

Anglia NSCD Programme – Gunnersbury Commissioning

Project Overview

Traction Rail Electrical (TRE) delivered the electrical installation and supported testing and commissioning activities for the Gunnersbury element of the Anglia Negative Short Circuit Device (NSCD) Programme, working with Octavius Infrastructure on behalf of Network Rail.

The scheme forms part of the wider programme to provide automatic, secure and safe isolation of the DC traction power system using switchgear with local and remote-control facilities. The completed system is designed to improve workforce safety and significantly reduce the need for personnel to access the railway to apply isolation straps.

Week 20 represented a major commissioning milestone at Gunnersbury, with multiple systems and equipment types successfully brought into service during a single commissioning night.

A key feature of the commissioning was the need to coordinate activities through two separate Electrical Control Rooms - Raynes Park DC ECR and Rugby AC ECR - requiring detailed planning, controlled sequencing and clear communication across the full commissioning team.

Client & Project Information

Client: Octavius Infrastructure / Network Rail

Programme: Anglia NSCD Programme

Commissioning Milestone: Week 20, 2026

Location: Gunnersbury, London

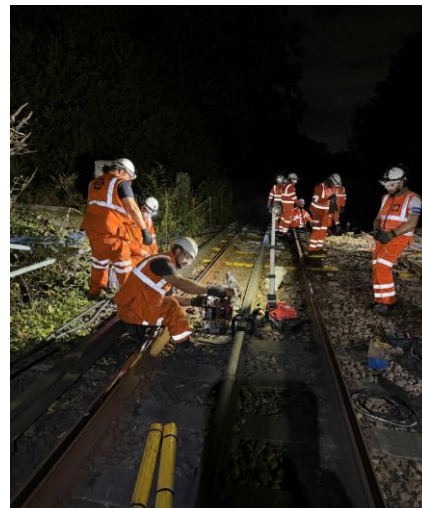
Operational Interfaces: Raynes Park ECR / Rugby ECR

About Gunnersbury site within the Anglia NSCD Project

The Gunnersbury installation provides a remotely controlled traction power isolation system incorporating NSCD equipment, Track Disconnectors, CTS, control panels, communications, lineside interfaces and associated traction power, LV, control and SCADA infrastructure.

The Week 20 commissioning scope included bringing the following equipment and systems into service:

- 6 x Negative Short Circuit Devices (NSCDs)
- 2 x Track Disconnectors
- 2 x Local Control Panels (LCPs)
- 4 x CTS units
- 3 x Lineside Interface Units
- Multiple Sella P2P communications units
- LV supplies
- Associated control and SCADA wiring
- DC traction power cable connections and terminations
- 3 x DNO cubicles
- Multiple Jumper cables



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Key Challenges

- Coordination of a single commissioning window across two separate Electrical Control Rooms.
- Interface between Raynes Park ECR and Rugby ECR operational control arrangements.
- Bringing multiple equipment types and control systems into service in one commissioning night.
- Final connections and traction power cable terminations to operational railway equipment.
- Integration of local control, remote SCADA control, alarms, indications and interlocking.
- Coordination between commissioning engineers, Level A personnel, installation teams, ECR operators, signalling personnel and the wider project team.
- Programme-critical sequencing within the available possession and isolation arrangements.

The Solution

TRE and the wider project team adopted a detailed, staged commissioning approach, building on the pre-commissioning activities completed ahead of the commissioning night. Pre-commissioning included interlock checks, functional testing, SCADA alarm and indication wiring checks, CTS wiring checks and electrical testing of the NSCD and Track Disconnector equipment and end to end testing with TPCMS. This ensured the installation was fully checked and ready before entry into service.

For the commissioning night, activities were carefully sequenced around the operational requirements of both ECRs. Clear communication was maintained between the commissioning engineers, Level A personnel, installation teams and ECR operators so that final connections, proving and energisation could be completed in a controlled manner.



The works included completion of final traction power connections, functional and interlock proving, SCADA alarm and indication checks, local and remote control proving, signal works testing and safe energisation of the new equipment. Entry into service was managed through the project assurance and Form E process.

Key Deliverables

- Successful commissioning of 6 NSCDs.
- Successful commissioning of 2 Track Disconnectors.
- 2 Local Control Panels brought into service.
- 4 CTS units integrated and proved.
- 3 Lineside Interface Units integrated into the system.
- P2P communications, LV supplies, control and SCADA wiring brought into service.
- Final DC traction power cable terminations and operational connections completed.
- Functional, interlock, alarm, indication and control proving completed.
- Signal Works Testing completed as part of the commissioning sequence.
- Successful coordination of Raynes Park ECR and Rugby ECR during one commissioning night.



Case Study:



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Project Outcome

The Week 20 commissioning at Gunnersbury was successfully completed, delivering a significant milestone for the Anglia NSCD Programme.

The successful outcome demonstrated the ability of Traction Rail Electrical, Octavius Infrastructure, Network Rail and the supporting design, SCADA, signalling and operational teams to coordinate a complex multi-interface commissioning within a tightly controlled railway environment.

Bringing multiple equipment types into service under separate operational control arrangements during a single commissioning window required strong preparation, disciplined execution and close collaboration throughout the night.

The completed installation now supports safer and more efficient traction power isolations by enabling secure local and remote operation and reducing the requirement for personnel to access the railway to apply isolation straps.

