

Gipsy Patch Lane

Project Case Study

The project was a multi-disciplinary project to install a new 4260Ton Concrete Bridge to allow a dual carriageway to pass underneath vice the existing single carriageway as part of the wider Cribbs Patchway Metrobus Extension for South Gloucestershire Council.



Location:

Bristol (Patchway Jn);ELR:
SWB/BSW

Dates:

Start October 2020
Complete Feb 2021

Key KGJ Price Deliverables:

- Permanent Way
- CRT & Track Monitoring
- Track CRE
- Signalling

Client:

Alun Griffiths

Contract Value:

£ 650,000

KGJ Price Scope of Works:

KGJ Price were contracted to provide all aspects of Permanent Way services to Alun Griffiths to remove the track, ballast and re-instate the track fully tamped & stressed at the end of a 13 day blockade during WK30 to WK31 in October 2020.

Additional works included Signalling:

Dis-connections, Re-connections, Points Setup & G110 Testing; CRT & Track Monitoring & Track CRE Duties throughout.

Core Elements & Scope:

- 2200T Of Ballast Installed Utilising Trimble 3D Dozer
- 84m of Existing CWR Removed & Reinstated, 11 x 18288mm Closure Rails & 108m of New CWR Installed
- 18 PEMs & 12 LEMs Used to Lift out and reinstall a Modular CEN56v EVs 1 in 15 Turnout
- 129 G44's Removed & Reinstated (84m)
- 169 New G44's installed (108m)
- 108m Plain Line Panel built off the critical path and walked in with PEM LEM's
- 43 Welds Installed, 10 of which were stress welds & x2 to set the ball & claw
- 5 x Stressing Pulls in & around the S&C, Totalling 626 Yards
- Approx. 1600m of tamping carried out over all lines disturbed, including 9 x S&C Units
- All Track removed in less than 24 hours and handed over to Civils 10hr ahead of schedule
- Full Installation scope completed +4hr ahead of schedule
- Innovative & Bespoke Track Monitoring Solution Provided due to the 'EPS Block' Back Fill associated with the bridge construction
- Constant Programme revisions throughout due to Site challenges with the Civils Works
- The first time an existing Modular S&C unit has been Removed & Reinstated, an Industry first!
- Comprehensive delap survey carried out to note down pre-existing issues



KGJ Price Technical Capability:

KGJP provided the PWay Project Management and Engineering specialist support throughout utilising the most modern technologies such as Trimble Total Stations, 3D Dozing, Intelligent Wackers & Hytorq / Losomat Torque Guns.

Efficiencies:

KGJP devised a methodology that allowed part of the works to be done off the critical path which allowed more time to be utilised for the Civils works. This involved building and welding a 108m long plain line panel off site and walking in with PEM / LEMs.

Innovation:

Due to the EPS Block backfill associated with the bridge works and the amount of track that was removed a bespoke track monitoring solution was put in place with our experienced Track CRE working in conjunction with the Network Rail DPE to provide a pragmatic, risk-based approach to the post installation track monitoring.

Technical Quality:

The EVs 15 Modular Turnout was installed to a higher quality than before it was taken out, fixing many historic gauging issues due to our detailed knowledge of the modular S&C system.

Programme:

Due to issues with the Civils install of the bridge the works had to be reprogrammed on an almost daily basis. KGJP were on hand to provide detailed re-programming for the PWay works as well as integrating OHL, S&T and Civils – a truly one stop shop!

Adaptability:

Resourcing issues of other disciplines towards the end of the blockade became a problem that threatened the handback time of the works. KGJP worked with the other disciplines and came up with a solution that fitted all parties. Instead of continuous 24 hour working, the shifts between PWay, S&T and OHL were split into PWay & S&T worked days and OHL worked nights thus reducing the need for multiple skilled teams.



“I think you guys have more than demonstrated the value of experience and expertise in a hugely demanding and fluid situation, amazing effort by all involved.”

Sukhdev Toor – Possession Planning Specialist (NetworkRail Capital Delivery, Wales & Western Route)