



CIHT North Western Branch Awards 2011

A-one+ and Klaruw RMS - Entry in the category 'Safety Project of the Year'

“Implementation of KlaruwTex190 retexturing as a best value solution for skid-resistance improvement schemes in Area 10.”

Award summary

The UK is one of the highest ranking performers in international road safety tables, with the lowest road death rate in 2009. Highways authorities and term contractors responsible for the UK road network are under pressure to help meet even tougher proposed road safety targets to 2020, working with level or reduced budgets.

A-one+ identified a major opportunity to realise significant cost savings, reduced traffic disruption and enhanced sustainability by embedding retexturing as part of its regime for managing pavement skid-resistance in MAC Area 10. The roads renewals team has adopted an engineering methodology for validating and maximising opportunities to use KlaruwTex190 (K190) retexturing for skid-resistance improvement schemes (which meet qualifying structural/condition criteria) to harness a range of benefits that improve Value Management scores whilst maintaining the engineered safety of pavements at compliant levels.

K190 controlled mechanical bush hammering restores the surface friction - and thus skid-resistance - of existing pavements to above investigatory levels, as an alternative to applying materials to achieve the same result. It involves no virgin or recycled materials, no hot processes, no chemicals, no after-treatment, no cleaning, no white line reinstatement, no raising of ironwork; all whilst generating minimal waste for disposal.

The process typically extends pavement life by 2 to 5+ years before more costly inlay or overlay is required. However, as a result of the project, A-one+ has identified that K190 retexturing could delay SCRIM issues for an additional 10 years depending upon the traffic volumes, road layout and geometry and investigatory level of the site.

Road traffic collision (RTC) and barrier strike incident numbers available for 11 of the 15 sites treated are down from 80 to 18 incidents (including incidents not influenced by pavement surface characteristics) over comparable pre- and post-treatment periods.

As well as safety, K190 retexturing delivers on remaining Value Management criteria: value for money, reduction of disruption and sustainability. It has enabled a reduction in CO₂ from skid-resistance work alone of almost 450 tonnes for the first 18 months of K190 use*. At around a fifth the cost of overlay, it has saved in the region of £1.14M over 18 months, as well as saving an estimated £186,000 (based on a £3k average figure) in repairing network damage. These savings can help fund other safety improvements/priorities; effectively, 320% more square metres of pavement can be restored to compliant skid-resistance levels by K190 retexturing instead of resurfacing.

By reducing highway possession by some 25-50% compared to surfacing, K190 treatment improves journey time reliability by limiting the number of traffic diversions (averaging 6-10km) implemented for short duration night-time schemes, and reducing associated fuel consumption and carbon footprint. Requiring less plant than surfacing operations, K190 retexturing also provides scope for other works to share Traffic Management, for further cost savings and reduction in traffic disruption.

ENDS

*Based on provisional data from the Road Surface Treatments Association (RSTA) carbon calculator project. This indicates that K190 retexturing reduces the 'Cradle to Laid' carbon footprint of restoring skid resistance by potentially up to 90% compared to a 40mm asphalt thin surfacing (assuming 50kg CO₂ e/t asphalt).