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Dear Caroline,

I would like to start by thanking you for our meeting last month, which enabled me to give you an in-depth update on project progress. I hope you found it useful.

As I mentioned at the meeting, Crossrail remains on track to open the Elizabeth line in the first half of 2022. We are doing everything we can to complete the Elizabeth line as quickly as possible, but there are no short-cuts to delivering this hugely complex railway.

Following the commencement of timetabled train movements in May, we successfully increased the number of trains from four to eight trains per hour (tph), on 7 June, operating through the central tunnels as part of the major railway trials taking place on the system throughout this year. 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 signalling software. Once completed, it will demonstrate that the Elizabeth line can run at performance levels necessary to move to the next phase of the programme.

After successfully entering Trial Running, the focus remains on completing the necessary works at stations for transfer over to Transport for London (TfL), as well as ensuring that the next version of the train and signalling software is commissioned to schedule. We have recently added Woolwich to the number of stations that are now under the responsibility of TfL, and we have almost completed our first construction blockade following the transition to ROGS, focused on physical works, testing and inspections in the tunnels and stations. Liverpool Street station is expected to be transferred to TfL in the coming days.

Everyone working on this railway is focussed on the tasks ahead, in what will be an extremely busy but exciting couple of months in the journey to bringing the Elizabeth line into passenger service.

### **Safety**

Delivering a safe railway in an equally safe working environment is our top priority and this is reflected in our recent safety indicators. Despite the challenges involved in transitioning from a construction environment to an operational railway, during the last two periods there were no reportable or lost time accidents on the programme. There was, however, a hydraulic fluid spill in the tunnels that was quickly cleared and was reported to the relevant authorities.

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As a project, we continue to be vigilant to risks to safety and in recent months we have stepped up our levels of engagement with colleagues to remind them of the changes to the processes and procedures that we now operate under. This is now even more important as we look to safely complete our first construction blockade under the new rulebook.

### **Trial Running Phase**

The early stages of the timetabled train movements in the central operating section have been encouraging. We commenced four tph on 10 May 2021 and eight tph commenced on 7 June 2021. This has helped continue to build competence and experience of the drivers and the staff in the Route Control Centre.

We are planning to increase the number of trains to 12 tph in the tunnels from the middle of July, after the blockade. This will be a significant moment for the project as this will be the configuration of the Elizabeth line when it enters passenger service. So far, reliability during Trial Running has been good and there are not any new software issues that we weren't already aware of and that won't be resolved in future upgrades.

### **Trial Operations**

Before being able to commence Trial Operations a number of programme milestones need to be achieved in addition to commissioning the remaining stations.

On 21 June we started an 18-day blockade focused on finishing numerous intricate works that connects the tunnels and stations. While this is underway Trial Running of trains is currently paused. As previously mentioned, this is the first blockade operating under the new rulebook and if we can mirror the productivity levels of previous blockades, albeit they were under a construction environment, we should be able to reduce the outstanding work required for Trial Operations.

Uploading the passenger-quality software, called ELR100, onto the central operating section is critical to being able to commence Trial Operations. The developer, Siemens, needs to complete the engineering phase of the software and the complex task of integrating it onto the railway. Once the software is commissioned, a further blockade will take place to complete any elements of outstanding works on the routeway.

During the summer period we will be completing the integration and testing phase of the railway, bringing together the whole railway to ensure that all of the components work seamlessly together. This will enable us to form the final safety case sufficient for Trial Operations. We will also use this period to increase the accumulation of mileage as we move to 12 tph, demonstrating the railway's reliability and capacity to deliver a safe service for passengers.

Work continues to finish off the stations to a point where they can be transferred to TfL. Good progress is being made having previously transferred Custom House, Farringdon and Tottenham Court Road stations to TfL.

Woolwich station has recently been transferred to TfL who will be responsible for the station as the Infrastructure Manager. This brings the total number of central section stations transferred to four. The next station will be Liverpool Street in the next couple of days and then Paddington, which is expected in the coming weeks.

Whitechapel station has recently entered the T-12 process and it is expected to be transferred later this summer. The T-12 milestone means that the station is considered to be 12 weeks away from being ready for transfer to TfL. Work at the station will now be primarily focused on the extensive testing and commissioning of systems ahead of the Elizabeth line opening. Reaching this important milestone allows the contractor to



commence the demobilisation process across the site and enables Crossrail to commence the process of transferring the station over to TfL.

Works continue at Canary Wharf station to support its scheduled transfer to TfL after Whitechapel station; and Bond Street is currently showing encouraging signs that it will meet its requirements (SC2) in the autumn to be able to support Trial Operations.

### **Focus and Challenges**

The focus of the project remains on achieving the opening of the railway to passenger services in the first half of 2022. Over the past couple of months there has been demonstrable progress in line with our most likely programme forecasts and we are now concentrating on mitigating any pressures to the Trial Operations schedule.

A joint Crossrail and TfL working group has been established to oversee the various workstreams that are crucial to achieving entry into Trial Operations. This group meets on a weekly basis to look through the data and if there are any issues that are vital to delivery, they are escalated to executive leadership for intervention.

The refreshed Delivery Control Schedule (DCS) will shortly be finalised. It will provide a fully assured, risk assessed, articulation of the works to go, taking into account the scope schedule, cost and risk exercises that are being actioned.

### **Operational Readiness**

The Public Performance Measure (PPM) in the last period were both better than target. The east achieved 97.3% and the west achieved 95.6%, the highest level since the end of the summer last year. The Moving Annual Average trend also better target, recording 95.8%.

Train software updates have driven an improvement in reliability in the Class 345 nine-car Full Length Units (FLU) operating the Reading and Heathrow services. Although there has been a welcome improvement, it is not currently at the forecasted levels partly due to the emergence of non-software related door and hardware issues. The manufacturer, Alstom, is reviewing future software releases and instigating a fleet-wide component inspection regime.

The new Stage 4a timetable between Liverpool Street to Shenfield was launched, as planned, on 16 May, using the seven-car Reduced Length Unit (RLU) fleet supplemented by a residual number of Class 315 trains. On 26 May the first three nine-car trains (FLUs) entered service on the route. The transition of the Liverpool Street to Shenfield service to a full FLU operation (22 trains) will start in the autumn.

Maintenance training continues against a tight plan, and as we move 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.

### **Network Rail**

Network Rail are continuing with station enhancement works. Good progress continues to be made at West Drayton, Hayes & Harlington and Southall stations, with step free access forecast for the end of the summer. There are, however, challenges being experienced by Network Rail at Ilford and Romford stations, that are causing pressure to the schedule for completion of their works.

We remain absolutely resolute in our determination to provide Londoners with a safe and reliable railway.

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On current performance the project remains on target to achieve opening to passenger services in the first half of 2022.

Kind Regards,



**Mark Wild**  
CEO