

Innovation Cambridgeshire Package of work 18 – 19.

The following details the new materials, processes, and methods Cambridgeshire are utilising through this year's resurfacing package. All the below were chosen as they will provide the best value for money when compared to standard products available on the market. In most cases these products do have a higher initial cost, however they will all save the county money in the medium to long term.

Road marking.



Instead of traditional road marking materials we will be using a different product called MMA. This lining material is more durable and longer lasting than normal thermoplastic, and will ensure we have to revisit site less often to refresh and renew road markings. It has a higher initial cost, however this is largely offset due to the quantity of lining required over this package, with any other differences negated by reduced future visits to redo the markings.

Ironwork.



When repairing any ironwork which is likely to be overrun by vehicles, instead of following a traditional approach, we will instead be using a product called Pacopatch. The process involves patching around the ironwork in question with a polymer modified material, and resetting the gully or chamber on a more flexible bed. This allows it to resist wear and tear from continuous vehicle overrun. This is an approved system which comes with a 5yr warranty from the contractor.

Further information can be found here - <https://www.ikogroup.co.uk/systems-new/highways-civils/ironworks-reinstatement/iko-pacopatch/>

Reduced Temperature Asphalt.

The materials we are using will all be supplied in a reduced temperature mode, wherever possible, meaning they are heated to around 140 degrees Celsius, instead of 190 degrees Celsius. This means that once the material is laid it takes less time to cool, and the road can be opened to traffic sooner. In addition to this, the use of materials in low temperature mode reduces the counties overall carbon footprint.

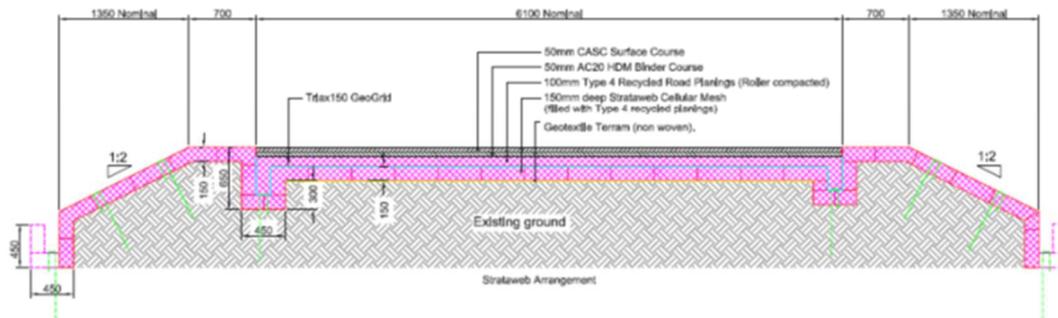
Cambridgeshire Asphalt Surface Course (CASC).



For each of these schemes, the new surface course will be one of Cambridgeshire's own design, this means that as well as providing a high specification material, we are also not paying more than we have to for branded products from suppliers. This means we are able to maximise the total amount of road we resurface on every scheme.

C89 Edge Reinforcement.

**C89 Area 2 - Construction
Drawing**



On the C89 we are trialling a new edge strengthening technique which we hope will reduce and/or eliminate ongoing edge failure, (usually caused by soil erosion and slippage). The process involves embedding plastic geo cells into the embankments, these are then filled with aggregate and pinned in place at the top / bottom. This is then overlaid with topsoil and grass seed. We will then monitor the performance of this webbing, with a view to using it at other locations around the county, should the trial prove successful.

Echelon Paving.



Where applicable in the package we will be using two pavers at once, instead of the conventional one machine approach. This allows us to eliminate the centre joint on the road. As joints are one of the main points of failure on carriageways if they fail or open up over time, by eliminating the central one our roads should last longer.