CASE STUDY NUMBER 86: Kier, Clancy Docwra, Anglian Water – Roadmender

WINNER OF THE NJUG INNOVATION AWARD 2015

The National Joint Utilities Group (NJUG) is the UK industry association representing utilities solely on street works issues. The 42 Utilities and 16 Associates we represent are major contributors to economic growth and work to deliver gas, electricity, water and telecommunications to both individual consumers and UK plc. NJUG members need to continue to drive forward further improvements. We have therefore developed the NJUG Vision for Street Works, which revolves around seven main principles:

- Safety
- High Quality
- Minimise Disruption
- Keep the Public Fully Informed
- Sustainable Methods and Materials
- Avoid Damage to Underground Assets
- Innovation

This case study is an example of the street works sector delivering on these principles and turning the vision into reality.

Overview

Working collaboratively to embrace the NJUG vison on innovation, Kier, Anglian Water and Clancy Docwra introduced Roadmender Asphalt: a new environmentally friendly technology that enables reinstatement teams to make their own Hot-Mix Asphalt directly at the job site without needing to visit a quarry.

Roadmender allows first-time, permanent, high quality repairs with polymer modified materials offering flexibility to gangs to carry multiple different-mix designs on board to suit their needs. This reduces waste and unnecessary travel by allowing reinstatement teams to make just the quantity they need, at the correct temperature every time, and without the need to visit an asphalt plant. This will provide a significantly increased customer experience by providing a less disruptive solution to street works.

The extensive research undertaken over seven months demonstrates a smarter, more sustainable approach to street works which will ultimately lead to a reduction in traffic, vehicle movements, waste and road closures – keeping Britain moving and boosting customer satisfaction. While massive growth in both population and traffic density clearly requires equivalent growth in investment across our utility networks, what's perhaps more important is the ability to leverage the

cost savings and efficiencies to be gained from emerging technologies and innovations. Roadmender contributes towards this goal.

What are the benefits of Roadmender?

The case studies that led to actual operational activity show a dramatic reduction in carbon footprint. A typical diesel van of up to 3.5 tonnes doing 30 miles to the quarry on the day would save 0.01 tonnes. In more remote areas, where the van travels 120 miles one way, 0.07 tonnes would be saved.

Roadmender Asphalt allows you to make the right material in the right quantities so there is a large saving in waste. For example from a quarry you would traditionally have to adhere to a 'minimum order' requirement, resulting in frequent over-orders and increased waste. The case study and operational findings found between 30% - 50% of material was wasted the conventional way. With Roadmender Asphalt, this waste material is not being sent to landfill which results in an environmental saving as well as saving time and associated tax costs.

There are also significant travel savings made by not having to collect material from the quarries – as much as 2.5 hours' travel can be saved in the mornings, and a further 2 hours saved by not tipping waste material at the end of the day.

Roadmender Asphalt delivers on five of the key goals of the NJUG vision for street works: 'Safety', 'high quality', 'minimise disruption', 'sustainable methods and materials' and 'innovation'. This project also delivers on the aims of the Department of Transport in tackling congestion on our roads and continuing to improve road safety through reduced occupation of the highway.

Furthermore, Roadmender also provides benefits for employees. Working hours are reduced without loss of productivity, meeting and improving on legislation requirements and best practice for working out of hours and weekends.

Customers also benefit from the use of Roadmender through less traffic disruption, delivered by reduction in travelling time for plant and the all-important right-first-time delivery.