Case Study: ETCS Testing – Thameslink Core Area

Class 700s

ETCS testing took place during mid-week nights through the Thameslink Core Area, while adjacent lines were open to service traffic, in preparation for ATO to be enabled

Class 700 unit ETCS testing is undertaken as part of the Thameslink Programme works to upgrade the signalling in the Core Area for European Train Control System (ETCS). The Class 700 unit is fitted with ETCS equipment for testing the associated on-train and track-side equipment that has been installed in the Core (mainly track-side balises).

The ETCS signalling system, once operational, provides a high level of safety integrity which will then enable Automatic Train Operation (ATO). Ultimately the consistent acceleration/braking and dwell times provided by ATO can reliably deliver 24 trains per hour through the Core Area.

Overview of ETCS Testing Arrangements

- As per previous arrangements all testing will be undertaken within the T3 possessions. The only difference to previous testing is that the testing will take place over mid-week nights with the adjacent line open to service traffic. All instructions and procedures are still applicable.
- The possession will be taken around the test train (Kentish Town, St Pancras or Blackfriars). When in the initial weeks the signaller at Three Bridges ROC and West Hampstead will be required to set routes as requested by the TIC via the ES.
- As per the WON the possession can be given up around the test train at a signal location agreed between the Signaller and PICOP/ES.
• Separate Signal Box Instructions will be issued to West Hampstead PSB and TBROC to detail the arrangements.
• If the Test Train fails, the possession will be given up and recovery arranged by Kent route control or Derby route control. The test train will be assisted by a Class 700 unit and moved to either Three Bridges depot or Cricklewood depot as appropriate.
• Evacuation procedures remain as they are.
• The timetabled train service will run as booked using the bi-directional line.
• GTR will undertake the necessary station briefings to ensure that station staff are aware of the bi-directional working and changes to platform management, signage and dispatch arrangements.
• No additional planned works, maintenance access or lineside access is permitted within the possessions.
• Staff travelling on the test train are not permitted to exit the train trackside at any time (unless in an emergency).

Initially testing is only in the Thameslink Core. The London Bridge area will be tested once the high-level station works are completed.

**Future ETCS Area:**
Geographical representation

KEY
- ETCS Level Transition Border
- GSM-R Data capacity for ETCS Level 2 required

Author
Case Study produced by Michael Kelly, Programme Manager (Operations), Network Rail High Capacity Railway Systems, October 2018

Further information
For more information on this Learning Legacy case study please email contact@thameslinkprogramme.co.uk