

Richmond

Making funds go further

The Challenge

The London Borough of Richmond was looking for more efficient ways to carry out pothole repairs.

“The process we were using was inefficient, time consuming and costly and the quality output often not good,” says Nick O’Donnell, assistant director of traffic and engineering, who is driving an innovation programme in the Borough. “And we were getting a lot of complaints.”

In an urban environment, noise, environmental constraints and disruption to road users and the community mean that traditional pothole filling techniques are not ideal. “You want to get in and get out – like the SAS,” says O’Donnell.

The Solution

O’Donnell came across the Thermal Road Repair (TRR) system at a conference and was able to talk to officers at Northamptonshire County Council who were using the system. “It’s always helpful to speak to officers in other authorities when considering new technology,” advises O’Donnell.

The TRR system uses a thermal infrared heater, which uses LPG and power gained from its in built solar panels, to heat up failed and failing material in the pothole and surrounding asphalt. The existing asphalt is then mixed with a small quantity of new asphalt to create a homogeneous material and then compacted with a roller.

“Cost savings of 40-50% could be achieved.”

Because the asphalt around the edges of the pothole is also heated, there is no joint; the material all bonds together preventing the pothole from reforming. The repair process is also much faster than traditional techniques: there is no need to break out the defect, saw cutting or jack hammering. Also, there is no requirement for vehicles to take waste material away or bring fresh asphalt in. Everything is contained in the one repair unit.

The next step for Richmond was to set up a trial where TRR could demonstrate to council members and technical staff how the system works. O’Donnell’s team then created a business case which showed that, using the council’s own operatives, cost savings of 40-50% could be achieved. The cost of the equipment could be paid back two years’ time.



The Borough's members were also impressed by TRR's environmental credentials. "It's 80% more environmentally friendly than traditional methods – which is a big selling point for members," says O'Donnell. TRR's method producing an average of 0.4 tonnes of CO2 per eight-hour shift compared to 2.4 tonnes for traditional techniques*. Richmond purchased the TRR system in Autumn 2020.

The Results

Due to changes internally, Richmond ran the TRR system using TRR operatives initially. "TRR has a number of operating models as to how it can be run as a system," says O'Donnell. "They can operate it for you with trained-up gangs, they can train up your teams for you or train up a third party to run it."

Employing TRR operatives, Richmond is achieving between 20 and 30% cost savings, says O'Donnell. The next step will be for TRR to train up workers from the Borough's framework maintenance contractor. "We expect that this will push the savings up further," says O'Donnell.

“If you do more repairs in a year, you improve the state of the network and reduce the risks of accidents and claims. There are indirect savings as well as the direct ones.”

Nick O'Donnell, assistant director of traffic and engineering, London Borough of Richmond & Wandsworth

Richmond's goal, however, is not to spend less money, it is to repair more roads for the same amount of budget. "If we can repair 50 roads instead of 30, then we are improving the roads for more communities in the Borough," says O'Donnell. "We also think that the quality of the repairs is better which means that we can keep the roads in a reasonable condition for longer before having to invest in further repairs or resurfacing."



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