

CASE STUDY

Chertsey, Camberley, Rusham & Stroude (CCRS) Level Crossings

LOCATION: Feltham to Wokingham
CLIENT: Atkins Global
DATE COMPLETED: April 2022



Introduction

Global Rail Construction Limited (GRCL) has completed the signalling and telecoms installation and associated civil construction works for the renewal of the following 4 No Level Crossings:

- ① Stroude - a bridled crossing without any barriers that required extensive resurfacing and fencing works and the replacement of 30 No track sleepers
- ① Rusham - a complex crossing that included design and installation of piling, extensive hardstanding and fencing
- ① Camberley - a barrier crossing requiring modification, new bases, cable routes, associated fencing and surfacing works
- ① Chertsey - minor signalling and civils works as there was no new barrier or RTL bases

The works were completed for long-term client Atkins Global, on behalf of Network Rail's Wessex Route. The completed crossings fall within the Feltham & Wokingham Resignalling project which comprises the renewal of all signalling assets controlled from Feltham Area Signalling Centre (ASC) and Wokingham Signal Box (SB), replacing 9 RRLs with new centralised ElectroLogIXS (CBI) interlockings controlled from Basingstoke ROC.

Project Deliverables

Global Rail Construction Limited were the works installation contractor for Principal Contractor and designer Atkins. The scope of the sub-contract covered the construction and handover of the signalling installation, commissioning and testing and civil engineering construction scopes required for the CCRS Level Crossings. This included mobilisation, site set-up, security, traffic management, piling design at Rusham, associated management, supervision, labour, materials, plant supply and delivery to the point of construction and vegetation and site clearance including waste recovery. Below is a summary of the works:

- ① Cable pulling and installation of all signalling, power and earthing tail and lineside cables from marshalling boxes to all associated equipment
- ① Decommissioning and recovery of existing barrier machines/booms and road traffic lights as well as all redundant cabling and bracketry

- ① Cable installation and terminations of the main and secondary marshalling boxes
- ① Installation of all pedestals/booms
- ① Installation of all road traffic lights
- ① Installation of all standing red men
- ① Installation of a new miniature stop light
- ① Installation of a new lighting and CCTV column
- ① Installation of a new lighting control cubicle
- ① Installation of a new DNO
- ① Resurfacing works
- ① Fencing works
- ① Termination of all earthing arrangements to spider plates
- ① Installation and termination of the Local Control Unit (LCU).
- ① Installation of signage

Challenges and Solutions

Robust planning and coordination

To support the smooth delivery of this project, Global Rail Construction used all reasonable endeavours to coordinate, liaise with and make allowance for working alongside others engaged both by Atkins and Network Rail to assist the delivery of the overall project in accordance with the main project programme. This was provided through proactive input and data into a collaborative single masterplan which included all other parties during the progress of the works. The provision of this accurate and timely data enabled all other parties to be fully coordinated to meet the requirements of the main project programme.

Access Constraints

The sites were heavily constrained throughout, resulting in both materials and plant access issues. To combat these, a detailed logistics plan was prepared for each site so that each activity could be carefully programmed, with Global Rail Construction managing the logistics in a collaborative manner to ensure the assets were provided in a timely manner. Limited track access provided a significant challenge for the bulk of the track side installations within a limited amount of track possessions. Working closely with the client, GRCL undertook deconfliction activities and access planning works to co-ordinate their works. This allowed GRCL to deliver their works on time, to meet the commissioning date.

Resource Planning Excellence

There was a sequence of crucial possessions over four weekends leading up to the final project commissioning, which required meticulous planning of each weekend by Global Rail Construction, with every access, stakeholder and railway operational issue examined, to provide a bespoke solution in each area. Resourcing works was also managed with aplomb, with GRCL flexing its substantial in-house resource capacity, alongside proven supply chain partner capability to keep works on track.

Weekend 52 covered the decommissioning of Chertsey Level Crossing where 4No Barriers and Road Traffic Lights were replaced for new. Camberley then followed in weekend 1. Rusham was then completed in weekend 2, which involved the breaking out of the existing foundations and the installation of 2No new concrete bases for two new full road barriers to be then installed and terminated ready for final commissioning - all completed within a 52-hour possession. Weekend 3 was the last weekend of the project, where Global Rail Construction assisted Atkins with final testing.

As a result, Feltham Phase 2, was successfully commissioned and signed into use on 18th April 2022 - precisely on time.

Benefits

Global Rail Construction Limited thrives on challenging projects – in fact they are the very cornerstone of the company's offering, which is tailored to the specific nature of any railway contracting project. The company's ability to be flexible allows project variance, complex problems, or even contractual changes to be absorbed with minimal fuss.

Having a multi-faceted offering helps Global Rail Construction to see the bigger picture on both mainline rail and mass transit

projects. GRCL's in-house teams in civil and structural engineering, signalling installation, E&P and track always work in harmony, to provide the necessary solution and with the company's ability to provide both standalone discipline turnkey solutions, or a full multi-disciplinary offering for both mainline and metro rail infrastructure, helps make them stand out from the crowd.

Testimonial

"Global Rail Construction Limited has delivered 5 level crossings for the Feltham Resignalling Scheme over the last 6 months encompassing Civil Engineering and Signalling Installation. Delivery was completed to enable wider commissioning events within Atkins. The relationship between Atkins and Global has been positive, collaborative and open and enabled us to solve challenging issues on site successfully. I would certainly approach Global again for support in future projects."

Adam Lucas MAPM
Senior Project Manager
Atkins Global UK and Europe