

## MEETING REPORT

# “THE REVERSED ENGINEERED DRAWINGS OF THE REMAINS OF CITY & SOUTH LONDON RAILWAY CARRIAGE NUMBER 163”

Presented by Doug Rose

**A presentation given to the Society on Tuesday 10 September 2023  
at The Gallery at Alan Baxter, Cowcross Street, London, E.C.1**

Doug started his talk by giving an historical overview of the C&SLR: it opened in 1890 as the first deep level tube. All the original carriages were of timber construction with metal cladding on the outside.

There were several batches with wooden frames over the years, coming into service from 1890, built by a few different coach builders.

The first ‘all-steel’ carriages were also from Brush and it was these that arrived in two separate batches built for the 1907 Euston extension. The surviving source material, of which there is little, is all from the first batch and carriage 163 was from the second batch. There were notable differences between the two. These all-steel carriages were of L- and U-shaped flitched beams – fabricated steel with substantial teak inserts. Window and other panel frames were also of teak, inside and out, as were the doors.

In 1913, the C&SLR was bought by the Underground Electric Railway (UERL) which, among others, owned the Hampstead Tube (now the Charing Cross branch of the Northern Line). As the C&SLR was the first deep tube in the world, and also the first electric railway in the world, there were no standards, and so the railway created its own.

All later deep tubes were built with larger diameter tunnels. In order to merge the C&SLR and Hampstead line the C&SLR had to be extended north of Euston to Camden Town, and the Hampstead south to Kennington. The C&SLR tunnels therefore had to be re-bored to a larger diameter and this was attempted overnight with trains continuing to run during the day. Services continued during these works for some time until a tunnel collapse in 1922 caused the line to close for about 18 months and allow the work to be completed. In 1923, all C&SLR carriages were therefore unusable and scrapped or sold off.

Carriage 163 had been stripped of its bogies and chassis and sold for scrap, and sometime soon after, was taken initially to East Molesey where it was converted with home comforts and then placed onto a bus chassis and taken to Wraysbury, near Windsor. In 1974, the London Underground Railway Society bought the carriage intending to restore it at Ruislip Depot. By 2000, they realised the restoration was too complex for their resources and so transferred 163 to the Electric Railway Museum near Coventry, where it was left in a very sorry state.

When this Museum closed in 2017, the carriage, now even more dilapidated, was retrieved by the London Transport Museum (LTM) and had it taken to Neasden Depot. After four years, the depot staff told the LTM to remove it or it would be scrapped.

After an inspection by a specialist company, the LTM was advised that Carriage 163 was in too poor a state to be rescued and so the decision was made to commission a very high-definition 3D video of it, inside and out, before it would be scrapped.

In February 2021, the LTM contacted Doug and asked if he could do a drawing of what remained. He knew that no technical specifications would still be in existence from when 163 was first built and therefore, a full set of measurements and photographs would have to be taken to produce these scale drawings. Doug contacted his friend Printz Holman, who is held as the leading authority by far on the C&SLR, and they agreed to work together on this project and met at Neasden Depot. However, there was not much left of Carriage 163 for them to work on, where all the seats, lights, advertising boards, doors, and so on had gone.

From his archive, Printz had a 1:12 scale, General Arrangement microfilm print out, reduced to A3 in two halves. Although this was for a carriage from the first batch, it gave basic reference points from which to prepare a new drawing of Carriage 163, which was from the second batch. Doug also took over 200 photographs of the remains on his first visit to Neasden. Subsequent visits caused about 450 photographs to be taken overall, as well as a lot of measurements. He showed to the meeting some of these, which revealed how the door mechanisms had worked, and also much other close-up areas from the resulting drawings.

With permission from the LTM, Doug removed and took home one of the window frames and a small section of one of the metal cladding panels from below the windows.

After his third visit, he requested that the carriage be rolled onto its side for his final visit to enable him to document and draw the underside. It was known that the floor was of corrugated steel with a concrete coating (lito-silo), on top of which the wooden slats were laid. Sadly, carriage 163 was cut up in July 2021 and is no more.

All the orthogonal and axonometric drawings, which are at 1:12 scale, along with their accompanying references have been bound into a book, extending to over 60 pages. Two copies are with the LTM, one each at Acton and Albany House (note: the facility at Albany House is about to move to Leicester Square) and are available for reference. The drawings and book contents of selected photographs are also available from Doug's website at **[www.dougrose.co.uk](http://www.dougrose.co.uk)**

After a short Q and A session, during which it was mentioned that two of the engraved windows may be with the Bluebell Railway, the meeting thanked Doug in the usual manner.

**Amanda Griffiths**