



Case Study



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Concrete Carriageway Rehabilitation

It used to be common practice to overlay concrete estate roads with Microasphalt and other bituminous surfacing products.

Years later, this solution has left authorities with two problems:

1) Firstly, the aesthetics of the now, patchy finish with open joints and the regular occurrence of worn-off areas of blacktop exposing concrete patches.

2) Secondly, the high cost of the ongoing maintenance liability in keeping the highway free of pot-holes, trip hazards and maintaining a safe running surface in a residential environment.

The solution used in the seaside town of Bexhill in East Sussex is to expose the original concrete carriageway by planing off the layers of surfacing and, using a combination of specialist products, repairing the damaged surface.

- Fine milling the surface
- Concrete Joint repairs
- Concrete Crack repairs
- Patch repairs
- Ironwork adjustment
- Ironwork repairs
- Kerb edge sealing





Planing off the surface with a Wirtgen W120CFI fitted with a fine milling drum .
This machine does the first pass taking off the majority of the black top



The midrange tracked machine with a 1.2 metre cut. The drum at the rear and elevator at the front makes it ideal for smaller jobs, estate roads and car parks but also capable of larger jobs when necessary.





A variety of smaller Wirtgen planers are utilised to pick up smaller patches, and difficult to reach areas such as bell mouths and along kerb edges . On show here we have a, Wirtgen W50Ri and W350 and below a W35Ri

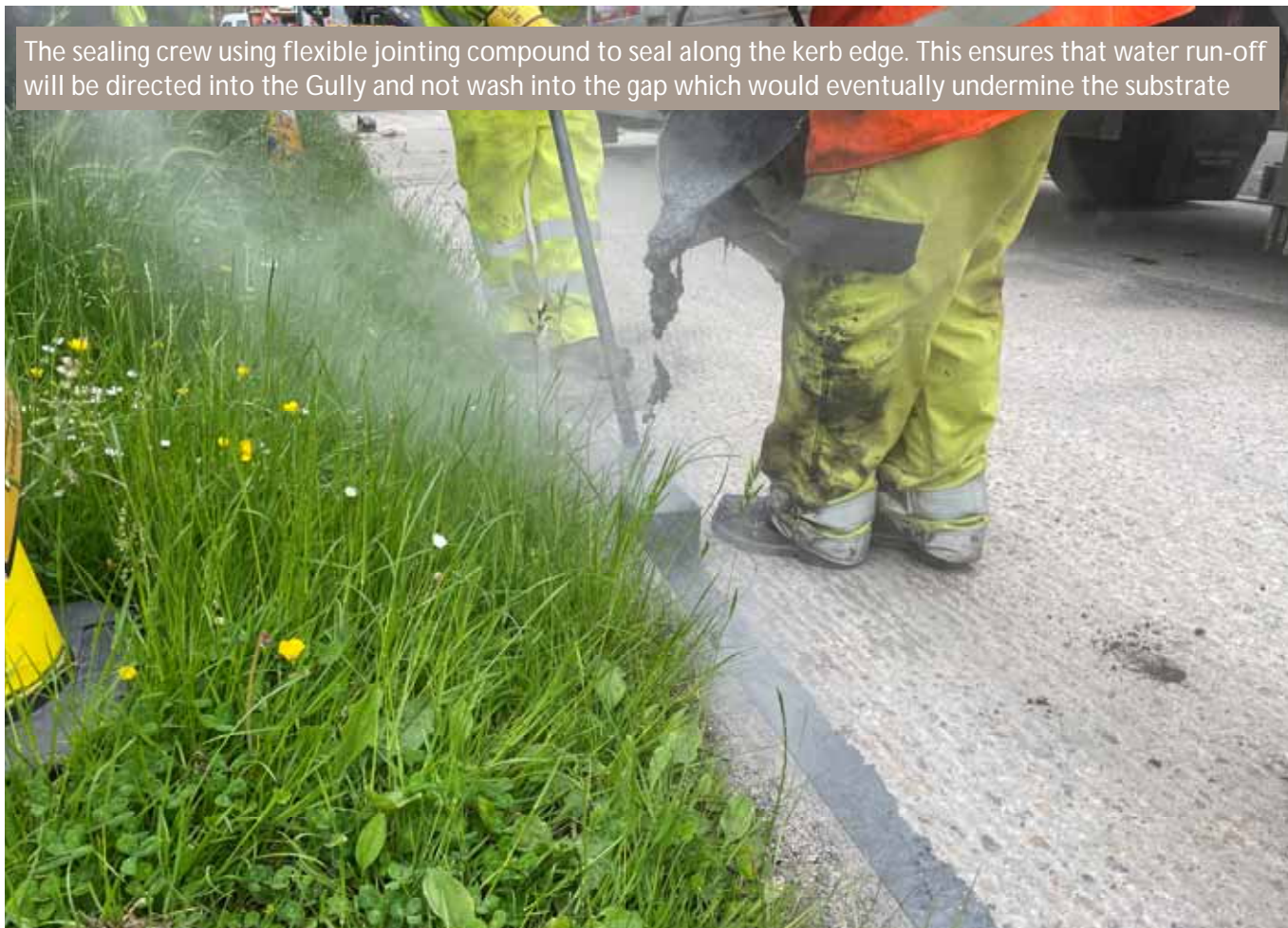


The extent of how much blacktop is removed needs to be considered. Some areas of black discolouration can remain on the concrete surface which if milled out would leave a hollow in the surface. The alternative is to accept these areas of discolouration which do not detract from the overall appearance.





The sealing crew using flexible jointing compound to seal along the kerb edge. This ensures that water run-off will be directed into the Gully and not wash into the gap which would eventually undermine the substrate





After the main planing operation has removed the blacktop, the transverse and longitudinal joints and cracks are milled out and sealed with the flexible joint compound





Flexible material to repair the cracks and joints



The joint repair material is a synthetic binder with a high polymer content and aggregates. The material is very flexible making it able to accommodate the high movement typically found at a concrete joint without cracking



The material will accommodate that movement without cracking. It will stay stuck to the surrounding concrete and will not crack. Making it the perfect material for sealing concrete cracks and joints. Once applied to the surface it is dressed with a bauxite aggregate finish to give skid resistance and a yellowed colour finish.



The finished joint repair



The fine milled finish with the kerb edge sealed and the centre joint treated

