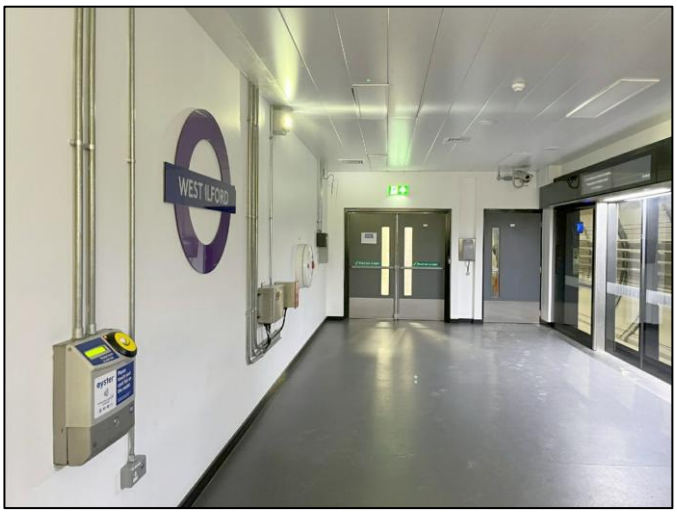
SOCIETY VISIT TO ELIZABETH LINE
STAFF TRAINING FACILITY AT WEST ILFORD

The Society organised two visits to this facility, one on 24 May and the second on 14 June 2024. I was very fortunate to be one of the party of eight members present on the latter visit. This visit was slightly delayed in commencing, as our host, Tim Phillips, was under the impression that it was booked for the following Friday. However, despite the delay he more than made up for it by a very friendly welcome, giving us a two-hour tour with excellent explanations and demonstrations of all there was to see inside, as well as fielding and answering extensive questions.

To start with, a bit of background on the facility. From what I already knew added to from an internet search, the building was a purpose-built training facility providing a range of training and qualifications to people working in tunnelling and underground construction to address shortages of skills needed to assist delivery of the Crossrail project. The building still displays its original name externally, “Tunnelling and Underground Construction Academy” was indeed funded as part of the Crossrail legacy and opened in 2012, being the first such facility outside of Switzerland. It once had part of a tunnelling boring machine outside and a tunnelling locomotive and wagons inside. Initially it was run with the National Construction College, but TfL seems to have awarded a contract to PROCAT (Prospects College of Advanced Technology) in 2017, but they merged with SEC (South East College of Further & Higher Education) in 2018 and pulled out around that time. It is now run by TfL and in the reception, the lobby displays signage proclaiming it to be the “Elizabeth Line – Home of the Rail for London Infrastructure Training Team”.

So, following a brief introduction to the facility and Tim’s previous working history with London Underground in the reception lobby, with office area visible behind, we viewed a model of the tunnels and had the ventilation and heat recovery systems explained to us. We then entered the vast corridor between the workshops and were taken into one on the south side into what is mock-up of a part of an Elizabeth Line platform. Here we could inspect and had explained to us the platform edge screens, doors and emergency break-out doors with display panel. Present were also an Oyster validator, entry gates, help point, station announcement point, departure indicator and a West Ilford roundel. We had the operation of the line explained, including the design one could see the other side of the platform edge screen and part mockup of a train carriage. We then visited the control room and saw the CCTV systems displaying on monitors all areas of a station to aid dealing with incidents or any inadvertent access point being left open.

Next up, we moved trackside, where we were able to visit the inside of the carriage mockup and see it could be hand pulled along the rail once the hand brake had been released. The long track area was then explained, and the evacuation walkway on one side and the maintenance access the other was very evident, these being throughout the tunnel section of the Elizabeth Line except in the reused Connaught Tunnel (east of Custom House). We could now see the other side of the platform screen doors and breakout emergency panel. We then stepped down to track level and we had the following explained and shown to us; flat bottom rail, Pandrol rail clips (both bolted and spring loaded types), two-piece concrete sleepers with bonded RSJ between to prevent track spread, platform ladder and location indicator light, insulated block joints and overhead the rigid beam containing the copper standard overhead collection supply. Walking along the track in the workshop then we had the CBTC signalling system explained, saw an axle counter, rail greaser, inner rail to prevent track spread over say a metal bridge span, drain covers, point motor, check rail, overhead catenary where it changed to a wire suspended system, self-adjusting overhead wire tensioners, location identification plate, scotch and clip devices, before seeing two sections of slab track on a slightly higher level to one side. One being used throughout the central tunnel section of the line, and the other being a floating type containing a rubber type insulation in its construction for noise reduction purposes used under sections below the Barbican Arts Centre. Then we progressed outside once roller shutter door was opened to follow the track into a conventional ballasted section and saw the electric points heater, overhead circuit breaker and had it demonstrated.



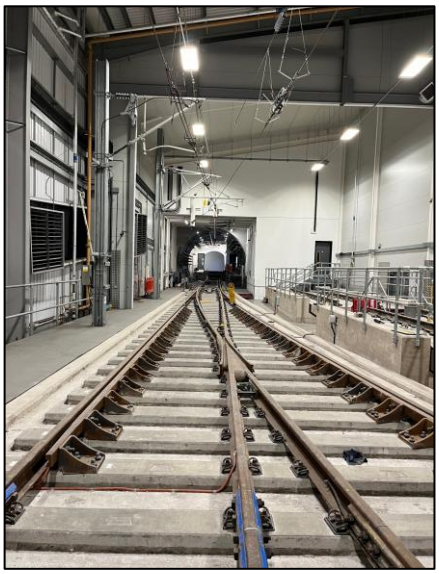
***Left**: The lobby area of workshop showing ticket machines and validator.*

***Below**: Platform edge screen and doors (Left) complete with break out panel to left of doors viewed from lobby area and the view (Right) from the trackside with the breakout panel on the right hand side of the doors.*

All in all, we saw first-hand the wealth of kit installed on the line to allow the trains and signalling to be demonstrated and used to train the staff that maintain the line. Finally, we were shown back into the corridor but via a tunnel evacuation door set as installed on the real railway in the tunnel sections to allow evacuation into the opposite running tunnel in event of an emergency. I've possibly overlooked a few of the items shown or demonstrated and can't possibly have fully reflected all the information provided in answer to all the questions asked, but hopefully the photos included will assist in showing the extent of the facility and illustrating the text for those not present.

Tim was thanked for a very interesting and informative visit.

View of workshop looking east towards roller shutter door to outside track, showing overhead wiring.



View of workshop with pointwork looking west back in towards the car mock-up in the distance.

Mock up of class 345 at West Ilford.