What to do about roundabouts and high stress areas....

On the theme of 'right treatment, at the right place, at the right time', lets talk about possible treatment options for roundabouts and other high stress areas.

I often get asked what materials I recommend for use on roundabouts and high stress areas, and this often comes out in the training I deliver, specifically the examples where I recommend maybe not using particular surface treatments.

Historically HRA was the material of choice, which as we know is a dense, robust material, but it was always susceptible to rutting in the wheel tracks on roundabouts especially.

In the 90s we moved to thin surface course type materials, and these materials can be vulnerable on the joints, especially given the high stresses on roundabouts.

So what do we do? We keep using the same thin surfacing type materials! And often within weeks after laying, you can see how vulnerable the joints are and can almost foresee the early onset failure.

Treatments options

Highway authorities that have used grouted macadams will undoubtedly have recognised its value for use in high stress locations like roundabouts and junctions.

These materials are grouted with either a bituminous or cementitious grout, so there are no joints.


Somerford roundabout


Woolbridge roundabout

Woolbridge Roundabout in Dorset is in close proximity to Bovington Tank Museum and on a daily basis is trafficked by tanks. The cementitious grouted macadam used on that roundabout is holding up very well, despite the huge stresses it experiences.

And for something really different

Some creative thinking on a small roundabout in Blackpool, saw the roundabout resurfaced / recycled using thermal patching equipment, with fantastic results (shown below). The use of thermal equipment means a further seamless joint repair, with zero waste, and reduced carbon.


BEFORE


AFTER