

ELECTRICITY NORTH WEST

TRENCH

REINSTATEMENTS

The Challenge

After utility companies have carried out street works, such as trench excavation and reinstatement, they are liable to correct any defects for two years following those works. Defects can include overbanding that doesn't comply to the specification, use of the wrong materials, deterioration of the surface or joints or too many voids in the asphalt.

Street works contractors are legally bound to ensure that they complete all reinstatements to the required legislation. This includes the *Specification of the reinstatement of openings in highways* (SROH), health and safety law, *New road and street works act 1991* (NSRWA), permit law and the 'Red Book', *Safety at Street Works and Road Works*.

In 2015 Electricity North West identified a 6-mile stretch between Bamber Bridge in Preston and Chorley where a 600mm-wide trench had been overbanded with non-compliant material.

"Because it is heated on to the surface, overbanding is not easy to remove," explains Adam Brunskill, Street Works Manager for Electricity North West. "To plane the full surface at 700mm and relay material for the full length would have been very expensive, so we started to explore other avenues."

The Solution

One of the technologies appraised by Electricity North West was Thermal Road Repairs' (TRR's) pothole and defect repair system, which uses a thermal infrared heater, charged by solar power, to raise the temperature of asphalt in and around a defect. The hot material is then agitated and mixed with fresh material if necessary and re-compacted. Heating the asphalt means there is no cold joint so that the asphalt bonds across a former joint or defect to become a homogeneous material.

"It's an ideal solution for us. It's quick, it's efficient, it's cost effective and less disruptive for the people of the North West. And there are huge environmental benefits."

Adam Brunskill, Street Works Manager, Electricity North West

“We wanted something that was quick, efficient and did not need a significant amount of traffic management,” says Brunskill, who sits on the expert practitioner group for SROH. “Thermal Road Repairs seemed like an ideal solution due to its inobtrusive nature.”

That was six years ago. And though Electricity North West no longer has responsibility for the reinstatement, Brunskill can confirm that the pavement remains in good condition. “I still go and see it every now and then, and it is still a good result,” he says. “It was a much cheaper option for us than replacing the entire surface course and a far quicker and less disruptive solution – which was good news for all the people using the road.”

There are also huge environmental benefits from using the TRR system, says Brunskill: “Imagine the lorry movements and material needed if you were to plane out 600mm for 6 miles, take hundreds of tonnes of material away and replace it with hundreds of tonnes of new asphalt. That’s where the real benefits are from my perspective.”

Since then, Electricity North West has used it to rectify a significant number of defects in reinstatement works, including uneven surface courses, deterioration of edge joints, too many air voids in the surface course or non-compliant overbanding.

The Results

As well as proving its longevity through its ongoing performance on that very first repair - six years and still going strong - TRR’s system also received formal recognition for its environmental credentials, thanks to its work with Electricity North West.

Electricity North West entered the system into The National Joint Utilities Group (NJUG, now Street Works UK) Awards where it won in the Sustainable Methods and Materials category. The awards entry compared the carbon footprint of the Thermal Road Repairs system, 0.4 tonnes CO₂, versus a traditional system. 2.4 tonnes CO₂, for a standard shift, a carbon saving of over 80%.

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