Nexus Learning Centre

South Shields

Location: South Shields

Client: Galliford Try

Project Value: £590,000

Date: August 2019 – September 2020

The Project

Nexus commissioned the installation of a new Nexus Learning Centre (NLC), located on the old South Shields sidings, to enable personnel training on Nexus Rail infrastructure and rolling stock. The new facility includes a pair of tracks terminating in a new training facility building, which includes service pits and overhead walkways for access to the Nexus trains. At the rear of the facility is an unconnected 'mock-up' section, which includes a short two track section of railway with Overhead Live Equipment (OLE) for maintenance training purposes. It is not connected to the traction system and is not live.

Scope of works

The Nexus Learning Centre also interfaces with the adjacent South Shields Transport Interchange (SSTI) scheme. The SSTI scheme has reconfigured the OLE through the South Shields area.

As a result, the current OLE tension lengths, which run through the South Shields existing station, have been de-wired as part of a rationalisation exercise.

This resulted in the de-wirement of the existing (shortened) sidings two and three. The scope of the OLE design was to reinstate the wiring to enable electrification of the three routes within the NLC facility, incorporating siding one, and tracks two and three through the facility approach and into the training facility building. Due to the de-wirement works being undertaken by the interfacing project, this project reinstated a second tension length through the current South Shields station which required additional infrastructure within the SSTI area.

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OLE works

REL was engaged by the main contractor, Galliford Try, to complete all the works associated with the OLE infrastructure within the footprint of the new Nexus Learning Centre and interface with the adjacent SSTI.

This included installation of 13x610 CHS pile foundations, main steel installation, small parts steel and associated cantilevers, 3x wire runs, 2x new switches, 3x section insulators and 3x balance weight tension devices. Additional scope included the conversion of existing Nexus cantilever arrangements to Siemens double insulted cantilevers at seven locations.

A secondary part of the works was the installation of a 60m long training span consisting of Siemens double insulated system.

The system comprised of a two-track railway with crossover. Within the training span, 6x double cantilevers, 1x single cantilever and a head span to incorporate the crossover. A total of four wire runs with 3x balance weight tensioners and 1x gas tensioner.

The training span offers Nexus trainee's the opportunity to see all the scenarios of the main system such as overlaps, crossovers and head span set up with section insulator. It also shows the trainee the potential dangers that can occur while working on the system due to heavy radial loads.

All works were carried out successfully by the REL construction team, without accident or incident.

> ***REL was contracted by Galliford Try to install the OLE infrastructure to the new Nexus Learning Centre.***
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> ***This included brand new installation into the depot shed and depot area and tying into the existing Nexus infrastructure at South Shields, as well as installing the OLE to a new training track facility to the rear of the depot building. REL performed very professionally and all of the work was to a very high standard throughout.***
>
> ***I will definitely use them again on future projects.***
>
> **– Peter Stubbs** – Senior Project Manager, Galliford Try

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