



TECHNICAL MEETING

<https://d10-dev-3.techsoc.org.uk/talks/24ts-challenge-gauge-clearance-piccadilly-line>

24TS – Challenge of Gauge Clearance on the Piccadilly Line

Presented by
Dave Watkinson, Colin Davenport

Thursday 15 January 2026

Venue: CR1 Ground Floor, Palestra, 197 Blackfriars Road, SE1

Commencing at 5:30pm GMT

Talk synopsis

24 Tube Stock (TS) trains are being introduced to the Piccadilly line as a replacement for 73TS. Introducing a new passenger fleet presents a challenge for gauge clearance as business requirements dictate suppliers shall maximise the available space and minimise passenger 'steps & gaps'. The challenge is particularly acute for the 24TS where novel 'floating' bridge cars interface with the surrounding infrastructure in an unconventional way. This presentation will review the requirements within LU Gauging Standard S1156 and the relationship between the infrastructure and vehicles, then examine the specific challenges posed by 24TS to enable infrastructure remedial works and provide assurance to operate.

Speaker biography

David Watkinson is a Senior Leader within TfL Track Engineering and is the technical lead for gauging. Joining LT in 1980 and initially gaining experience in track maintenance, he moved to LU Track Engineering at a time when advances in technology were coming to the fore, transitioning from a drawing desk and hand calculated Hallade alignment designs to a CAD Inrail/BRT environment. From 2004, he has principally provided technical expertise on gauging and PTI issues supporting new LU train introduction on the Victoria and SSR lines plus new fleet to DLR. David leads a team that manages Route Clearance Approval (trains) and Clearance Approval (infrastructure) assurance. Currently, David is an integral part of a team looking at the new challenges posed by the introduction of the radically different 24TS to LU.

Colin Davenport is a Track Gauging Engineer based within TfL Track Engineering, with 12 years' experience working in railway gauging. Colin initially spent five years working for Balfour Beatty delivering gauging support to vehicle manufacturers and infrastructure clients including NR and TfL. During that time, he authored a technical summary report for RSSB evaluating platform gap filler solutions and lead on the development of a new Locomotive Gauge for inclusion in Railway Group Standard GERT8073. A subsequent role at Bombardier/Alstom included working with the design team to ensure gauge compliance of the Aventura fleet being introduced across various GB rail franchises. In his current role at TfL, he provides a range of gauging expertise including supporting the roll-out of 24TS on Piccadilly and Bakerloo lines.