



# SAMI SOLUTIONS

## SAMIflex 'E'

### Campbelltown City Council



SAMIflex Solution No. 1

## Spray sealing during extreme weather



"To be honest, I never believed it would be possible for SAMI to make such a success of spray sealing in the middle of the night, in the middle of winter," said Campbelltown City Council's Construction Engineer, Ken Hartwig.

CAMPBELLTOWN City Council was recently faced with a major construction and logistics challenge when it had just 30 hours to complete the construction of a new dual lane roundabout and 100m long road designed to improve access to the F5 Freeway, near the junction of Campbelltown and Raby Roads in Sydney's west.

Traffic volumes in the area had increased significantly following the opening of a new shopping centre at nearby Eaglevale, and Raby Road also leads to Camden Valley Way, a major road leading to suburbs experiencing significant residential growth.

This, in conjunction with the rapid growth of new local housing estates in the Campbelltown area like St Andrews, which are also accessed from Raby Road, meant access to the area had become a major problem.

Traffic trying to gain access to Raby Road and St Andrews had to turn right across the Campbelltown off load ramp from the F5 and this created a traffic bottleneck, extending up to one kilometre long during

peak hour. The location had also become an accident black spot.

To alleviate the situation, the Council and the RTA decided to relocate the access point for Raby Road and install a roundabout, however, because of its importance, the RTA would only allow the Council to close the road for construction work to proceed from midnight on a Saturday to 6.00am on Monday morning.

This meant that the newly constructed pavements for the access road and roundabout would have to be sealed during the night, the first time the council was faced with such an occurrence.

"To be honest, I never believed it would be possible for SAMI to make such a success of spray sealing in the middle of the night, in the middle of winter," said Campbelltown City Council's Construction Engineer, Ken Hartwig.

"It was a very cold night and it wasn't even possible for SAMI to begin spraying until about 2.00am on the Monday morning."

Working under lights, SAMI completed the 4500m<sup>2</sup> two-coat spray seal in under four hours, with a two hour break between each coat.

Because of the exceptionally low temperature - less than 5°C - SAMI used Samiflex "E", a high residual emulsion binder specially developed for application in cool and damp conditions.

Applied at a temperature of between 85°C and 90°C, the 14/7mm two-coat spray seal was placed over 450mm of crushed slag road base, which was delivered to the site in 40 semi-trailer loads from Wollongong. The sealed base was then to receive a 60mm asphalt wearing course at a later date.

The works were carried out by two gangs of five from the council working 10 hour shifts in conjunction with a number of contractors, with SAMI also having 10 personnel on site during the spray sealing operation.

"Co-ordination of the various contractors working on the project was the key to its successful outcome," said Ken Hartwig.



SAMI used a polymer modified emulsion binder on the spray seal for Eagleview Road because it was very heavily deformed.

As soon as the spray seal was completed, the surface was vacuum swept to remove any loose stones.

"As soon as we had finished laying and trimming the pavement, SAMI would move onto that section of the project and begin applying the spray seal, while we got on with preparing another section of the pavement.

in extreme weather conditions by resealing a 3km long section of one of its major urban roads, Eagleview Road.

Prior to the 10mm single coat reseal being placed on Eagleview Road, Campbelltown City Council carried out some isolated deep lift patching.

"It was very much an around the clock operation and thanks to the efforts of our various crews and all of the contractors, I am pleased to say that we were able to return the road to service just 25 minutes past our target at 6.25am on the Monday morning."

Owing to the extent of surface deformations of the road, which had been heavily patched over the past 15 years, the Council opted to use Samiflex E60HR, a 6% polymer modified high residual emulsion binder.

As soon as the spray seal was completed, the surface was vacuum swept to remove any loose stones and eliminate the possibility of vehicle damage.

Campbelltown City Council has also recently taken advantage of SAMI's polymer modified emulsion binders' ability to be placed

The incorporation of polymer in the emulsion binder not only increases the flexibility of the cured surface, but also improves the pavement's ability to control deflections and reduces the likelihood of reflective cracking.

The total area of around 30,000m<sup>2</sup> was completed between the hours of 8.30 am and 4.30 pm, over two days, with SAMI spraying one lane width plus the shoulder at the same time.

"Work of this nature during winter months, and especially at night-time, was unthinkable before the development of emulsion binders like Samiflex," said Ken Hartwig.



All of the equipment line up and ready to begin another run on Eagleview Road at Campbelltown, where SAMI resealed about 30,000 m<sup>2</sup> of heavily deformed pavement in two days.

"They certainly help to extend the spray sealing season well into winter and, from what we've seen on Raby and Eagleview Road, we'll certainly be considering their use on a more regular basis."

*This Case Study has been produced with the kind assistance of Campbelltown City Council.*



For further information on any of the products featured in this Case Study or any of SAMI's other specialist road maintenance products and services, please contact:

**SAMI Pty Limited** A.C.N. 001 089 416  
 12 Grand Avenue, Camellia, NSW 2142  
 Telephone (02) 9638 0110. Facsimile (02) 9638 4090.

