ approval signoffs</p>
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		<p>due to limited resources available within CRL. Priorities are being balanced to support the programme, but this may still impact on SC3ROGS.</p> <p>Woolwich station’s AFC growth has been demonstrated through added scope and CECs. Repositioning Woolwich station in the sequence for Bringing into Use has also caused some impact to the AFC through incremental prolongations. At present, this is better defined provided assurance support does not impact on the schedule.</p>
<p>Commercial and Risk</p>	<p>CRL has increased focus and transparency in respect of its cost and risk analysis and reporting. The Period 11 AFDCD increased by ██████ to ██████ due to emerging pressures arising from the in-period IPR and PDR reviews. Of this ██████, CRL is proposing to offset ██████ from risk, overlays and the scope gap provision, and fund the remaining ██████ from the CEO reserve, to maintain the Period 11 AFDCD at £15,885m. The proposed drawdown on CEO reserve significantly reduces the contingency allowance to ██████, of which ██████ is reserved for potential issues arising at Bond Street Station. As a consequence of CRL’s proposed drawdowns and offsets in Period 11, contingency trends indicate that prolongation excluded allowances are already spent and, if prolongation is included, will expire approaching Period 1 2021-22.</p>	<p>CRL agrees and welcomes the Project Representative’s observation of increased focus and transparency in relation to cost and risk analysis and reporting.</p> <p>Period 11 was the first period in which AFDCD reflected the operation of a strengthened change control process and included two very significant change items (full reflection of the cost implications of the Workforce Plan for 2021 and provision of Principal Contractor in the trace to the end of the year). These two changes constituted a significant proportion of the set of cost pressures identified in January of this year, leaving the residual unallocated costs of ██████, broadly in balance with the potential savings arising from risk mitigation. Work continues to review and challenge these outstanding items to limit their impact on AFDCD. This is captured within the role of Star Chamber and the strengthened Change Panel described in the Key Observations in the Period section above.</p>

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	<p>At Period 11, the AFCDC remains ██████ in excess of current funding of £15,789m. CRL reported ████████████████████ in delivering Crossrail within the current funding, though an improvement to ██████████ was reported at ELDG. Consequently, we believe that it is unlikely that CRL will be able to deliver the Elizabeth Line within the £825m funding increase. CRL's Period 11 CTG forecast, which includes ██████ of risk and contingency items accounting for uncertainty, risk and additional commitments over and above Direct and Indirect costs, is expected to exceed the current funding threshold around Period 2 2022-23. However, these projections are conservative, as they exclude the current ██████ cost pressures noted in this Summary.</p>	<p>Given the residual allocated cost items, CRL does not recognise the projection that contingency and risk allowances will be exhausted in Period 1 2021/22. However, CRL acknowledges the need to continue to proactively manage the drawdown of existing cost provisions and risk assessments to protect the programme's position going forward. The detailed planning of activities to Stage 3 Passenger Service continues as part of DCS1.2, and all cost provisions and risk assessments will be fundamentally reviewed as part of this exercise.</p>
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<p>Organisation</p>	<p>It is encouraging that CRL has started implementing its Change Management Process in the period. However, further refinement is expected, including the implementation of a Change Control Panel, and understanding within the project teams might benefit from additional engagement and communication. Currently, the process seems to be focused on emerging scope, but it is anticipated that it will also address existing scope that is yet to be formalised into instructed works.</p> <p>Complications are likely with the implementation of RfLI’s new Change Assurance Framework (incorporating CAP and ITAP) after transition into ROGS. The integration of RfLI’s ITAP with CRL’s Change Management Process requires further clarification but, importantly, project teams’ full understanding of the new ITAP system will be necessary, as the submission and review timescales are longer. However, a benefit is that current RAB(C) members and attendees will remain engaged in the ITAP process when RAB(C) no longer acts for CRL. There will also be no change to the System Authority representative until [REDACTED], when CRL anticipates it will complete delivery for entry into Trial Operations.</p>	<p>The Change Management process has been evolved to consolidate the approval process for all types of financial and change controls, and this was effective from 18 January 2021. It enables single oversight in addition to the implementation of delegated authority limits that have been introduced as part of the revised funding arrangements. A Programme Change Panel is being implemented. The Panel will rule on programmatic approaches to scope changes, assure the business cases of proposed changes (scope and non-scope related), and review how change is being instructed to the projects. Another communications round will be implemented to support the establishment of the Panel and general refinements of the process.</p> <p>CRL has embraced the ITAP process and is working proactively with RfLI and relevant assurance bodies to facilitate a smooth transition. As such, Rolling Stock, Signalling and Stations have initiated CAP and ITAP submissions to outline programme and assurance plans going forward. In places where the process rollout was inconsistent with the 13-week notification period, such as planned works occurring sooner than the 13 weeks and the ITAP was rolled out less than 13 weeks from ROGS, mitigations have been agreed between all parties to maintain the plan. Going forward, all work areas have embraced the ITAP/CAP process and included that within the Staged Works Plan for all works post ROGS. This is evidenced by Rolling Stock achieving ITAP</p>
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		<p>Cert 0001 and Signalling achieving ITAP Cert 0002. The DCS1.2 will include ITAP and CAP timescales within its logic.</p>
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