CASE STUDY

roadtechs group

A proactive approach to highway maintenance

PROJECT – **A1270 BROADLAND NORTHWAY (NDR) WITH NORFOLK COUNTY COUNCIL**

BACKGROUND

Norfolk County Council, through their term maintenance contractor Tarmac, continued to take a proactive approach to highways maintenance in 2021.

In a council press release, Cllr Martin Wilby, cabinet member for highways, infrastructure, and transport, said: "Proactive maintenance in the short term is a vital way to cut long term costs. Our focus is on providing a network that's reliable and helps support the economic recovery in our part of the country."

"Norfolk's asset Management Team looked at this as a possible way to reduce our whole-life costings, especially on our A road network, by extending the period before reconstruction. We found, which was written up in a 2016 internal report , that Reclamite did give us a whole-life cost benefit in comparison to other treatments, such as dressing, but in this case (on the A1270 Northern Broadway) it was even more beneficial due to a clause in the Development Consent Order (DCO) requiring the road to have a low noise level throughout its life. This ultimately means that one of Norfolk's normally preferred option (traditional Surface dressing) cannot be used, so to elongate the life of the present surface, Reclamite was prescribed.

It is unclear exactly the extra life that will be achieved, but it is hoped that with such a large area of road this could save millions of pounds in the years to come."

Norfolk County Council

SOLUTION

As part of the county-wide activities, Roadtechs was the contractor chosen to apply a spray treatment to the A1270 Broadland Northway carriageway. This is 12.4 miles (20km) of dual carriageway. This was to be the first treatment of Reclamite on this road, with the next one planned for about 5 years' time. This primarily mechanical process reduces the carbon footprint by over 95% compared to traditional maintenance methods. Tarmac provided the traffic management for these works and kept the traffic flowing and the installation team safe.

The quick to apply Reclamite treatment, minimised disruption to traffic and is more cost effective as it reduces long-term maintenance costs. Reclamite was chosen as it helps to keep good roads in good condition and has a vastly reduced carbon footprint when compared to some other conventional surface treatments. The process had been used successfully in several locations in Norfolk including in 2020 on the new A47/A143 link road near Gorleston.

OUTCOME

Norfolk County Council have been using this treatment for the past **12 years** on their network. Over this period of time Norfolk used their own independent UKAS accredited laboratory (the Norfolk Partnership Laboratory now forms part of the Norse Group) to confirm the effectiveness of this treatment and where it fits in their asset management toolbox. 10 No 150mm cores were taken from the untreated and treated section of the carriageway and then tested to confirm the effectiveness of this treatment in having a positive change in the rheology of the binder.

"Testing on the A1270 and other sites within Norfolk over the past ten years on the Stone Mastic Asphalt Materials used in Norfolk, has shown that the Reclamite has had a positive effect on the surface course, indicating it is lifting the softening point towards its initial values. it has been clear to see the effects of the treatment on the initial trial site ten years ago (A140 Daniels Road, Norwich outer ring road), as the section which has been treated is clearly visible, compared to the untreated section."

Simon Shearwood, Senior Engineer (Pavements & Structures), Norse Group.

When the carriageway was constructed, it made use of the locally available aggregates with the minimum amount being brought in from neighbouring counties. So, the consideration on the carbon footprint has been carried through in this programme. Tarmac commented as follows - "Tarmac is committed to collaboratively working with our Client, Norfolk County Council, in embracing and trying alternative surface treatments to prolong the life expectancy of the existing carriageway surfacing on the network. This scheme is of particular interest to us, as it is on a road that Tarmac had supplied and laid the asphalt carriageway layers, when constructed and opened in 2018. We are keen to see the benefits of what Reclamite will bring to the longevity of the surface layer and how long it extends beyond an anticipated 15 year lifespan obvious benefits of this increased lifespan will be to reduce the whole life costs, delaying the eventual inconvenience to road users with associated works in planing out a worn carriageway and replacing it with new asphalt layers, and helping towards the goal of reducing the carbon emissions during construction works. Tarmac have recently developed a carbon calculator and are working towards being able to capture the carbon emissions for all types of pavement options including schemes where Reclamite has been applied. The carbon figure for spraying Reclamite on 50 lane miles was 14.18 (tCO2e)."

Norfolk County Council

Roadtechs, based at Topcroft near Bungay is a specialist highways maintenance company which has over 30 years' experience. The money spent by Norfolk County Council on this programme found its way back into the local economy and supports local jobs at the same time.

Norfolk County Council was confident in its knowledge to introduce innovative solutions such as Reclamite as a surface extension / preservation treatment and has been reaping the benefits. We would encourage other local authorities, county councils and contractors to follow their lead and embrace this innovation. Reclamite is proven (in numerous locations across the UK), successful and 'green' – please consider how it could be used on your network.

The relationship between Roadtechs, Norfolk County Council and Tarmac is based on mutual trust, knowledge, and confidence, there is no doubt that this plays a key part in the success.