PROJECT SHEET

Long term performance of local roads treated with Aspen rejuvenation treatment at Penrith City Council, Newcastle City Council and Tweed Shire Councils

Location
Numerous residential streets in three NSW Municipalities

Commencement
Aspen treatment commenced in 2000

Completion
This project is ongoing

Total area Treated
In excess of 1.5 Million m² treated to date

Condition of asphalt surface of local roads in Wallsend, Newcastle Council
Left photo, Claymore Close - surfaced in 1992 and treated with Aspen
Right photo, Boambee Close - surfaced in 1995 and no treatments to date

Overview

Several councils have adopted a proactive asset management strategy to maintain the 'as new' condition of the local roads within their expanding housing estates.

Penrith City Council, Newcastle City Council and Tweed Shire Council have all demonstrated that the local roads in their housing estates can be extended beyond the expected 25 year design life with regular applications of *Aspen* surface rejuvenation treatment.

With several roads over 30 years of age since the last surfacing treatment and based on their current condition it is anticipated that the surfacing life will exceed 40 years following further planned *Aspen* treatments.

Another benefit resulting from the regular application of *Aspen* includes eliminating the requirement for routine pavement maintenance and a reduction in the incidence of cracking.

How this was achieved

To counter the effects of environmental distress on local roads which results in binder oxidation, surface ravelling, stone loss and cracking *Aspen* was initially applied before the surfacing had reached 10 years and in most instances by year 8.

Subsequent *Aspen* treatments have been reapplied on a 4 to 8 year cycle with several roads having received 3 treatments to date.

The reapplication frequency is dependent on the timing of the initial Aspen treatment with a longer frequency cycle to maintain the benefits if applied before Year 8.

Life Cycle Cost benefit

Over a 40 year life cycle the cost of *Aspen* treatments is approx half the cost of an asphalt overlay.

Similar benefits have also been observed when *Aspen* has been regularly applied to spray seals on local roads. An added benefit is that stone loss due to binder oxidation is prevented.

Hans Meijer, City Works Manager Penrith City Council comments;

"Penrith City Council has been using Aspen as a low cost pavement rejuvenation treatment since 2000 and has now applied in excess of 750,000 m² of the product across a range of roads within the LGA. Several locations have now been treated 3 times and have asphalt wearing courses approaching 35 years of age with minimal signs of degradation. Community acceptance has been high and any delay in more costly treatments is a benefit to ratepayers"

Steve Paff, Maintenance Engineer Tweed Shire Council comments;

"Tweed Shire Council uses rejuvenation treatments to its low-trafficked residential streets primarily to delay asphalt ravelling and binder deterioration due to oxidation. A secondary benefit of rejuvenation is that it reduces the permeability of the asphalt and further protects the pavement against moisture ingress. Subdivision streets are attempted to be treated on an 8 year cycle with the aim of extending the life of asphalts to 40 years before a further asphalt resurfacing is required. The value of the treatments has been verified in the field with the asphalt surfacing of several roads constructed in the mid-1980's still being in good condition"

Zero Harm

We maintained our Zero Harm principles with no harm or serious incidents during this project, as well as preserving community assets.