

Time efficient solutions that are sustainable can take years to develop. But it only took a moment for **Craig Willsher** to spot the transfer potential in existing highway equipment, and find a better way to clean up fuel spills.

I hope jetwashing will become the standard practice for clearing the majority of fuel spillage incidents



Out with the wash

It is said that often the simplest ideas are the best, and there is ample evidence of that in highway maintenance. Over the years, the industry has evolved with the times and grown adept at recognising when a new piece of technology or a new way of tackling a problem has the ability to measurably improve day-to-day working.

Even today, the smallest of innovations can make a difference, especially when it comes to developing and establishing practices that are both cost-effective and sustainable. It is why one highway contractor has introduced jetwashing to deal with fuel spillage incidents, a method that is clean, safe and time efficient.

On its Highways Agency area 9 contract, Amey has traditionally dealt with carriageway fuel spillages using the absorbent granular method. The granular material is applied over the area affected to soak up the spill, and then brushed in and removed. Once complete, the carriageway can be safely reopened.

Unfortunately, this method has its limitations, particularly when dealing with large spillage incidents. If the majority of a spillage cannot be absorbed and removed, then a supply chain partner must be called on to resurface the contaminated area.

This not only involves an additional cost, but also requires all affected carriageway lanes to remain closed until the resurfacing work is complete.

Frustrated at the length of time it took to complete this process, and realising the level of congestion it caused during peak hours, the team set about finding a process to replace the granular method. It hit on the idea of washing, rather than resurfacing lanes contaminated by fuel spillages.

However, the challenge was not just to find a system that could provide a wash powerful enough, but one that could also contain the sizeable amount of run-off that would inevitably be generated.

A solution was found close to home when a

Hydroblaster was observed on another stretch of carriageway being used to remove old road markings. The special equipment, sourced from WJ Hydroblast, uses jets in a rotating head to spray the road surface with water at a pressure of 40,000psi without causing any rutting, overheating or displacement of bitumen.

The jets were strong enough to cleanly and quickly remove typical thermoplastic road markings, and so were judged more than capable of dealing with the contaminants associated with a fuel spillage. On top of that, the system was operated on a versatile buggy, ensuring maximum versatility at road level.

Arguably though, the most advantageous aspect of the Hydroblaster method was its ability to contain and store all the resultant run-off of water and contaminants almost instantaneously as the road surface was washed.

The system embraces captive hydrology tech-

nology combined with a vacuum-recovery system, which prevent any water or contaminate loss during the jetwashing process. This ensures that no contaminate particles are dissipated into the atmosphere because all the removed contaminants and water are captured and stored within the dispensing vehicle. They are disposed of safely and sustainably off-site as soon as the washing process is complete.

Once the full capabilities of the Hydroblaster were researched, it became clear that the jetwashing method could be adapted to clear up fuel spillage incidents. However, the real test would be to put the idea into practice.

That chance came sooner than expected when, in June 2007, a lorry fire incident on the M42 required the team to deal with the subsequent oil and diesel spillages. The sheer size of the area affected meant that the traditional absorbent granular method was not sufficient to absorb all of the leaked fuel from lane one of the motorway and, for safety reasons, there was no option but to close the entire lane to traffic during the morning peak.

In fact, it soon became apparent that the contaminated surface would need to be removed and replaced. This would extend working into the evening rush-hour, and require closure of a second

lane of traffic to achieve the necessary safe working zones for the workforce, creating more disruption.

So, instead, with the approval of the authorities working alongside the team, Amey decided it was an opportune moment to put the jetwashing method into practice. And the results were superb.

As lunchtime approached, WJ Hydroblast was called in to provide the equipment needed to complete the job. The company's swift response allowed the team to treat a 120m length (438m²) of full lane width within just 90 minutes.

Not only that, but because of the limited amount of workspace needed to operate the Hydroblaster equipment, the safety zone could be cleaned under a rolling road block, and the additional lane closures which had been planned for resurfacing were no longer required.

Moreover, the speed and success of the jetwashing process allowed all lane closures to be removed prior to the peak hours of evening traffic, avoiding the feared congestion.

Impressed by the effectiveness of the system, Amey put the innovation forward to the Network Board in September 2007, which subsequently agreed to a series of trials to test the technology for its safety and efficiency.

Since then, the jetwashing process has been

employed on a number of occasions and has continued to prove highly effective at clearing fuel spillages both cleanly and efficiently, significantly reducing the amount of time needed to deal with such incidents.

In area 9 alone since June 2007, there have been 14 spillage incidents which led to resurfacing work during peak traffic hours that could have benefited from the jetwasher system.

Had it been available, an estimated 72 hours of work could have been saved. Using the Highways Agency's regional intelligence unit's recognised figures for costs associated with peak hour road closures, these 72 hours would give potential savings of more than £1M for road-users affected by resurfacing delays.

So, while in some circumstances resurfacing does remain the only viable option, I hope jetwashing will soon become the standard practice for clearing the majority of fuel spillage incidents in a timely and sustainable fashion.

Ultimately, by dealing with fuel spillages more promptly than ever before, we can ensure more reliable journey times not just for road-users in area 9, but across the UK highways network.

• **Craig Willsher** is deputy operations manager at Amey.