



Generating efficiency savings in highways maintenance

Innovation and partnership in supply chain management

PROJECT OVERVIEW

As part of Northumberland County Council's plans to generate efficiencies from their Highways maintenance programmes, three key resurfacing schemes were identified for potential cost savings. The chosen schemes were A697 Cornhill to Barelees, A1167 Sunnyside to Tweedmouth and A697 Humbledon. The target was to achieve savings of around 20% to bring costs in line with allocated budget.

Collaborative work was undertaken with members of the supply chain to explore where efficiencies could be made. Combining the detailed asset knowledge of the local authority with the skills and expertise of the supply chain partner helped to identify innovative approaches and potential cost savings.

**COMPLETED
ON SCHEDULE**

**QUALITY
OF FINISH**
Smooth surface finish

**LOW
ROAD NOISE**
for local residents

**REDUCED
DISRUPTION**
to public

**SAVING IN TRAFFIC
MANAGEMENT COSTS**

VALUE ENGINEERING

Initially the focus was on generating efficiencies by improving planning, to allow scheduled programmes to run concurrently. However, because the labour and plant element of the schemes only equated to around 15% of the project value, these savings would not be sufficient to meet the target cost saving.

Greater savings were needed from the material component of the programme costs. This meant that a detailed design evaluation was required to investigate whether alternative pavement design could achieve further cost savings. It was hoped that combining innovative pavement designs with improved planning would jointly achieve the target cost saving.

PARTNERSHIP APPROACH

Ian Carr, Regional Technical Manager at Tarmac (then Lafarge Tarmac) was asked to inspect all three of the schemes and advise on alternative pavement designs, while experienced supervisor Chris Cawley was briefed to advise on the process, 'build-ability' and outputs. The priority was not only to generate up-front cost savings, but also to deliver a durable, low maintenance finish that would minimise the need for future resurfacing work and deliver long term value for local communities.

After detailed inspections of all three schemes, alternative proposals were presented. One of the schemes, a section of the A697 between Cornhill and Burlees Bends was originally designed as an overlay of 40mm HRA project with base and binder patching where required. The road was fairly straight and approached a roundabout. The proposal was to carry out the patching as per original design but to overlay with an Ultithin 6mm surface course of 30mm in depth. This would use locally produced 55 PSV aggregate for the main area and a 65 PSV aggregate for the approach to the roundabout.

This new design would achieve a durable, long-lasting surface but also mean significant saving in the volume of materials required and the time required on site. Using a high PSV aggregate on the approach to the roundabout also removed the requirement for additional antiskid surfacing.

RESULTS AND OUTCOMES

COST SAVINGS

As a result of this partnership and the detailed joint investigation that took place, major cost savings were identified on this scheme. The saving equated to around 17.5 % of original allocated budget of £106k, but also removed the requirement for around £8,000 of antiskid treatment.

QUALITY, CUSTOMER SERVICE AND ASSET MANAGEMENT

In addition to this direct cost saving, there were also a number of key benefits to road users. The programme period was reduced, so restrictions and delays to the public were minimised. There was also a further saving in traffic management costs to the authority.

This partnership approach involving detailed inspection of the highways asset and a tailored approach to delivery, helped to build knowledge of the asset and make sure that the correct surfacing solution was chosen. It contributed to the council's commitment to continuous process improvement and helped to generate learning to carry forward into future programme delivery.

The work was completed, as planned, during [dates required]. After inspecting the site, the Area Highways Manager and contractor were in agreement on the quality of the finish, which delivered excellent ride quality and low noise. This resulted in a big improvement in the quality of the surface for the road user, but also a reduction in noise for local residents living nearby.