

CASE STUDY

Clay Mills Level Crossing Upgrade and Renewal

LOCATION: Clay Mills
CLIENT: AtkinsRéalis
DATE COMPLETED: July 2026



Introduction

Global Rail Construction Ltd successfully delivered the Clay Mills Level Crossing Upgrade & Renewal project on behalf of Principal Contractor AtkinsRéalis, undertaking a comprehensive programme of civils, signalling and E&P works to modernise and enhance a key operational level crossing.

The project formed part of a wider asset renewal strategy designed to improve safety, reliability and resilience at the crossing through

the replacement of ageing infrastructure and the installation of modern level crossing technology. The upgrade included significant highway, civil engineering and signalling modifications, culminating in the successful commissioning and return to service of the crossing ahead of programme expectations.

Challenge

The existing crossing infrastructure required substantial renewal to address ageing assets and support the long-term operational requirements of the railway. The project involved extensive multidisciplinary works within a constrained operational railway environment while maintaining a strong focus on public safety, stakeholder engagement and programme delivery.

The works required close coordination between civils, signalling and E&P teams, together with meticulous planning to ensure all construction, testing and commissioning activities could be completed safely and efficiently during critical possession periods.

GRCL Scope of Works

Working in collaboration with AtkinsRéalis, GRCL delivered a full package of civils, signalling and E&P works, including:

- ② Installation of a new Under Road Crossing (URX)
- ② Existing chamber modifications
- ② Construction of new level crossing quadrant upgrades
- ② Installation of equipment foundations and hardstands
- ② New quadrant and roadside fencing
- ② Carriageway widening works
- ② Carriageway reprofiling and resurfacing
- ② Road and crossing deck line marking
- ② REB modifications and installation of new equipment racks

- ② New signalling cable installations and terminations
- ② Installation and commissioning of new barrier machines and booms
- ② Installation of new road traffic lights (RTLs)
- ② Installation of Level Crossing Control Unit (LCU) and Level Crossing Terminal equipment (LCUT)
- ② Installation of new crossing signage
- ② LUX level testing and commissioning activities

The works supported the introduction of new crossing infrastructure designed to improve safety, functionality and long-term asset performance.

Engineering Delivery

The Clay Mills scheme required seamless integration between civil engineering and signalling disciplines. GRCL's teams worked collaboratively throughout the project lifecycle to deliver infrastructure upgrades that included foundation construction, highway modifications, signalling equipment installation and interface works associated with the level crossing renewal.

The wider project incorporated significant level crossing improvements including new barrier technology, upgraded

signalling equipment, crossing control systems and associated infrastructure supporting the operational requirements of the route.

Through detailed planning, effective possession management and strong coordination with the client and stakeholders, GRCL successfully completed all installation, testing and commissioning activities within the required programme.

Safety & Community Engagement

A positive and proactive safety culture was developed across the project from commencement through to completion. GRCL maintained a strong focus on safe systems of work, workforce engagement and collaborative planning, ensuring that all activities were delivered without compromising safety standards.

Alongside operational delivery, the project team placed significant

emphasis on stakeholder engagement, maintaining positive relationships with local residents and road users throughout the construction period. Regular communication and collaborative working practices contributed to the smooth progression of the works and the successful delivery of the project.

Outcome

Following a successful commissioning period, the upgraded Clay Mills Level Crossing was handed back into operational service earlier than anticipated, providing an enhanced and more reliable asset for the railway and the wider community.

The project demonstrates GRCL's capability to deliver complex multidisciplinary rail infrastructure schemes, combining civil engineering, signalling and E&P expertise to achieve safe, efficient and high-quality outcomes for clients across the UK rail network.

Key Achievements

- ② £750k multidisciplinary rail infrastructure project
- ② Civils, S&T and E&P delivery under a single GRCL team
- ② Successful installation and commissioning of upgraded level crossing infrastructure

- ② Strong safety performance throughout the project
- ② Excellent collaboration with AtkinsRéalis and key stakeholders
- ② Positive community engagement throughout the works
- ② Successful handback achieved ahead of expectations