

Date: 25 July 2023

Item: Elizabeth Line Programme Assurance Update

This paper will be considered in public

1 Summary

- 1.1 This paper reports on progress with programme assurance activity across the Elizabeth line since the last report to the Committee.

2 Recommendation

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

3 Background

- 3.1 The Elizabeth line Integrated Assurance Framework is based on a Three Lines of Defence model comprising:

- (a) Line 1 – Management functions of Crossrail Limited (CRL), Rail for London (Infrastructure) Limited and key interfaces;
- (b) Line 2 – Project and Programme Assurance Elizabeth line (PPA-EL); and
- (c) Line 3 – TfL Internal Audit and the IIPAG sub-group (IIPAG-EL).

- 3.2 This paper reports specifically on Line 2 (PPA-EL), Line 3 (Internal Audit) and Line 3 (IIPAG-EL) assurance progress.

4 Line of Defence 2 (LoD2) Assurance

- 4.1 The commencement of Stage 5c of the Elizabeth line on 21 May 2023 completes the final stage of the train service operations linking Abbey Wood and Shenfield in the east with Heathrow and Reading in the west via the central operating section (COS). The challenges of running a fully integrated metro frequency railway on infrastructure provided by Network Rail (NR) in the east and west through the COS provided by CRL have resulted in occasional days of reduced performance, as measured by the public performance measure, below that required to maintain a resilient Stage 5c timetable. The continuing operating challenge going forward is to improve the reliability and resilience of the end-to-end railway to achieve the required trains per hour (tph).
- 4.2 The resilience of the Great Western infrastructure and the impacts on performance on the overall end-to-end train service continue to be a concern. There have been significant improvements in the visibility of the NR data on infrastructure failures, and the improvement plans being implemented to mitigate the issues.

- 4.3 Fleet availability consistently achieves 65 train units per day, which is the requirement for Stage 5c. Alstom are actively working on train software and hardware service affecting failures which are resulting in reliability and performance below that required to provide a consistently robust Stage 5c timetable.
- 4.4 The latest Computer Based Train Control software provided by Siemens is being upgraded progressively to supplement the ELR400 software installed at Easter 2023. The next major software installation will be ELR500 scheduled for Easter 2024, which will address a number of reliability performance matters which have become apparent during passenger service operations.
- 4.5 Since the last meeting of the Committee, LoD2 Periodic Assurance Review Reports have provided input to the periodic Integrated Assurance Report to the Elizabeth Line Delivery Group and to the Audit and Assurance Committee.
- 4.6 The LoD2 assurance process of regular interaction with the CRL team continued when the Crossrail Close Out Strategy was developed, and close out was divided into 10 Areas of Closeout and Transition (ACTS) identifying the activities required to close out the programme in a controlled way. The delivery of the workstreams identified in the ACTS (Stations Delivery, Routeway Delivery, Health, Safety and Environment, Commercial Services, IT Services, Engineering, Delivery Assurance, Finance, Human Resources, Transition and Closeout) enabled satisfactory completion of the obligations set out in the Project Development Agreement (PDA). Appendix 1 sets out the summary LoD2 position on CRL's response to the obligations and concludes that CRL have undertaken their obligations as set out in the PDA and have not transferred any residual risk to TfL as a result. There are some obligations relating to On-Network Works which are not included in the PDA and once complete will enable Final Completion to be considered as described in a paper elsewhere on the agenda.

5 Line of Defence 3 (LoD3 - IIPAG-EL) Assurance

- 5.1 The terms of reference of the IIPAG-EL sub-group provide "look ahead" overview and areas of interest highlighted as part of the revised Integrated Audit and Assurance Schedule in February 2022. Support was provided to the assessment conducted by LoD2 to ensure adequacy and consistency. The schedule was maintained and reviewed regularly with the Elizabeth Line Programme Assurance Group which was co-ordinated by LoD2.
- 5.2 The focus by LoD3 over the reporting period was on the performance of the system in maintaining the 24tph service and the resilience of the system, both technically and operationally. The operational teams have risen to the challenge and continue to learn through their various experiences. There have been some challenges around the signalling functionality, the Customer Information System, and the fleet reliability remains a challenge. The performance of both Great Western and Anglia will need to be continually monitored to ensure continued improvement.
- 5.3 In general, the overall assurance framework for the Elizabeth line has continued to operate effectively.

6 Line of Defence 3 (LoD3 - TfL Internal Audit) Assurance

- 6.1 This section covers the Internal Audit activities that were agreed in the Integrated Audit and Assurance schedule.
- 6.2 There no audit reports issued in Quarter 1 of 2023/24 (1 April to 24 June 2023) (Q1).

Audit Delivery

- 6.3 There was one audit in progress at the end of Q1 – Elizabeth Line Transition from Capital Programme to business-as-usual, and details are provided in Appendix 2. There is an audit planned for Quarter 3 of 2023/24 (17 September to 9 December 2023) on Privacy and Data Protection: Surveillance Cameras in London Underground and Elizabeth line trains. This will be reported to the Audit and Assurance Committee as part of the Risk and Assurance quarterly report.

Management Actions

- 6.4 The team monitors the implementation of all Internal Audit management actions and confirms whether they have been adequately addressed before closing them. There are 16 actions open with 10 overdue at the end of Q1. Two of the actions are now overdue since 30 June 2023 and relate to the audit on Obsolescence of Critical Systems.

7 Transition to Business-as-Usual Assurance

- 7.1 In December 2022 responsibility for the project and programme assurance of the Elizabeth line was incorporated into the remit of the TfL Project Assurance team. Third line assurance continued to be undertaken by Internal Audit and the IIPAG-EL sub-group.
- 7.2 The responsibility for future third line project and programme assurance will remain with IIPAG, however the IIPAG-EL sub-group will be disbanded. Elizabeth line assurance will be incorporated into the overall IIPAG work plan.
- 7.3 The work of Project Assurance and IIPAG is overseen by the Audit and Assurance Committee and provides assurance on capital works to the Programmes and Investment Committee. Assurance of the Elizabeth line will be incorporated into the regular reports that Project Assurance and IIPAG submit to those Committees.
- 7.4 The focus for future Elizabeth line assurance will cover the following areas:
 - (a) a targeted assurance review to align with the TfL project completion stage gate following financial close as agreed as part of the recent Infrastructure and Projects Authority review;
 - (b) continuous assurance monitoring of the reliability performance of the rolling stock, until an acceptable level of reliability has been achieved;
 - (c) continuous assurance monitoring of the management of the Siemens

contracts until delivery of ELR500 – currently scheduled for Easter 2024;

- (d) targeted assurance reviews on the identified residual capital works being undertaken by TfL (and funded by CRL) including the Plumstead power supply requirements;
 - (e) annual targeted assurance reviews on the Elizabeth line capital renewal works programme;
 - (f) targeted assurance reviews on capital projects exceeding £5m in value, selected on the basis of risk and project lifecycle stage; and
 - (g) additional assurance identified as necessary, or as directed.
- 7.5 Going forward, assurance updates of the Elizabeth line will be incorporated into regular reports that the Project Assurance team and the Independent Investment Programme Advisory Group (IIPAG) submit to the Audit and Assurance Committee and the Programmes and Investment Committee.
- 7.6 Responsibility for future audit activity will continue to form the remit of Internal Audit. Audits of the Elizabeth line are detailed in the Integrated Assurance Plan as agreed by the Audit and Assurance Committee.

List of Appendices:

Appendix 1: LoD2 Assurance Assessment of the Completion of CRL Close Out Process

Appendix 2: Line 3 (TfL Internal Audit) Work in progress during Quarter 1 of 2023/24

List of Background Papers:

None

Contact Officer: Lorraine Humphrey, Director of Risk and Assurance
Email: lorraine.humphrey@tube.tfl.gov.uk