



Rural Norfolk Recycling

Scheme:	Norfolk
Authority:	Norfolk County Council
Client:	Tarmac
Date:	February & March 2019
Area:	96,000 m ²
In-Situ Process:	Conventional Deep in Situ Recycling & 150mm "REGEN" Treatment
Surface:	Double Dressed (PMB) 10 & 6mm
CO2 Saving:	1241 Tonnes

The project involved the reconstruction of failing carriageways within Norfolk County Council's rural network.

A co-ordinated partnership between the Client team, SPL and Norfolk's maintenance contractor Tarmac enabled a rapid investigation, mobilisation and delivery of approximately 96,000 m² of structural in situ recycling.

The majority of sites favoured SPL's shallow award winning process referred to as REGEN whilst on a couple of more heavily trafficked sites conventional deep in situ recycling was carried out.



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BEFORE



Conventional recycling in Methwold and Wereham at approximately 240mm and 270mm was deployed following Norfolk Laboratory testing – the deeper treatment on the B1160 in Wereham was due to its location adjacent to the British Sugar Factory and both schemes amounted to 10,000 m² which were subsequently overlaid with a 70mm and 100mm (respectively) SMA surface course. Cementitious binder was mixed at 4% by volume in line with TRL design guides and Norfolk's own testing and design solution.



The REGEN schemes (86000 m²) were recycled at 150mm with a 2% PFA/OPC binder and included a Double dressing of 10 & 6mm stone using a Premium PMB. As with our lower cost treatment generally pre-start testing was limited to visual inspections as well as examination of existing cores in order to understand the depth of the existing granular (recyclable) material.

Being programme sensitive it was imperative that the delivery was monitored closely to pick up any potential issues that may impact the works – as such weekly progress meetings held at West Norfolk's Saddlebow Depot, worked well in capturing any potential delays, particularly given the possibility of poor weather during February and March.

Commercially the process has been a successful investment and will minimise ongoing maintenance for some years to come.

Our experience with REGEN has shown this solution will extend the life of the structure due to providing consistency in strength as well as removing the dips and humps along with their dynamic loadings.

The benefits of retaining the shape or profile of the road not only prevents additional wear from dynamic loadings as vehicles negotiate uneven surfaces but also allows for drainage of surface water reducing the risk of potholing.



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However, whilst these CO₂ savings are significant, it is largely down to the collective assessment of current and future traffic volumes that dictates the appropriate use of Deep in Situ Recycling or the lower cost REGEN.

Early site reviews and assessments enable SPL to apply the most suitable solution to the individual site. It is this relationship with the client and contractor that is valuable to all and along with our QA procedures during and after delivery enables delivery with certainty of success.

