

How low carbon solutions are helping to drive the largest road infrastructure project in Wales

Sunbelt Rentals embraced the challenge to provide a complete range of greener plant and equipment solutions for use on the largest road infrastructure project commissioned by the Welsh Government. Starting in 2021 and scheduled to complete in 2025, the A465 from Dowlais Top to Hirwaun is being converted to two lanes in each direction.

Delivering positive social impact through regeneration and contribution of volunteer hours

Largest Infrastructure project in Wales, estimated project cost £590 million

17km of new road
30 new bridges
14km non-motorised routes

Over 5,000 items delivered to 17 compounds across the project

All equipment provided less than 3 years old

How low carbon solutions are helping to drive the largest road infrastructure project in Wales

The A465 Heads of the Valleys road section 5 and 6 extends for 17 kilometres and is being converted into a 70mph dual carriageway with six junctions. The work is being carried out to improve traffic flow, make the road safer and improve accessibility.

It forms part of the overall Heads of the Valleys Road upgrade project - estimated to cost £1bn - which was divided into six sections. This is one of the most challenging sections to complete due to the environmental mitigation measures that needed to be planned and executed, so innovative and sustainable equipment solutions are a critical part of the project.

Sunbelt Rentals has worked hand in hand with Future Valleys Construction (FCC Construcción) who were awarded the design and construction contract for this section of the A465 project.

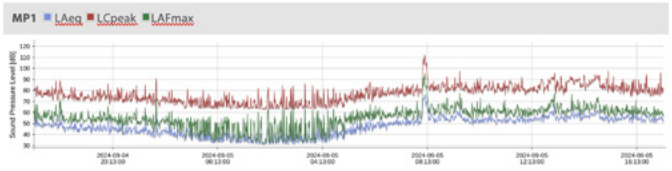
Challenges

There have been several location and environmental challenges throughout this project.

The size and location of the project present a challenge to any contractor, with a need to source local suppliers where ever possible, and consolidate deliveries, as well as monitor equipment and its performance across such a vast area.

The hilltop scheme crosses two valleys and includes sloping ground, with a 210m difference in topography between Dowlais in the east and Hirwaun in the west.

Sections of the A465 are located near homes, schools, hospitals, and businesses, as well as areas with challenging ground conditions. This presents difficulties in using heavy plant and other equipment, requiring innovative solutions to minimize environmental impact and reduce disruption to local residents and businesses.





Environmental monitoring - noise

Our equipment and services supplied at a glance

- Plant Equipment including Stage V Telehandlers, Excavators, Compressors, Rollers and Dumpers
- Powered Access
- Tools
- Anti-Theft Solutions & Telemetry
- Eco Accommodation Units
- Safety and Communications Equipment
- Temporary Power
- Eco Tower Lights
- Surveying Equipment
- Solar Powered Noise Monitoring
- Climate Control
- Traffic Management
- Non-Mechanical Equipment
- Test & Monitoring



“The variety of kit Sunbelt Rentals offer from a small power drill upto a 13 tonne excavator is a massive advantage to us.”

Jonathan Lewis
Procurement Manager FCC

How low carbon solutions are helping to drive the largest road infrastructure project in Wales

Solution

Due to the sheer scale of this project, a huge amount of equipment has been needed to enable the construction work to be carried out.

As the UK's largest rental provider, with over 250,000 items on fleet across 25 different product categories, Sunbelt Rentals UK were able to partner with FCC as a preferred supplier across multiple product categories. This enables contractors to consolidate their supply chain and site deliveries, with Sunbelt Rentals also providing an onsite hire storage facility to support with the Project's extensive and constantly evolving equipment requirements.

From Stage V plant to powered access equipment, mobile welfare units, eco lighting and environmental monitoring equipment, Sunbelt Rentals UK have provided solutions from over a dozen specialist business areas, with an added commitment to providing equipment with an age profile of 3 years or less, ensuring it is the highest specification available.

Innovative and greener equipment solutions have been important on this project, from Eco Tower Lights which operate on timers and provide energy saving LED lighting and Stage V plant equipment fitted with state-of-the-art tracking solutions to environmental monitoring devices to record noise.

Not only have solutions like these contributed towards reduced deliveries to site, but Stage V compliant engines are currently the most advanced commercially available solution in today's market for lowering NOX and PM in larger plant. On board telemetry has helped protect against potential theft of equipment, as well as enhancing safety on-site, with the customer having their own login giving them access to a whole host of information such as driver speed or whether seat belts are being used.



> **"We are delighted to provide a huge range of equipment across our complete range for the largest road infrastructure project ever carried out in Wales. It's a brilliant example of how customers can leave the 'How to Us'."**

Toni Walters

Business Development Manager - UK, Sunbelt Rentals

Result

FCC Construcción are delighted with the full-service solution provided by Sunbelt Rentals, it's anticipated that this road upgrade project could drive investment in the area through improved accessibility, and the success of the scheme could set an example for future projects.

Over and above the supply of equipment and services for this project, Sunbelt Rentals is proud to have provided social value to the local community by colleagues committing volunteer hours and equipment for initiatives such as building a sensory garden for a local school, supporting children with special educational needs and hosting a local schools 'girls into construction day'.



