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Chair, Public Accounts Committee
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Wednesday 11th March 2020

Dear Chair,

Crossrail progress update: Winter 2019/2020

Firstly, on behalf of the Crossrail board and our CEO Mark Wild, we would like to offer our congratulations on your re-election as Chair of the Public Accounts Committee. We look forward to working with you and the Committee in the coming months.

As you will be aware, last November, Crossrail Ltd confirmed that the opening of the central section of the Elizabeth line (Paddington to Abbey Wood) would not occur during the previously announced six-month window and would occur as soon as practically possible in 2021.

Following this, we committed to providing further certainty to Londoners and those who are eagerly awaiting the opening of the railway. The Board undertook a significant level of due diligence throughout November and December, looking at several key challenges that would impact a new revised opening schedule, including software integration and the assurance and handover process.

On 10 January, Crossrail Ltd announced a revised opening window which stated that we expect the central section of the Elizabeth line to open in summer 2021. This will follow the crucial period of Trial Running to fully test the railway, which will begin from Autumn this year and allows us to shake down the system and build maximum reliability before opening to passengers in Summer 2021.

This includes a final phase known as Trial Operations involving people being invited onto trains and to test real-time service scenarios, which provides an opportunity for

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the railway operators and emergency services to test their responses to scenarios resulting in major service disruption or incidents, such as fire evacuations.

Full services across the route, from Reading and Heathrow in the west to Abbey Wood and Shenfield in the east, are planned to follow by mid-2022.

Reading to Paddington (Stage 5a)

TfL Rail services between Reading and London Paddington (known as Stage 5A) officially commenced on 15 December 2019, which was a significant achievement for the team and highlights the level of progress the project made in 2019.

Central section progress

We are confident that the central section will be substantially complete by the end of the first quarter this year except for Bond Street and Whitechapel stations where work will continue concluding at the end of 2020. All physical works in the tunnels, shafts and portals have been completed.

In our previous update in November, we explained that Whitechapel and Bond Street were behind the other stations in terms of fit-out and completion, but that both had a clear path to completion. While Bond Street is not at the same level of completion as the other central stations, there has been an increase in the level of productivity for activities leading to the required state for Trial Running. We are also increasingly confident that Bond Street will be ready to open with the rest of the central section in summer 2021.

A review is underway to see what lessons can be captured from this increase in productivity to be applied elsewhere on the programme.

Software

Our co-located joint team consisting of senior technical experts from Bombardier, Siemens and Crossrail Ltd is working to increase the reliability of the signalling and train software for use during Trial Running.

Software configuration PD+11 is now being used in the central section, paving the way for the next wave of signalling testing. PD+11 is now safety approved for testing all areas of the railway including using single train, multi-train and close-headway, as well as with multiple trains running across the transition boundaries.

There are four releases of software updates planned for PD+11, providing the opportunity to bring forward any necessary bug fixes to enter Trial Running with the most reliable software possible.

Assurance/Handover

Assurance, particularly that which is required for entry into the Trial Running stage in autumn, remains a priority.

The volume of handover and assurance documentation required to bring the railway elements into passenger operations is significant - approximately 196,000 documents to be completed and over 2.5 million elements integrated across the railway.

This process is complex and takes time, but it is crucial as it verifies that each individual part of the railway has been built to the highest safety standards and allows us to be certain that we have a safe, reliable and operational railway ready to hand over to TfL.

There are numerous meticulous steps that must be followed to complete the assurance process. Each railway element needs to be tested to prove it works as intended. Further testing is required to ensure that not only does it work as a standalone element, but that it works together alongside other elements within the railway.

Elements that are brought together to work in tandem are known as a 'local system', which all need to be tested and ensure they work effectively in our Route Control Centre. After this testing we must demonstrate that each element of the railway is individually safe to operate and maintain.

Only once this complex process has been exhausted, can we move into the Trial Running phase of the project, which lets us test the full railway and allows us to build reliability and safety.

Funding

Crossrail Ltd's detailed cost forecasts continue to show that the project will be delivered within the additional funding range announced in November 2019. This indicated a range of between £400 million to £650 million more than the revised funding agreed by the Mayor, Government and Transport for London in December 2018.

Discussions are ongoing between Sponsors in relation to the additional funding requirements.

Governance/Scrutiny

There continues to be a good working relationship with our Sponsors. We have regular dialogue with representatives from both DfT and TfL including at the Crossrail Joint Sponsor Board. We continue to meet with the Mayor of London on a regular basis to provide a detailed project update in addition to our fortnightly meetings with the Deputy Mayor for Transport and Mayor's Chief of Staff.

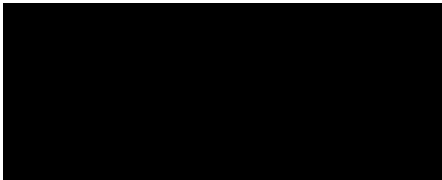
The project continues to welcome all levels of external scrutiny, but we believe there is always room for improvement. As a result, we are continuously reviewing our governance arrangements to ensure the Crossrail Ltd Board and the new reconstituted committees are providing maximum effectiveness to the project.

We have a very constructive relationship with our Project-Representative and we welcome their input across all meetings as they are adding real value to the project. They continue to have unfiltered access to every part of the organisation and we have ensured that they have access to all documentation required in order to do their job and scrutinise the project properly.

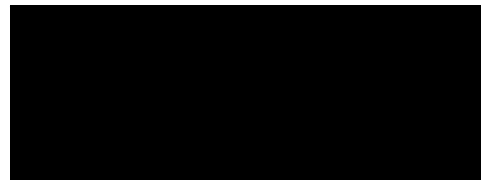
As you will be aware, following the recommendations in KPMG's Independent review of Crossrail, we have worked to strengthen the organisation's 'Three Lines of Defence' including broadening internal assurance coverage of commercial and financial matters. A follow-up review of the programme will shortly be undertaken by the Infrastructure Projects Authority, on behalf of sponsors, focusing on Systems Safety Assurance and Operational Readiness. We will engage with the findings once they have been finalised.

We hope that you find these regular updates useful. If you require any further information about the project, please contact Crossrail's Public Affairs Manager, Ross Garrod, on [REDACTED] or by email at [REDACTED].

Yours sincerely,



Tony Meggs CB
Chairman



Rt. Hon Nick Raynsford
Deputy Chair

CC: Mike Brown MVO, Commissioner at Transport for London
Bernadette Kelly CB, Permanent Secretary at the Department for Transport