

Crossrail project update

February 10, 2020



Crossrail Ltd plans to bring the Elizabeth line into passenger service as soon as practically possible in 2021.

The central section remains on schedule to 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.

This is the most difficult and challenging phase of the programme with significant integration and testing to complete.

The two critical paths for the project remain software development for the signalling and train systems, and the complex assurance and handover process for the railway; both involve safety certification for the Elizabeth line.

These must be done to the highest quality standards to ensure the reliability of the railway from day one of passenger service.

Crossrail expects to transition into intensive operational testing of the central section, known as Trial Running, in autumn 2020. This will see multiple trains operating in the tunnels to simulate the Elizabeth line timetable.

Once Trial Running begins a period of time will be required to fully test the Elizabeth line before it can open for passenger service. This includes a final phase known as Trial Operations involving people being invited onto trains and stations to test real-time service scenarios.

Crossrail Ltd expects to open the central section between Paddington and Abbey Wood in summer 2021.

Following the opening of the central section, full services across the Elizabeth line route from Reading and Heathrow in the west to Abbey Wood and Shenfield in the east will commence by mid-2022. This will connect the eastern and western sections straight through central London.

Central Section Progress

Each Elizabeth line station has over 50 km of communications cabling, 200 CCTV cameras, 66 information displays, 200 radio antennas, 750 loudspeakers and 50 help points. All this technology needs to be fully installed, tested and integrated.

Fit-out is nearing completion at many stations. The company has handed over the first two of the 30 big engineering structures: Victoria Dock Portal and Pudding Mill Portal.

All physical work for shafts and portals is complete and all Platform Screen Doors have been commissioned. The programme remains on track to complete the remaining tunnel fit-out and snagging activity by early 2020. Tunnel pump drainage and fire mains have been fully commissioned in the routeway along with the radio system.

Main Dynamic Testing

Dynamic Testing of the trains in the tunnels remains underway using 4 x class 345 trains. A key purpose of testing is to identify and fix any software bugs in the train control system and to make sure everything works as planned.

The latest Siemens software configuration, PD+11, was installed in the central tunnels in December. PD+11 is now safely approved for testing all areas of the railway including using single train, multi-train and close-headway, as well as with multiple running across the transition boundaries.

Assurance

The Crossrail programme is now at the stage where it is progressing assurance of the railway.

Assurance documentation, particularly that which is required for entry into the Trial Running stage in autumn, remains a priority and the programme has made substantial progress in transforming processes for assurance documentation focusing on the requirements for Trial Running.

Operational Readiness

TfL Rail stopping services between Reading and Paddington commenced in December using the new

Elizabeth line class 345 trains. The service is currently operating with 7-car trains and will be extended to 9-car trains later this year.

Transport for London (TfL) is continuing its preparations for the handover of the next infrastructure elements, currently expected to be Mile End Shaft, Royal Oak Portal and Custom House station. TfL is also preparing to take on the role of maintenance support on the track and systems ahead of handover.

Network Rail

Crossrail continues to successfully work towards securing enough access onto Network Rail infrastructure for dynamic testing to continue across the Great Western Main Line and Great Eastern Main Line interfaces.

Network Rail continues its station enhancement works to improve customer service, and a new ticket office has opened at Harold Wood. Construction works took place over Christmas including the installation of a footbridge at Hayes & Harlington and completing subway improvements at West Drayton.

Photo credit: Crossrail Ltd