

CROSSRAIL PRESS OFFICE MEDIA Q&A – SCHEDULE – 22 AUGUST 2018

The Elizabeth line's central section between Paddington and Abbey Wood will now open in summer 2019 instead of December 2018. The Elizabeth line remains on track to be fully open by December 2019 as originally planned.

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK. Construction is now in its final stages with a huge effort underway to complete and commission the new railway which brings together multiple contracts, new rolling stock and three different signalling systems.

We have been working hard to maintain the programme but sufficient testing time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels, a later than planned start to dynamic testing and delays in the development of the train software that allows operation across the three different signalling systems.

Testing has started but further time is required to complete the full range of integrated tests required to ensure a safe and reliable railway.

The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of system operational reliability has been achieved.

The new Elizabeth line trains are already operating between Shenfield and Liverpool Street (mainline station) and between Paddington (mainline station) and Hayes & Harlington, in readiness for the full opening. The trains are also being tested in the Heathrow tunnels.

Construction activity is drawing to a close with the completion of the remaining architectural fit-out in the new central section stations and will complete this year.

When the central section of the Elizabeth line opens in summer 2019, the railway will operate as three services as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

Crossrail statement (proposed reactive / if asked before wider announcement):

“The Elizabeth line will be opened by Transport for London. Construction of the Elizabeth line is now in its final stages with a huge effort underway to complete and commission the new railway. Everyone involved in the Crossrail project remains focussed on completing the remaining works and supporting the testing phase.”

Key Q&A (for reactive use):

How did the Crossrail programme get this bad so quickly? Who is to blame for this situation?

The Elizabeth line is one of the most complex and challenging infrastructure projects ever undertaken in the UK.

We have been working hard to maintain the programme but sufficient time is required to introduce the next phase of the railway – the central section between Paddington and Abbey Wood – in a way that can be guaranteed to be safe and reliable.

The original programme for testing has been compressed by more time being needed by contractors to complete fit-out activity in the central tunnels, a later than planned start to dynamic testing and delays in the development of the train software that allows operation across the three different signalling systems.

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The railway will open through the central section once full testing of the train and signalling system has been successfully completed and a sufficient level of operational reliability has been achieved.

Did station construction delays affect railway systems testing?

Construction activity is drawing to a close with the completion of the remaining architectural fit-out in the new central section stations and this will complete as planned this year.

While there have been some delays in the station construction programme this has not directly impacted the testing and commissioning of the railway systems.

What was the impact of the electrical explosion at Pudding Mill Lane on the opening of the Elizabeth line?

During the initial energisation of electrical equipment at Pudding Mill Lane sub-station on 11 November 2017, two voltage transformers failed.

The cause of the failure was quality assurance – aspects of the wiring at the sub-station had been completed incorrectly.

This delayed the start of energisation of the power equipment in the tunnels by several months while extensive checks were completed, and thus delayed the start of testing.

What are the three signalling systems that will be used on the Elizabeth line?

CBTC or Communications Based Train Control was selected for the central section as it is technically and operationally proven and is successfully used by many metro systems around the world.

TPWS or Train Protection Warning System operates on the Great Western Mainline and Great Eastern Mainline.

ETCS or European Train Control System operates in the Heathrow tunnels.

What is the current status of construction activity?

Construction activity is drawing to a close with the completion of the remaining architectural fit-out in the new central section stations and this will complete as planned this year.

Will the Elizabeth line open in summer 2019, could it be later?

Everyone involved in the Crossrail project remains focused on completing the remaining testing and commissioning works to enable the central section of the Elizabeth line to open in summer 2019.

Will all the new central section stations open in summer 2019?

Yes. Paddington, Bond Street, Tottenham Court Road, Farringdon, Liverpool Street, Whitechapel, Canary Wharf, Custom House, Canary Wharf and Abbey Wood will all be served by the Elizabeth line when services through the central section commence in summer 2019.

Could a preview / partial service be operated this December?

No. It is not possible to operate a limited or partial service through the central section without it impacting testing.

Could the Elizabeth line open in the central section before summer 2019?

The intention is that the central section will open in summer 2019.

When exactly will the Elizabeth line open?

The Elizabeth line will be opened by Transport for London. TfL will confirm an opening date in 2019.

What is the revised opening strategy for the Elizabeth line?

When the central section of the Elizabeth line opens in summer 2019, the railway will initially operate as three services as planned:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2, 3 and 4)
- Liverpool Street (mainline station) to Shenfield

When the Crossrail project complete?

The project will complete as originally planned in December 2019.

What will be the final cost of the Elizabeth line?

The funding envelope for completion of the Elizabeth line is now £15.4 billion and reflects additional funding requirements by both Network Rail and Crossrail Limited.

The final cost will be confirmed when the programme completes.

Was it known that the Elizabeth line would not open in December 2018 at the time the WMS was published?

No. This situation only became apparent as we progressed through the dynamic testing phase progressed and was not known beforehand.

Have long has it been known that the Elizabeth line would not be ready to open in December 2018?

A final view was formed in August on the basis of current testing progress and technical input from our supply chain leading the signalling and train systems testing.

When did CRL inform Sponsors that it was no longer possible to open in December 2018?

Crossrail formally notified the Department for Transport and Transport for London on XX following a formal decision by the Crossrail Board on XX.

When was the final decision taken and by whom?

Crossrail Limited Board.

What was the trigger that made a December 2018 opening no longer possible?

Lack of sufficient progress with the dynamic testing phase.

FOR BACKGROUND – CRL MEDIA Q&A – ADDITIONAL FUNDING

Crossrail statement (approved):

“A number of factors have meant that additional investment is needed by both Crossrail Limited and Network Rail during this final stage of the programme covering both the new build central section and upgrades to the existing railway. These cost increases are disappointing but additional funding is critical to the delivery of this vital project. £300m will be made available to Crossrail Limited for its remaining programme of works in the central section. Both Crossrail Limited and Network Rail remain focused on managing costs through to project completion.”

Information for journalist:

The Secretary of State has announced on 24 July 2018 that the overall funding envelope for the delivery of the project has increased from £14.8 billion to £15.4 billion.

The original budget for the project was £15.9 billion, including a large contribution from London businesses. Following the Comprehensive Spending Review in 2010, a revised funding envelope of £14.8 billion was agreed. Crossrail Limited is responsible for £12.5 billion of works with Network Rail responsible for £2.3 billion of upgrade works.

Cost pressures have increased on both the Crossrail Limited and Network Rail parts of the project. As we get closer to the opening of the railway, the challenge of delivering a major infrastructure project of this scale and complexity has increased, with fewer opportunities to mitigate these pressures.

Additional funding is being provided to both Crossrail Limited and Network Rail.

£300 million is being made available to Crossrail Limited for its remaining programme of works in the central section, specifically the complex systems installation and testing, prior to the opening of the railway for reliable passenger service.

Around £290 million additional investment is required by Network Rail to complete its upgrades to the existing railway.

Crossrail Limited

Cost pressures in the central section have resulted from a number of factors.

Increased time and resource has been required for the installation and testing of the multiple systems needed to operate the new railway including track, communications, power and signalling and worse than expected ground conditions during station construction. These have prolonged works and compressed the delivery schedule. Some construction costs are higher than was originally budgeted

Network Rail

The need for around £290 million additional funding for Network Rail to complete their programme of works for the Elizabeth line, including those enhanced ticket halls at surface stations, relates to a number of factors.

These include the complexity of integrating new systems onto the national rail network such as a new driver only operation camera system and the poor underlying condition of some of the Victorian infrastructure.