

Date: 25 November 2021

Item: Elizabeth Line Readiness

This paper will be considered in public

1 Summary

- 1.1 This paper provides an update on the performance of the TfL Rail operational service and the status of the transition and readiness of the Infrastructure Managers for the operations and maintenance of the railway after handover from Crossrail.

2 Recommendation

- 2.1 **The Committee is asked to note the paper.**

3 Performance of Operational Service

- 3.1 TfL Rail continues to deliver a good service with the Public Performance Measure (PPM) beating target during period 7, the four-week period between 19 September and 16 October 2021. We compared favourably against the rest of the industry with only Merseyrail and London Overground performing better. The eastern section of the line achieved 97.5 per cent with the western section achieving 93.0 per cent of trains meeting their reliability target. The overall Moving Annual Average trend also continues to be better than target at 95.3 per cent.
- 3.2 Passenger services between Reading and Heathrow continue to be operated by nine-car Class 345 trains. The current train control software is not delivering the expected reliability, but defects are generally rectified by a system reset and containment measures put in place by the operator MTR Elizabeth line (MTREI) which has limited the impact to passenger service. Testing is complete on a reliability-focussed software version for delivery by train manufacturer Alstom in December 2021, which is forecast to deliver a significant reliability improvement as it is loaded onto the fleet in January 2022.
- 3.3 Six nine-car Class 345 trains are operating in passenger service between Shenfield and Liverpool Street, supplementing seven-car Class 345 and 'legacy' Class 315 trains. The transition of the Liverpool Street to Shenfield service to a full nine-car Class 345 operation, with up to 22 trains commenced on 1 November 2021 and will complete by the end of December 2021.

4 Operational Readiness

- 4.1 Trial Running has resumed in the Central Operating Section following the planned two-week blockade to allow for the vital commissioning of one of the last major

software configurations before Revenue Service (ELR100 Signalling Software update). In the initial period since the software update, we have seen a significant improvement in performance of the 12 trains per hour (tph) timetable.

- 4.2 Sustained reliability with the 12tph timetable is critical to allow us to move into the Trial Operations (TO) phase. The improved reliability enables our operational teams to increase their understanding on how to manage the service, utilise the infrastructure available and deal with issues as they arise, more effectively.
- 4.3 The countdown for TO is underway towards late November. We will be undertaking a staged approach to build greater resilience and to allow for the earliest commencement of passenger services next year. Eight of the ten central stations are now under our control with Canary Wharf due to be handed over in the autumn. Further work will take place on the tunnel ventilation system and the next software upgrade (ELR110); both critical for the second stage and a key enabler to progress with the next phase of volunteer exercises in the New Year. A series of project gates has been established as “Go/No-Go” decision points before moving into TO and beyond, towards Revenue Service.
- 4.4 The operations training and assessment programme ‘end to end’ process review has been completed with benefits including a reduction in training time of nearly two weeks, as well as supporting further development of the Route Control Centre team through TO.
- 4.5 Following completion of station works at Hayes & Harlington, providing a new station building and step free access on 14 September 2021, Network Rail station enhancement works on the west are nearly complete. This complements Acton Main Line, Ealing Broadway, West Ealing, Southall, and West Drayton stations which have already entered into passenger service. Enhanced station improvements at Ilford and Romford are progressing, with the glass façade now complete at Ilford and lift cards installed at both sites. The stations are expected to be completed in early 2022, and Network Rail continues to monitor this to drive performance.

5 Joint Trial Operations Plan

- 5.1 We have received provisional endorsement of the Joint Trial Operations Plan (JTOP) at the Interim Technical Assurance Panel (ITAP). This follows the decision to approach TO in two phases. This phased approach will enable final testing and software adjustments to the Tunnel Ventilation System (TVS) before Christmas, providing time for the subsequent assurance approvals to be in place.
- 5.2 A ‘gate’ has been scheduled for December 2021 to provide the conditional Go/No Go for Phase 2 subject to the successful completion of the TVS works. Once approved, this will allow us to carry out planned volunteer evacuation exercises in January 2022 including the emergency services.
- 5.3 The JTOP is undergoing final updates in response to stakeholder commentary and will proceed to the Trials and Operations Review Group for final approval before being shared with ITAP.

6 Reliability review points

- 6.1 As part of the decision-making process leading to TO and Revenue Service, the Elizabeth Line Reliability Board will consider Confidence Review Points focusing on reliability and operational performance against expected performance outputs. Confidence Review Point 6 was considered in October 2021 with a 'red' rating based on the need to see improvements following the ELR100 software upgrade – as mentioned under 4.1 we have started to see significant reliability improvements since the software upgrade. The next Review Point is due later in November.

7 TfL Residual Works Programme

- 7.1 The residual works team continue to progress a number of pre and post revenue service activities across the London Underground and Rail for London (Infrastructure) Limited estate and are supporting the decommissioning of Whitechapel temporary ticket hall.

List of Appendices to this report:

None

List of Background Papers:

None

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