

Patching reports received from the public

It has been a couple of years since we implemented some changes in how we respond to publicly reported potholes, particularly where they are clustered together and/or where there is evidence of several visits to the same location to repair the same potholes.

Off the back of this change we now operate four 'reactive' patching gangs around the county – resource that we can draw upon at relatively short notice to undertake patching repairs, that is larger-scale repairs over and above what a regular pothole repair gang can realistically achieve.

Highway Safety Inspectors are now trained to identify these problem 'hot spots' and can capture details including measurements and photographs at the point of their initial assessment to enable orders to be handed to our contractor, Milestone, to deliver. Sites containing [safety defects](#) are prioritised accordingly to avoid sending a regular pothole gang, thus representing much better value for money whilst ensuring we are doing the right thing.

Identifying problem areas *before* safety defects occur, adopting a more proactive approach, is also a key part of the process and inspectors are also trained to look for areas of surface deterioration that indicate a high likelihood of failure and pothole occurrence in the near future, if left untreated.

Since April of this year, we have so far carried out reactive patching on around 350 individual sites, with in excess of 13,000sqm worth of defective highway patched. Data analysis shows a significant reduction in follow up visits to these locations, after works are completed.





Dragon Patching

Devon County Council and Milestone have been employing the use of four Dragon Patching machines across the county to assist in dealing with clusters of potholes as well as other minor surface defects such as cracking or crazing.

Dragon Patchers use compressed air to blow loose material out of a pothole before using a flame to dry out any moisture or warm up the surface on colder days. Layers of aggregate, mixed with hot emulsion, are then sprayed into the pothole. The surrounding area then has a thin layer of material applied to form a waterproof patch over the affected area. The entire patch is then compacted using the rollers underneath the vehicle.

The dragon patchers are being used as just one solution for safety defects on the minor network. Highway Safety Inspectors and Neighbourhood Officers can request dragon patching for roads alongside public reports of patching, traditional pothole repairs or as part of a larger and longer-term scheme. Each site is then assessed by the dragon patcher before work is carried out.

The process is not only faster than traditional methods it also reduces the need for repeat visits to the same location as multiple defects can be completed at the same time, the road can be sealed (meaning less chance of new defects forming) and it can be used as a preparatory step for larger works in the future (e.g., surface dressing).

All repairs using the dragon patcher are done from inside the cab which requires less resource when compared to conventional hand and machine patching. For the same reason it is also significantly safer for the operatives.

Once the repair is completed the surface can instantly be driven on. The advantage of this is that most roads treated by the dragon patchers do not need to be closed. Traffic may need to be held for up to 15 minutes while an individual repair is made but disruption to the network is greatly reduced and access to residents and other road users can be maintained.

[SEE OUR DRAGON IN 360-DEGREES](#)

During the winter months, when road temperatures dip below 5°C, we will be treating localized surface defects **over 30mm** rather than shallow surface cracks. This is because in cold temperatures thin layers of material do not bond well with the existing surface and any shallow repairs are more likely to fail.

Additionally, single patches will not exceed 2m² squared as the flame can only heat the road to this extent. This may mean that in winter months that roads will be treated for potholes, ensuring the safety of road users, and then the dragon team will return in the spring to deal with shallower defects.



Before Treatment



After Treatment