

Date: 2 February 2022

Item: Elizabeth Line Operational Readiness and Crossrail Update

This paper will be considered in public

1 Summary

- 1.1 This paper provides an update on the status of the remaining work on the Crossrail project (or Crossrail) and of the readiness of the Infrastructure Managers (IM) for the operations and maintenance of the Elizabeth line railway after handover from Crossrail.
- 1.2 We are coming to the end of the first phase of Trial Operations, which started on 20 November 2021, ahead of starting the next phase including large-scale exercises across the new railway. Passenger services will commence in the first half of 2022 with initial services between Abbey Wood and Paddington Elizabeth line stations.

2 Recommendation

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

3 Crossrail Update

- 3.1 With the project in the final complex stages of delivering the railway, the focus remains on ensuring that it is completed safely. The project remains vigilant to the recent coronavirus developments and will continue to closely monitor the situation across the programme. Access to our sites has been restricted to protect our workforce and to limit disruption to the programme.
- 3.2 During the festive period the programme successfully undertook works, including the commissioning of the remaining tunnel ventilation system software upgrades, the latest signalling software update, the commissioning of the latest control and communications software and the replacement of voltage transformers. These upgrades provide further increases in operational reliability of the routeway and signalling systems. Alstom also uploaded the train fleet software update, which has provided improved fleet reliability. These fixes bring the system close to the intended configuration for revenue service and support the pivot to reliability and focus on wider system issues, which are important in the final completion of the railway for revenue service.
- 3.3 The success of the commissioning of the software over the festive period and the transfer of Canary Wharf station are critical to commencing the second phase of Trial Operations. Final modifications to the safety systems were carried out at Canary Wharf station, which transferred to TfL on 21 January 2022. The team is

making good progress at Bond Street station and the decision has been made to decouple the completion of the station from the opening of the railway. This allows the best opportunity for the earliest opening of the railway and the earliest completion of the station and the team is working on a plan to achieve the earliest opening.

- 3.4 All Network Rail station enhancement works on the west of the central section have been successfully completed with the new station buildings and step-free access already bringing benefits to customers. The completion of the remaining construction activities and snagging works are also on track for completion in early 2022.
- 3.5 The focus for Network Rail on the east continues to be on the enhanced station upgrade works at Ilford and Romford. Delivery continues to progress at both sites, however, there is a structural issue at Ilford. While carrying out the station upgrade work, Network Rail identified a damaged concrete slab in the concourse area and are working up options for its resolution. Network Rail is working hard to confirm the revised dates for bringing the facilities at these two stations into use.

4 Elizabeth Line Operational Readiness

- 4.1 The first phase of Trial Operations commenced on 20 November 2021, in line with the earliest forecast dates. A phased approach to Trial Operations has been adopted to build greater resilience into the railway and to allow for the earliest commencement of passenger services.
- 4.2 Trial Operations has begun with scenarios such as testing the response to an unwell passenger and an obstruction on the line. Prior to the festive period a third of the total tests planned for the whole Trial Operations period were completed. The second phase of Trial Operations will involve a series of more complex exercises, including evacuations of trains and stations. Once complete, this will be followed by a period of shadow running, operating timetabled services ahead of the Elizabeth line opening.
- 4.3 Performance of the railway has generally been positive since the works over the festive period. The central section is currently running at 12 trains per hour (the initial level of service on the Elizabeth line) with the new signalling software to test reliability and build mileage. The focus is to establish consistently reliable performance to develop confidence in the railway for the start of revenue service.
- 4.4 The operations training and assessment programme continues with further recruitment for Traffic Managers and initial assessments completed. A detailed tracking programme for each successful applicant is in place to monitor their progress to full competence. The strengthening of Incident Response Manager resources is also underway with the aim to recruit into an additional four posts.
- 4.5 The opening of the Elizabeth line has always been planned to take place in stages to ensure the new central London stations, signalling and infrastructure can run safely and reliably before it fully links in with services out to the east and west.

- 4.6 Following the opening of the central section between Paddington and Abbey Wood, and until the next phase of opening in autumn 2022, the Elizabeth line will operate as three separate railways. The services on the east and west will continue to run into the mainline stations and passengers wishing to continue their journey to one of the new Elizabeth line central London stations will need to change to the Paddington or Liverpool Street Elizabeth line station.
- 4.7 Opening the Elizabeth line (Stage 3) during the first half of 2022 will enable the later stages (5b and 5c) to be delivered in line with our earlier forecast and achieve much of the benefit to passengers of a through running service on the railway.
- 4.8 TfL Rail delivered a Public Performance Measure of 91.7 per cent during Period 9 (14 November – 11 December 2021). The eastern section of the line achieved 90.7 per cent with the western section achieving 92.9 per cent. There were several service impacting incidents on the eastern section largely related to the infrastructure on the Anglia route. The overall Moving Annual Average trend continues to improve at 94.9 per cent in Period 9.
- 4.9 Passenger services from Paddington are now being operated by nine-car (to Heathrow and Reading) and seven-car (to Reading) class 345 trains. The seven-car trains will be progressively converted to nine-car trains for the start of Stage 5b. The Liverpool Street to Shenfield service transitioned to a full nine-car class 345 operation at the end of December 2021.

List of Appendices to this report:

None

List of Background Papers:

None

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