

Date: 24 November 2022

Item: Elizabeth line Operations and Programme Completion Update

This paper will be considered in public

1 Summary

- 1.1 This paper provides an update on Elizabeth line performance and the status of the Crossrail project.
- 1.2 The Elizabeth Line Delivery Group (ELDG) was formed to ensure appropriate oversight of the delivery of the Elizabeth line by Crossrail and the Transport for London (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 website¹. Available reports will be uploaded to correspond to the meeting of this Committee.

2 Recommendation

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

3 Operations and Programme Update

- 3.1 Through-running services were introduced on the Elizabeth line on Sunday 6 November 2022, with Sunday services also commencing from this date – a major milestone for passengers on the east and west of the line, delivering many of the railway's key benefits.
- 3.2 For the first time, trains with passengers on board entered the underground platforms from the west at Paddington, and from the east at Liverpool Street, and on towards the central section. Meanwhile, passengers boarding at London Underground stations were able to pass through the new Elizabeth line stations at Paddington and Liverpool Street without needing to change trains or enter the mainline station above.
- 3.3 Opening day and the first weekday service on Monday 7 November 2022 were very successful with excellent customer feedback and performance at the levels anticipated. A further verbal update will be provided at the meeting.
- 3.4 Timetable trial days have been a key part of preparation for the successful delivery of through-running, with two trials taking place on Sundays in September 2022, and a further one on 23 October 2022. These days helped to build confidence in the infrastructure and allowed the control teams to practise their

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

operational response to incidents – similar to during the trial operations which ran prior to the opening of the Central Operating Section (COS).

- 3.5 Following the introduction of through services on 6 November 2022, most passengers travelling on the Elizabeth line will have seen significant enhancements to service frequency, connectivity and journey times.
- 3.6 A small number of services will not run directly through into the Elizabeth line tunnels and some customers may need to change at London Paddington or London Liverpool Street National Rail stations.
- 3.7 Bond Street Elizabeth line station opened to passengers for the first time on Monday 24 October 2022, meeting the target of an autumn opening date and its opening marked the completion of all ten of the new central section stations.
- 3.8 On opening day, the doors at Bond Street were opened to customers by the then Commissioner, Andy Byford, and Director of the Elizabeth line, Howard Smith, accompanied by the Mayor of London, Sadiq Khan, and the then Parliamentary Under Secretary of State at the Department for Transport, Katherine Fletcher MP.
- 3.9 Bond Street's opening has been warmly welcomed by businesses and attractions in the area. With capacity for 140,000 passengers each day, the new facility provides a direct link between the West End and Heathrow, further improves connectivity with the Jubilee line and has provided greater accessibility to one of the busiest shopping districts in the UK just ahead of the Christmas period.
- 3.10 The Crossrail Project will move to being a Close Out Organisation from 16 January 2023 when Jim Crawford will step down as Chief Programme Officer for Crossrail, transferring responsibility to Kim Kapur as the Crossrail Close Out Director. At this point, the Crossrail Close Out Organisation will be a full part of the Elizabeth line team, reporting to the TfL Elizabeth line Director. This is timed to follow the major signalling commissioning over the Christmas period.
- 3.11 Updated "SCADA" communications software was successfully commissioned at the end of October, removing two remaining operational restrictions. Meanwhile, the ELR300 signalling software update also underwent successful 'over and back' testing, putting it on track for its planned commissioning over the Christmas period.
- 3.12 Stage 5c remains on track to deliver 24 trains per hour in the central section at peak times. The capability will be delivered by the ELR300 software update, but the timetable will remain the same until May 2023 in order to align with National Rail timetable changes. A further signalling upgrade is due as part of ELR400, in Easter 2023, at which time all station contracts are also expected to be complete.

4 Operational Service

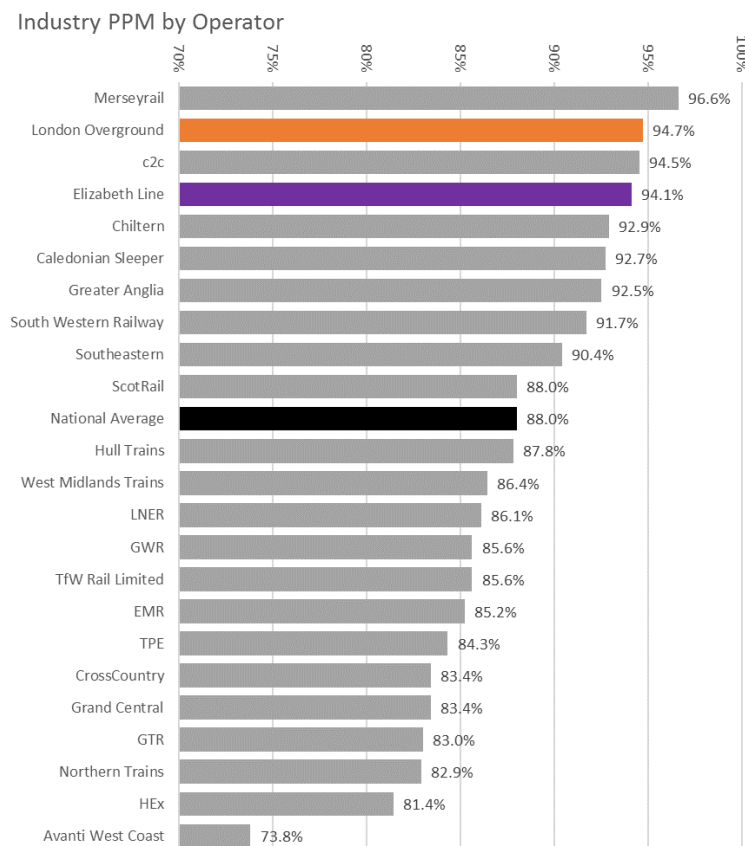
- 4.1 Throughout Periods 6 and 7, the Elizabeth line ran a 12 trains per hour service, Monday to Saturday in the COS, through extended operating hours of 05:30 to 23:30. This improvement in operational hours has been achieved by improved access and productivity of maintenance.

5 Reliability

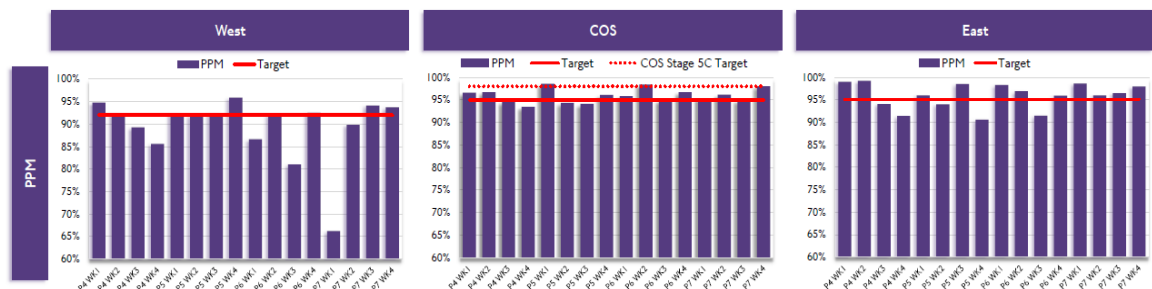
5.1 The overall Elizabeth line Public Performance Measure (PPM) during Period 7 (18 September to 15 October) was at 94.1 per cent – though marginally below target the figure is an improvement on Period 6 and represents good recovery from some major issues on the surface sections of the line, including dewirements on the western section of the route.

5.2 COS performance remained high – at 96 per cent for Period 7, and 96.5 per cent in Period 6. The focus ahead of stage 5b- is on the ability to respond and recover quickly and efficiently to protect the reliability of the railway through this major uplift in services and the added complexity of through-running.

5.3 Chart showing industry PPM by operator for Period 7 (18 September – 15 October 2022):



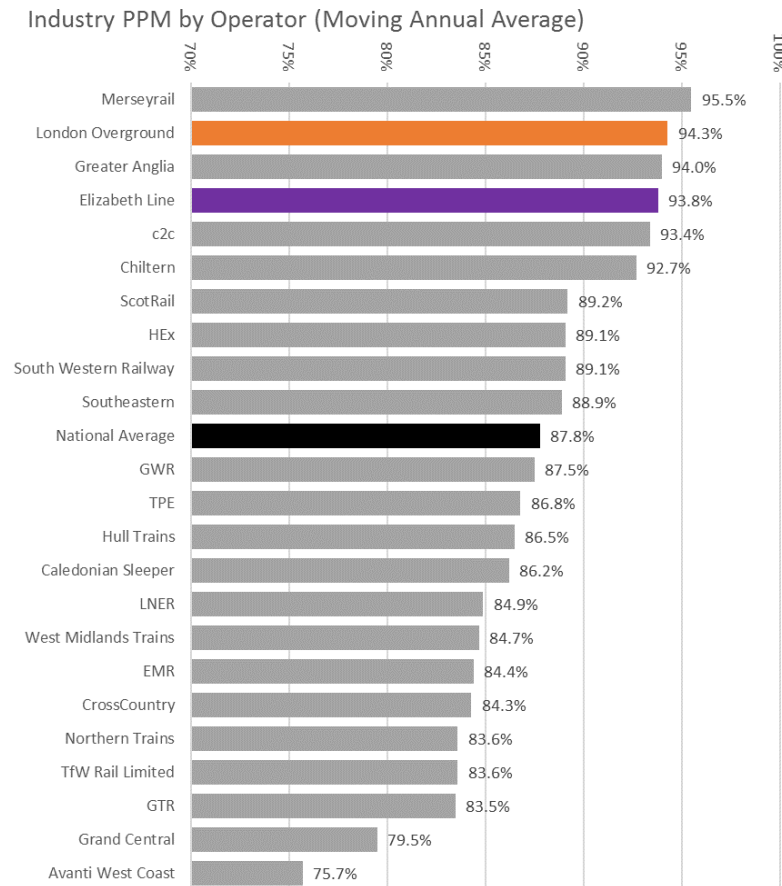
5.4 Charts showing weekly breakdown of PPM on the line for West / COS / East:



(Data date 25 June 2022 – 15 October 2022)

5.5 The Moving Annual Average (MAA) performance is now at 93.8 per cent – remaining the fourth best in the sector.

5.6 Chart showing industry PPM by operator (MMA) – long-term performance indicator up to 15 October 2022:

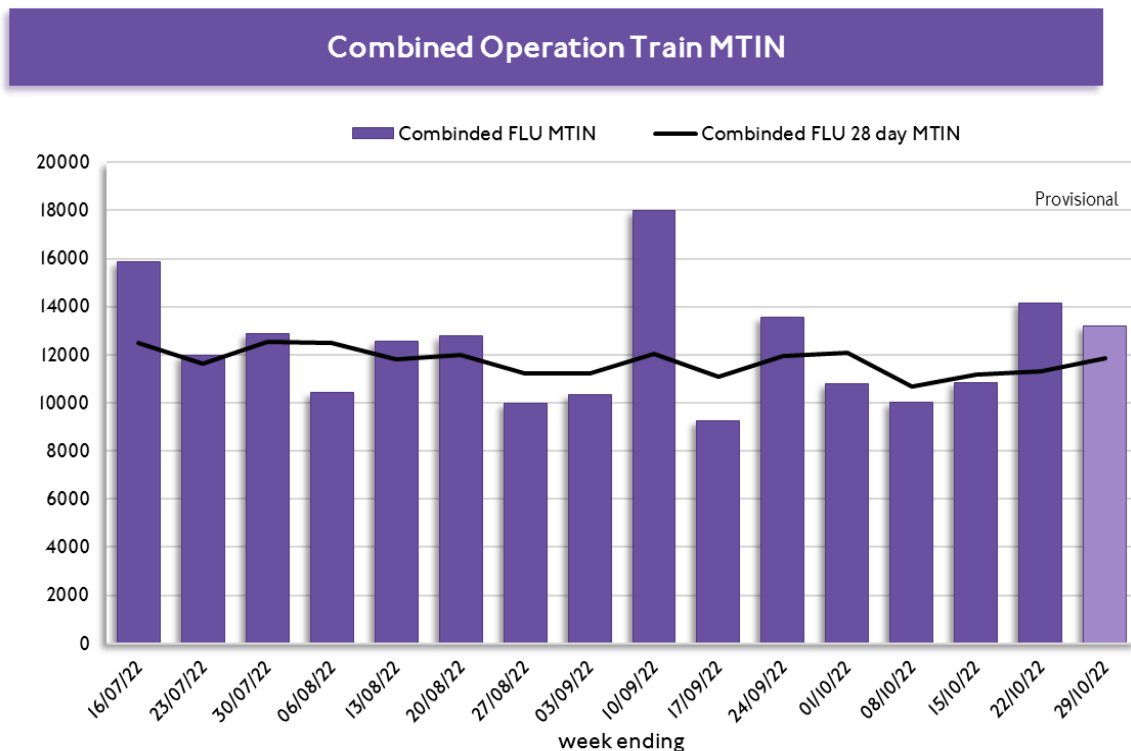


5.7 Overall, platform screen door (PSD) reliability continues to improve. Work is also ongoing towards a permanent solution to detachment or dislodgement of PSD seals, which has been notable at Liverpool Street and Paddington stations as major interchanges for passengers with large luggage. The operational impact has already been largely mitigated since a new and improved incident response procedure was implemented by MTR Elizabeth Line on 1 October 2022.

5.8 On rolling stock, the first of the three remaining seven-car class 345 trains was withdrawn from service on 31 October for conversion to a nine-car Full Length Unit (FLU). All seven-car trains will have been converted by mid-December, at which point the Elizabeth line will be running a homogeneous fleet of 70 FLUs.

5.9 The underlying class 345 MTIN figure (miles per service affecting faults of three or more minutes), which reflects train reliability, has remained largely static but has been consistently above the 10,000-mile mark for 5b minus services.

5.10 Chart showing combined operation (COS and Surface) train reliability for the 16 weeks up to 29 October 2022:

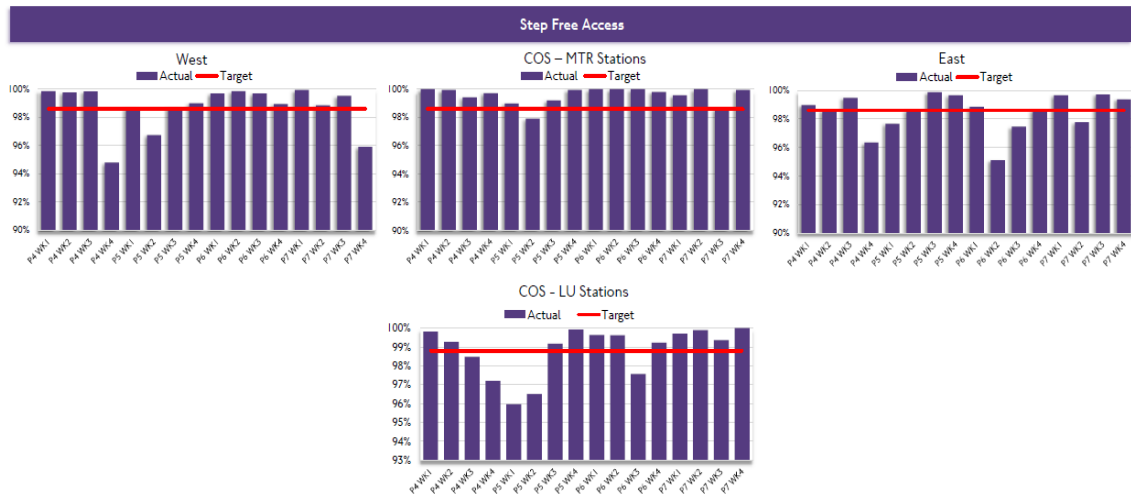


5.11 The train manufacturer, Alstom, has several intermediate initiatives in place to grow reliability and increase the overall fleet reliability to around 15,000 MTIN ahead of the delivery of the next reliability-focussed train software release, scheduled for February 2023.

6 Step Free Access

- 6.1 Step Free Access in the COS has remained reliable since entry into revenue service. During Periods 6 and 7 it remained above target at all stations with the exception of Period 6 Week 3, when Liverpool Street experienced several issues – none of which ultimately affected Step Free Access to the line.
- 6.2 Step Free Access in the west has also been above target, with the exception of the final week of Period 7 when faults occurred at several stations including Southall, Hayes and Harlington, West Drayton and Taplow. These are being investigated by Stannah with a view to reducing future impacts.
- 6.3 In the east, performance has improved with new assets such as lifts being brought online in recent months (at e.g. Ilford, Romford and Goodmayes) and is now generally on target. However, a significant outage of one lift at Seven Kings affected performance in Week 3 of Period 6, which required new parts before the lift could be returned to service later in the week.

6.4 Chart showing weekly step-free access availability by section/operator:



(Data Date 25 June 2022 – 15 October 2022)

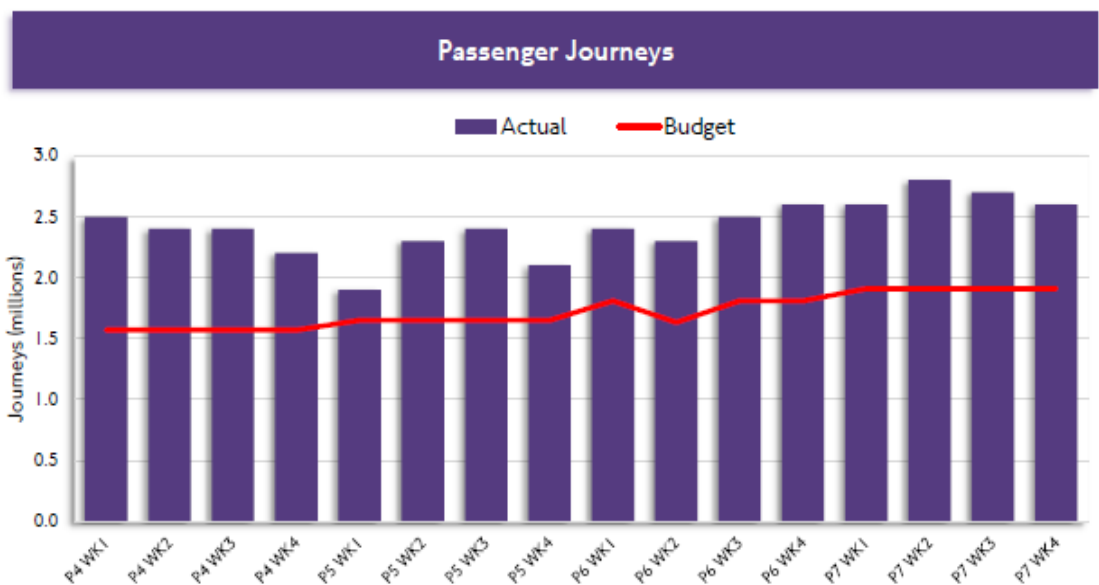
7 Passenger Numbers

7.1 Elizabeth line usage continues to contribute to London’s recovery from the pandemic and following the opening of Bond Street Elizabeth line station, which allows passengers an additional option for interchange with the Jubilee line in central London and is a further major destination to visit along the Elizabeth line route.

7.2 An average of more than 400,000 journeys were made in period 6 and 7 across the whole of the line every single day. Since the railway opened in May 2022, more than 60 million journeys have been made altogether, including 30 million journeys in the central section.

7.3 During Period 7 the number of journeys made in the central section on any one day reached a record 290,000 on Thursday 29 September.

7.4 Chart showing weekly passenger journeys in millions vs budget:



(Data date 25 June 2022 – 15 October 2022)

List of appendices to this report:

None

List of Background Papers:

None

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