

**Date: 25 November 2021**

**Item: Project Status Update**

---

## **This paper will be considered in public**

### **1 Summary**

- 1.1 This paper provides an update on the status of the Crossrail project.
- 1.2 Following the initial phase of transition, the Elizabeth Line Delivery Group (ELDG) was formed to ensure appropriate oversight of the delivery of the Elizabeth line by Crossrail and TfL Executive. The ELDG is chaired by the Commissioner. In line with the commitments made by the Mayor for greater transparency of the Crossrail project, the minutes and actions from ELDG are available on our website<sup>1</sup>. Available reports will be uploaded to correspond to the meeting of this Committee.
- 1.3 A paper is included on the Part 2 agenda which contains supplementary information that is exempt from publication by virtue of paragraph 3 of Schedule 12A of the Local Government Act 1972 in that it contains information relating to the business affairs of TfL. Any discussion of that exempt information must take place after the press and public have been excluded from this meeting.

### **2 Recommendation**

- 2.1 **The Committee is asked to note the paper and the supplemental paper on Part 2 of the agenda.**

### **3 Crossrail Update**

- 3.1 Crossrail Limited is in the complex final stages of delivery of the Elizabeth line with Trial Running making good progress and preparations for Trial Operations advancing. The project remains aligned to the scheduled opening of the railway to passengers in the first half of 2022.
- 3.2 The Trial Running of trains through the central tunnels began in May as part of the major railway trials taking place throughout this year. The programme introduced 12 trains per hour (tph) in July, the service level for the opening of the railway, and despite a small number of bedding in issues, overall, it has been positive with the team frequently delivering over 95 per cent of the 12 tph mileage. However, reliability has been lower than what is to be expected in revenue service mainly due to known software defects, much of which are anticipated to be fixed by revenue service as part of the ongoing software releases plan. Trial

---

<sup>1</sup> <https://tfl.gov.uk/corporate/publications-and-reports/elizabeth-line-delivery-group>

Running was paused, as planned, during the commissioning blockade and resumed on 27 October.

- 3.3 The ELR100 commissioning blockade commenced on 10 October 2021 which saw the ELR100 software successfully commissioned during what was a 15 day blockade. In line with the aforementioned software release plan, ELR100 is one of the last major software configurations before revenue service and is integral to the programme moving into Trial Operations. It is expected to have fixed a considerable number of the bugs identified during Trial Running and its performance is currently being assessed, now that Trial Running has resumed. Early indications of the effect of the software upgrade on the railway are encouraging and provide confidence that the objectives have been delivered.
- 3.4 The blockade also allowed for the tunnel ventilation system to be updated and this is now almost complete, as well as other key works to the rolling stock, signalling, and fleet roll out.
- 3.5 The final railway integration tests to ensure all of the components work seamlessly together are now almost complete. The tests apply to the tunnel ventilation system, trains, software, signalling and power systems and it is only possible to undertake these at this stage now that the complete railway is available.
- 3.6 Before the end of the year, there will be further changes to the tunnel ventilation system to complete the outstanding functionality of the system software for passenger service. There will also be a smaller scale software update (ELR110) that will sweep up any new issues identified during Trial Running. These final fixes are expected to be small in number but are important in the final completion of the railway for revenue service.
- 3.7 The next major improvement in system reliability is the new Alstom train software (5.3/5.4) which is currently going through its assurance process and is due to be commissioned on the railway by the end of the year. The success of this software will be influential in determining the opening schedule for the railway.
- 3.8 The programme is currently on course to commence the Trial Operations phase in line with the earliest possible forecasted date towards the end of November. A staged approach to Trial Operations has been adopted to build greater resilience into the railway and to allow for the earliest commencement of passenger services next year.
- 3.9 Trial Operations involves testing over 150 real-time operational scenarios to support the readiness of the railway. The railway is an immensely complex system and must work seamlessly to ensure the Elizabeth line is delivered safely and reliably from the point at which passenger services begin.
- 3.10 The central section stations are now at an advanced stage, with eight out of the ten now under the care of TfL and are ready to support Trial Operations. Tier 1 contractors are beginning to demobilise from site. To date, Tier 1 contractors from Farringdon, Tottenham Court Road and Woolwich stations have started the demobilisation process, along with those at Paddington and Liverpool Street stations.

- 3.11 The next station to be transferred to TfL is Canary Wharf where the schedule has been adjusted to reflect the introduction of the staged approach to Trial Operations. Final modifications to the safety systems are being carried out and it is expected to be transferred later this year.
- 3.12 Bond Street station achieved its readiness to support Trial Operations on 8 October 2021. This is a significant milestone for the station and for the wider programme. The team at Bond Street are now working on a plan to get the earliest opening date for the station. The possession of the oversite development and urban realm has also recently been handed to the developer.
- 3.13 Following the completion of the platform extension works at Liverpool Street mainline station, work is now underway on the transition to Full Length Unit operation on the Liverpool Street to Shenfield service.
- 3.14 Following the completion of station works at Hayes & Harlington in September 2021, Network Rail's station enhancement works on the west are largely complete. A significant benefit of these works is that passengers are now able to make step-free journeys across TfL Rail between Paddington, Reading and Heathrow.
- 3.15 Enhanced station upgrade works are progressing in the east at Ilford and Romford. The glass façade is now complete at Ilford and lift cars also installed at both sites. The target for entry into service of the new station buildings is February 2022 and Network Rail continues to monitor this to drive performance.

**List of Appendices to this report:**

Exempt supplemental information is contained in a paper on Part 2 of the agenda.

**List of Background Papers:**

None

Contact Officer: Mark Wild, Chief Executive Officer, Crossrail  
Email: [MarkWild@tfl.gov.uk](mailto:MarkWild@tfl.gov.uk)