



CASE STUDY

Canton VEMS

Customer
Transport for Wales

Completion Date
March 2026

Location
Canton, Cardiff

PROJECT OVERVIEW

Cairn Cross carried out the civils package required for the installation of a new Vehicle & Equipment Measurement System (VEMS) at Canton Depot in Cardiff.

The works included the construction of concrete foundations to support and house the equipment, as well as the installation of under-track troughing routes to facilitate essential services and connectivity.

Cairn Cross also installed the mains power supply to the control unit for the VEMS system, ensuring full operational capability and integration.



THE CHALLENGE

The project was delivered within a live rail depot environment, where train and site traffic were constant and operational safety was critical.

A key challenge was fully understanding all technical and operational requirements prior to construction, ensuring works could be delivered safely without disrupting depot activity.





THE SOLUTION

Cairn Cross adopted a collaborative and well-planned approach to ensure successful delivery.

This included:

- Close communication with the client and shunter control teams
- Detailed site surveys and coordination prior to works commencing
- Production of accurate site maps and drawings
- A structured procurement schedule to ensure all materials were available on site in advance
- Careful planning of labour, plant, and equipment to suit live working constraints

This proactive approach ensured full preparedness before works began on site.



THE RESULT

The project was successfully delivered with seamless on-site construction, completed safely, on time, and within budget.

All civils works were installed correctly and to specification, enabling the smooth and efficient installation of the new VEMS system at Canton Depot.

The system provides monitoring and measurement of wheelsets and key vehicle components, enabling informed decision-making and proactive maintenance to reduce downtime and operational costs.

The project was completed without incident, demonstrating effective planning, communication, and delivery within a complex operational rail environment.



CAIRNCROSS

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