



Caroline Pidgeon  
Chair  
London Assembly Transport Committee  
City Hall  
The Queen's Walk  
London SE1 2AA

Crossrail Limited  
5 Endeavour Square  
London E20 1JN  
T: 0343 222 0000  
Helpdesk  
T: 0345 602 3813  
[www.crossrail.co.uk](http://www.crossrail.co.uk)

27 August 2021

Dear Caroline,

I was pleased to welcome you and members of the Transport Committee to Paddington and Liverpool Street Elizabeth line stations earlier this month. On behalf of Transport for London's (TfL) Commissioner, Andy Byford, and the rest of the team, I hope you found the station visits and train ride useful and informative.

Further to my previous update, Crossrail remains on track to open the Elizabeth line in the first half of 2022, and we continue to make progress on completing the works necessary to commence passenger services in the central section of the railway next year. We are doing everything we can to complete the Elizabeth line safely and as quickly as possible, but there are no short-cuts to delivering this hugely complex railway.

Since my last update, we have continued to increase train mileage, build reliability and flush out any issues with our systems and signalling software through Trial Running. We are currently running 12 trains per hour (tph), the highest frequency of train movements seen in the central tunnels to date. This will be the initial level of service on the Elizabeth line when it enters passenger service in the first half of 2022. In order to help demonstrate that the Elizabeth line can run at the necessary performance levels for future service, we will be undertaking 'testing' 24tph train movements on the railway in the autumn. This will be the service frequency in the central section when the full end-to-end Elizabeth line is operational.

We also continue to make good progress with Systems Testing with a Train (STT), which, alongside 12tph train movements, is fundamental to our progress. These final integration tests are going well, with the majority of tests completed to plan with positive results, however there is more work to do over the coming months.

In the last month, both Paddington and Whitechapel stations have been handed over to TfL, with seven stations now handed over in total. As a result, the station delivery programme is now focused on integrating Abbey Wood station, achieving SC2 at Bond Street and handing over Canary Wharf.

## Safety

Over the last three four-weekly periods, the number of High Potential Near Misses (HPNMs) reported has been reducing with zero significant injuries reported over the last four periods. Since my last update, there have been no reported HPNMs across Crossrail sites.

**MOVING LONDON FORWARD**





On 21 July and 3 August, failures occurred to two Voltage Transformers, which measure the voltage on the 25kV line. Whilst no injuries were reported, the Office of Rail and Road have been informed of these incidents. A formal investigation is underway to ascertain remedial action.

COVID-19 cases across sites are being contained and continue to be closely and carefully monitored through the Gold Response Team structure. Our sites continue to observe restrictions in order to mitigate against spread.

## **Trial Running**

The Trial Running phase continues to progress well with 12tph timetabled train movements in operation on the central operating section. To date, a number of expected settling down issues encountered during Trial Running have related to known issues in the current software configuration and are expected to be resolved with the ELR100 software release.

The ELR100 software is the last major configuration before revenue service and is pivotal to the programme advancing through to the next phase of the programme, known as Trial Operations. Once the software is ready to be commissioned a further blockade, planned for the autumn, will take place to complete elements of outstanding works in the tunnels, including completion of the Tunnel Ventilation System (TVS) upgrade works.

During the Trial Running phase, we are also completing STT, the final railway integration tests to ensure that all of the components work seamlessly together for our assurance case. These tests are being carried out on the TVS, trains, software, signalling and power systems. The final integration tests can only be done at this stage now that there is a complete railway available.

A key success factor in managing the access complexities we have encountered since transitioning to a ROGS environment is to reduce works that require access to assets on the operational railway. The outstanding works remaining from the 18-day blockade in June are being reprofiled through the Outstanding Works List process. The blockade output evidence is also being processed into our document management system and remains a priority for assurance completion.

## **Trial Operations**

The next phase of the Crossrail programme is Trial Operations. As we move through Trial Running, we are preparing for this important stage of the programme, which will involve exercises to confirm that the railway is ready for passenger service. Our forecasts continue to project that Trial Operations will commence in November 2021 at the earliest, however several key milestones need to be met before this important and final phase of the programme can commence.

In order for the programme to move into the Trial Operations phase, the central section stations need to reach specific states of completion. On 23 August, Whitechapel became the latest central section station to be handed over to TfL. As a result of the handover, a new ticket hall and lifts have opened for customers at the station, reopening the previous entrance on Whitechapel Road with the addition of step-free access to London Underground and London Overground platforms.

In addition, Paddington station was handed over to TfL on 6 August. With both stations now transferred, we now have seven of the new stations handed over to TfL in total. This is the result of significant collaborative efforts between relevant stakeholders. As stations are transferred to TfL,



contractors will be focused on demobilising across the project, significantly reducing the number of contractors on site.

The next station to be handed over is Canary Wharf. Alongside the final integration of Abbey Wood station, we expect Canary Wharf to be handed over in the autumn.

Bond Street is showing encouraging signs that it will meet its requirements to be able to support Trial Operations, and we are continuing works at the station for it to be ready for passenger service.

## **Focus and Challenges**

As mentioned in my previous update, we continue to develop the Delivery Control Schedule 1.2 (DCS), an evolution of DCS 1.1, to ensure that the Elizabeth line is delivered into service as early and as safely as possible. Plans to re-sequence the joining up of the eastern and western sections of the railway and bring forward the commencement of full end-to-end Elizabeth line services have been presented to and approved by the Programme Sponsors. The latest plans bring forward the delivery of key Elizabeth line benefits by ensuring that services from Reading, Heathrow and Shenfield can connect with the central tunnels sooner than previously planned after the opening of the central section of the railway. The earliest expected date for this is autumn 2022. Full end-to-end services will commence no later than May 2023.

In addition to continued work on the DCS 1.2, a series of Cost To Go workshops have been carried out in order to develop robust plans for minimising our outturn expenditure.

As the programme continues to make positive steps towards the opening of the Elizabeth line, challenges remain in the short-term to integrate the railway. These challenges are mainly driven by pressure on the remaining stations programme impacting assurance activities for entry into Trial Operations.

## **Operational Readiness**

The Public Performance Measure (PPM) for TfL Rail services in period 4 improved to 95.2%, the second best in the country, with only Merseyrail delivering better performance. The Moving Annual Average also remained above target at 95.4%.

Following the introduction of nine-car full-length Class 345 trains on the Liverpool Street to Shenfield route in May, six are now in operation alongside seven-car Reduced Length Units (RLU) and Class 315 'legacy' trains. Replacement of the remaining RLUs and the Class 315 trains will commence in November.

RfLI is preparing for the start of Trial Operations and the subsequent increase in operational hours. Speeding up the process of moving between operations and maintenance activities is a significant objective, with a number of initiatives encompassed within an overall Engineering Hours Improvement Programme.

The training and assessment programme continues with more colleagues completing their training. Despite COVID-19 impacting operational staff availability, the Route Control Centre in Romford has remained open and productive.



## **Network Rail**

Station upgrade works by Network Rail continue in the east at Ilford and Romford, with entry into service of the new station buildings anticipated in early 2022. On the western section of the railway, Southall opened on 26 August and Hayes & Harlington is forecast to open in early September.

We remain focused on completing the remaining works ahead of the Elizabeth line's planned opening in the first half of 2022. As we approach the end of the summer, we will be looking ahead towards a busy autumn for the programme, with key milestones in our stations and railway commissioning programmes set to be achieved.

Kind Regards,



**Mark Wild**  
**CEO**