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Dear Caroline,

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

Earlier this month at the Elizabeth Line Committee, I provided more detail of our forecasted earliest date for Trial Operations (November 2021) and passenger services (February 2022); as well as the P50 and P80 dates (i.e. the date by which, through risk modelling, a milestone is achieved 50% of the time and 80% of the time). These dates are all within the August 2020 announcement of opening the line within the first half of 2022. I have enclosed a copy of the dashboard, where this information is displayed, with this letter.

I was pleased to note that the National Audit Office's latest report on Crossrail, published on 9 July 2021, noted that the programme was in a more stable position and good progress was being made on the challenging volume of work required to complete the project.

Since my last update, we have completed the routeway blockade, resumed Trial Running and increased the number of timetabled train movements from eight trains per hour (tph) to 12tph. These train movements are critical for increasing mileage across the network, supporting reliability growth of the railway and flushing out any issues with the systems and signaling software. Later in the summer we will be undertaking 24tph demonstrations on the railway, which will help demonstrate that the Elizabeth line can run at the necessary performance levels for future service.

On 5 July, Liverpool Street became the latest station to be transferred to TfL, meaning that over half of the central section stations are now under the responsibility of TfL. We expect Paddington to be the next station to join this growing list within the coming weeks.

It is going to be a busy end to the summer with a number of milestones to be achieved, including the transfer of Whitechapel station, but we all remain focused on delivering this railway to the highest safety and reliability standards.

MOVING LONDON FORWARD





Safety

With a rise in the number of COVID-19 cases and those having to self-isolate, we remain vigilant to this threat. In recent weeks, we have seen an increase in the number of people affected on the project, but this number is lower than the peak seen earlier in the year. It is also the case that the majority of those affected are being asked to self-isolate rather than having tested positive for COVID-19. It is being closely and carefully monitored by the Gold Response Team structure and we continue to observe restrictions on site to mitigate against spread.

Our health and safety performance indicators continue to be favourable. Despite the challenges involved in transitioning from a construction environment to an operational railway, during the last three periods there were no lost time accidents on the programme. Our positive record is testament to the interventions undertaken through the Safety and Health Executive Leadership Team (SHELT) forum.

Trial Running Phase

Current indications suggest that Trial Running is progressing well. Following a planned pause to the programme for the routeway blockade, we resumed Trial Running on 12 July and we are currently running a 12tph timetable of train movements in the central section. This is a significant milestone for the railway as this is the configuration that will be used when the Elizabeth line initially enters passenger service.

During the summer months we will be continuing to build mileage accumulation as well as identifying any defects and bugs in the systems and software. Presently, the issues that have arisen through Trial Running have been known issues that the next software update (ELR100) should resolve. We will also be using this time to complete the final railway integration tests to ensure that all of the components work seamlessly together for our assurance case. Tests will be carried out on the railway and will include testing the tunnel vent systems, trains, software, signalling and power systems. These final tests can only be done at this stage, now that there is a complete railway available.

Trial Operations

Trial Operations will involve exercises to confirm that the railway is ready for passenger service. It will comprise staff and volunteer exercises to make sure that all systems and procedures work effectively. Completion of Trial Operations will mark the final step before passenger services can commence in the first half of 2022. Our latest forecasts project that Trial Operations will commence in November 2021 at the very earliest but there are several crucial milestones that need to be achieved before then for this to happen.

Liverpool Street station was successfully transferred to TfL on 5 July and the benefit of this for passengers right now is that they can use the refurbished station entrance for Moorgate station to access the Circle, Metropolitan and Hammersmith & City lines, step-free, ahead of the opening of the Elizabeth line. Once the line opens, step-free access will also be provided to the Northern line.

Paddington is the next station in line to be transferred to TfL in the coming weeks, followed by Whitechapel and then Canary Wharf. As more stations are transferred to TfL, contractors will be focused on demobilising across the project, significantly reducing the number of contractors on site.

Bond Street is currently showing encouraging signs that it will meet its requirements to be able to support Trial Operations, although there is still work to do at the station for it to be ready for passenger service.



The completion of the 18-day blockade in the routeway is another vital step towards being able to enter Trial Operations. The purpose of the blockade was to reduce the number of the remaining intricate activities in the tunnels and stations uninterrupted, as Trial Running was paused during this period. It was a successful blockade with productivity at 95%. There are now only around 100 items left to complete on the routeway, planning is underway to complete these during a further blockade in autumn.

The main critical path on the schedule remains the ELR100 train and signalling software commissioning. Although the product development is complete, Siemens still need to complete the engineering phase of the software and the complex task of integrating it onto the railway.

Focus and Challenges

The transition to an operational railway is one of the most complex and challenging events in the history of this railway. However, it was achieved safely and in line with our schedule. To reduce the challenges that have been encountered from working in an operational railway environment, a specialised team was set up to improve access to allow for the necessary works to take place safely. Interventions have been put in place to successful effect, securing safety critical resources and supporting existing access procedures. Work is being carried out to deliver further improvements during the Trial Running period.

An improvement programme has been put in place to improve productivity levels, particularly across the station teams. The plan is intended to maximise available engineering hours and establish a stable maintenance plan. A conservative estimate is showing that an extra hour of productive time per evening is being accrued as a result of this intervention.

The next stage of the development of the Delivery Control Schedule 1.2 exercise continues. The revised plan up to the commencement of passenger services is now agreed and the final component to complete this piece of work is doing the same exercise for Stages 5B and 5C and the associated cost and risk elements.

Operational Readiness

The Public Performance Measure (PPM) in the last period was 94.2%. The below target performance is partly attributable to the impact of flooding at Goodmayes, a person being struck by a train at Gidea Park and a track circuit failure on the west.

Alstom are working on new additional train software to rectify the software defects that have impacted train reliability serving the Heathrow and Reading routes. They are also carrying out inspections on all the trains after the emergence of non-software defects related to doors and other equipment.

There are plans to increase the number of nine car trains serving the Liverpool Street to Shenfield route to six this month. The transition to a full complement of nine car trains serving the eastern route will start in late autumn when the requisite number of transit movements can be made available through the central section tunnels for maintenance at Old Oak Common depot.

Maintenance training continues against a tight plan and as the railway moves further into Trial Running some of the new colleagues within maintenance will gain further experience and competence, allowing for the completion of their final assessments.



A revised staged opening plan for earlier opening of the Elizabeth line Stage 5 has been developed and approved by Sponsors. The latest plans ensure the Elizabeth line services from Reading and Heathrow and Shenfield can connect with the central tunnel as soon as possible 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 be timetabled by no later than May 2023.

Network Rail

The major redevelopment of West Drayton station is now complete and opened to passengers on 20 July. The station enhancement works have transformed the station providing a revamped ticket hall and two new lifts enabling step-free access to the main platforms serving TfL Rail and Great Western. It will be fully step-free by the end of the year for the first time in the station's 183-year history.

Station enhancement works at Hayes & Harlington and Southall stations are continuing to make good progress and they are expected to open to passengers in August. Challenges, however, are still being experienced by Network Rail at Ilford and Romford stations, that are causing pressure to the schedule for completion of their works.

The focus of the project remains on safely delivering this railway for Londoners in the first half of 2022.

Andy Byford and I are looking forward to hosting you, and the other committee members, during your visit on 10 August.

Kind Regards,



Mark Wild
CEO