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Dear Florence,

At the Crossrail Board meeting on 18 July 2019 we presented a more detailed Delivery Control Schedule (DCS) mentioned in my previous letter. The Crossrail Board will meet again on 15 August and while progress is being made, we acknowledge that there are still risks to the project. We are committed to meeting the opening window of October 2020 – March 2021, but any risks are being identified and tracked with programme-level risk assessments on both schedule and cost. Around 120 key milestones have now been identified and are being tracked. So far, 11 out of 11 milestones that were due to have been achieved have been met.

I previously mentioned some critical areas that are being focused on, including: progressing Bond Street to the required stage of completion to allow us to commence trial running early in 2020, software convergence between Siemens and Bombardier, resource availability in our contractors' supply chain, testing and commissioning the railway and the handover process of assets to the infrastructure managers. We are now also including productivity as this will be crucial to ensuring that we achieve milestones.

We have also held sessions with our key Tier 1, 2 and 3 contractors to collaborate and discuss the best ways to work together to address the priorities for the project. We will continue with this partnership approach and meet every six weeks with the next meeting in September.

Work is continuing to align the final forecast cost for the central section of the route. Since receiving the schedules from our Tier 1 contractors, calculations have continued alongside further discussion and internal scrutiny. However, there are still some elements of risk around the project to be identified before a full cost can be reported.

Please find below the rest of this month's update on the Crossrail project for the Transport Committee of the Assembly.

## Safety

On Health and Safety, overall performance remained consistent in July and was the third consecutive period with no serious reportable incidents (known as RIDDOR incidents). In fact this was the first time in thirteen periods where there have been no reportable accidents and none that required time off work.

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However, there was cause to investigate two High Potential Near Miss events. At Tottenham Court Road a contractor entered a room with a limited access permit and opened a live electrical enclosure without permission and caused it to short to earth when closing the door. A safety alert was issued immediately, and the causes investigated with all similar equipment examined and the investigation learning shared.

ATC, the Systemwide Contractor, suspended Dynamic Testing (DT) due to concerns that some of the train tests may not have been fully authorised or included in the Test Run Dossier (TRD). This was the right action for safety and investigations identified causes and a number of corrective actions which have now been implemented.

On a more proactive note, our “Golden Rules” for safety were refreshed and relaunched with an updated promotional film being shared across the programme. The Non-Executive Directors also participated in ‘Safety Conversation’ training and site visits at Whitechapel and Woolwich, and the feedback from this has been very positive.

In response to High Potential “Near Miss” events, we have focused on mitigating risks related to the operational railway. In collaboration with our partners we have worked together to design an improvement plan across the Systemwide Contract. Implementation of the plan will be monitored.

The Crossrail Safety, Health Executive Leadership Team (SHELT) met again this month, the 80th time this meeting has been held. We will continue to investigate all significant incidents and share all learning across the programme through SHELT and the Crossrail Contractors Learning Forum.

### **Central Section Progress**

We have published the next in the series of videos on our website ([www.crossrail.co.uk](http://www.crossrail.co.uk)) to show the state of completion at three more of our central London stations (Paddington, Farringdon and Whitechapel). Alongside this we also shared new images from all stations. These all highlight the progress that has been made in fitting out station interiors and the transition from heavy construction to the process of testing and commissioning the systems required for the stations. Progressing Bond Street station does remain a key area of focus, but we are seeing positive work.

All work to interface test the platform screen doors is now complete and all the low voltage and lighting systems in the routeway (excluding those powered by Bond Street station) have also been initially tested ready for further integrated testing.

The handover of Victoria Dock Portal, Pudding Mill Lane Portal and Mile End Shaft to the Infrastructure Manager, which was delayed from July due to discovering additional complexities, is on course to be achieved later this month. Rail for London Infrastructure (RfLI) teams supported a readiness meeting on 26 July which counted down four weeks until handover, confirming the dates for Victoria Dock Portal and Pudding Mill Lane Portal transferring to RfLI as landlord from 23 August and 30 August respectively.

Reaching these milestones will help with the handover of the new stations and parts of the routeway when we get to the point that they are completed and ready to be passed on to the Infrastructure Manager as we will have a more rigorous countdown process alongside the DCS and the actual handover procedure will be more refined.



## **Main Dynamic Testing**

The co-located joint team of senior influential technical experts from Bombardier, Siemens and Crossrail meet daily to help ensure we achieve an integrated, safe and reliable railway. Working together in the same place means that they are able to quickly find solutions to any integration issues that could previously have taken days or weeks to resolve.

Safety approval was obtained in July to proceed with close-headway, multi-train testing with the latest software configuration (PD+8), that was mentioned in my last update. At present this is in 'standalone' mode which means that the other signalling systems including ETCS will be isolated.

Because of the scale of the changes to the software configuration, only 26 of the previously passed tests were carried-over as passed with PD+8. These mainly related to radio coverage and balise (electronic beacon) positioning tests. Of the tests undertaken since the new release was introduced, 19 have passed, bringing the total up to 45.

However, some tests of auto-reverse functionality have failed and there have also been a number of failures with platform screen door tests. These failures are currently being investigated and a fix for the platform screen doors is currently in the process of being implemented.

Testing of the current train and signalling software configurations has also continued at the Crossrail Integration Facility (CIF) in Chippenham. Of 106 test scenarios capable of being executed at the CIF with the current configurations, all have now been attempted, with 60 passing.

The next Siemens software configuration (PD+9) was also developed and available for rig testing as planned on 29 July. The software configuration that follows this (PD+10) is important as it is the software version that is intended to be used at the point where the project moves to Trial Running.

## **Operational Readiness**

In July we were able to successfully introduce the first nine car (full-length) train on TfL Rail passenger services in the west between Hayes & Harlington and Paddington. This is an important step in operating the full length trains which will be used for future opening stages of TfL Rail and the Elizabeth line.

We are still on course for TfL Rail to start operating the stopping services from Paddington to Reading in December this year (known as Stage 5A). We plan to use the nine-car trains, extending the service from Hayes & Harlington to Reading but there is also a contingency plan if software updates mean that we have to run the seven-car trains. TfL Rail already staff 11 stations between Acton Main Line and Taplow (excluding Slough) as TfL Rail stations after taking over the running of these from Great Western Railway (GWR) in December 2017.

Maintenance teams have now moved into their new Maintenance Management Centre at Plumstead. The teams continue to support the project with track inspections and are still working towards a programme of increased support and familiarisation ahead of taking over the Central Operating Section.



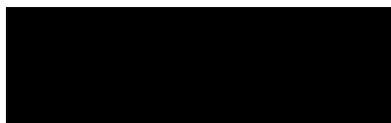
Fully simulated desktop exercises resumed in the Romford Control Centre simulator room with the majority of functionality concerns resolved following our team visiting Siemens in Germany. Traffic Managers have supported the Crossrail contractor ATC in signalling trains during dynamic testing.

### **Network Rail**

Network Rail (NR) continued delivery of their infrastructure works for Stage 5A TfL Rail services between Paddington and Reading from December 2019. Platform extensions at West Drayton are on target to be completed by the end of August, whilst extensions at Slough and Maidenhead are forecast for completion by the end of September. Previously reported delays to the installation of driver's CCTV at Burnham, Taplow and Langley have been reviewed with NR and an action plan has been put in place for approvals before the end of August.

The outstanding design issues with the station enhancement works at Ealing Broadway station are now resolved, whilst works at Ilford and Romford stations remain on forecast for contracts to be awarded at the end of August.

Kind regards



**Mark Wild**  
CEO