



CASE STUDY

SHARPE BROS INNOVATION SAVES ARMIDALE DUMARESQ COUNCIL TIME AND MONEY



PROJECT OVERVIEW

LOCATION	State Highway 78, The Waterfall Way, Armidale, NSW	SCOPE	Heavy patching at various locations along State Highway 78, The Waterfall Way
DATE	September & October 2012	MATERIAL	2% lime at 200mm depth road stabilising

SOLUTION

As part of Armidale Dumaresq Council's annual Roads and Maritime Services (RMS) budget for safety and reseal segment road failures, Sharpe Bros solutions allowed the council to save precious time and money to complete the project within budget.

With previous methods, heavy patching works for RMS could be a 5-6 week program with the result revealing a failure to complete all planned patches within the allowable budget. The use of the Rotamixer offered council a leap forward in time per patch, patch size and the cost savings.

Using Sharpe Bros equipment meant that council not only completed all of the heavy patching along the State Highway with minimal disruption to motorists and the community, they also had spare time to undertake additional repairs with shoulder grading and edge repairs.

TECHNOLOGY

The patent-pending Rotamixer technology, developed by the Sharpe Bros family company, is an all in one unit that incorporates new developments for mixing lime, cement or blending materials to stabilise road pavements.

The Rotamixer can spread lime, inject water and mixes, all in one high powered machine, allowing for greater control of spread rates, moisture content and mixing consistency.

The Rotamixer has the unique ability to mix at various widths and depths from one metre wide patching to full widths, allowing for vast increases in traditional production rates.

The traditional patching depth of 150mm is well surpassed with the use of the Rotamixer, which can reach 200-300mm for a more uniform mix and longer lasting roads.

BENEFITS

- **Excellent maneuverability** – The Rotamixer can easily move about the worksite within a single closed lane.
- **Easier distribution of additive** – Armidale Dumaresq Council used to apply 17kg additive bags by hand, which was a slow process and not popular with staff. Using Sharpe Bros Rotamixer, Council was able to use 1 tonne bags with a quick release to fill the Rotamixer's hopper. The process is much quicker and easier on the back.
- **Flexible working conditions** – Council found the Rotamixer could combine the product quickly enough to make working in changing conditions much more flexible. In the past works were sometimes delayed due to high winds causing additive and road base particles to become airborne.
- **Environmentally friendly** – Sharpe Bros processes that re-use and rehabilitate in-situ materials, eliminate the cost, energy use, air pollution and disruption caused by importing and exporting materials to and from worksites.
- **Cost effective** – The reduction in council crew members required on the job and the speed of the innovative Rotamixer meant Armidale Council saved an estimated \$11 per m² over traditional methods.
- **Longer lasting roads** – Sharpe Bros in-place road recycling process eliminates reflective cracking common with over-lays and increases base thickness for the new asphalt or bitumen wearing surface. The project has extended the pavement life by 15–20 years.
- **Minimal traffic disruption** – The ability to complete many patches per day with the Rotamixer minimised traffic delays along the highway.
- **Improved safety** – The use of less machines due to Sharpe Bros Rotamixer greatly increased safety operations at the worksite.
- **Improved staff moral** – Armidale Council staff and Sharpe Bros worked together as a united team on the project. Feedback from Council staff was that they enjoyed being part of the project and seeing the direct benefits of working with the new technology.

TESTIMONIAL

"The diversity of work achievable and innovative approach from Sharpe Bros will ensure that they are at the top of the contact list for patching and shoulder work.

Personally, I'm very impressed with the reliability of equipment, eagerness and co-operation of Sharpe Bros staff in the office and on the ground and especially the overall finished result of work. The dramatic improvements made through recent Rotamixer work greatly enhances the communities view of Council and with RMS who also receive the direct and carry on benefits.

Using large equipment has allowed us to play "catch up" with our defects and minimised maintenance and future heavy patching costs. Council is considering use of the Rotamixer on its local roads and surrounding locations for future projects."

Sharn Woolnough, Project Officer, Armidale Dumaresq Council (ADC)



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Council revs up road repairs with Rotamixer

AN INNOVATIVE new road repair machine has enabled Armidale Dumaresq Council to improve proposed reseal areas of the Waterfall Way in record time.

Council used the new Rotamixer machine, developed by Gosford Company Sharpe Bros, for heavy patching work along the road.

The machine is an all-in-one unit that incorporates new ways of mixing lime, cement and other materials to stabilise and repair road pavements.

Council's project officer Sharn Woolnough said the project was carried out under their Road and Maritime Annual Ordered Works budget aimed at improving road safety and quality of damaged roads.

"Using large equipment has allowed us to play 'catch up' with our defects and minimised maintenance and future heavy patching costs," he said.

Sharpe Bros joint managing director Michael Sharpe said the family company had identified the need for an environmentally friendly machine that could re-use existing road base materials.

"Roads across Australia are becoming distressed, carrying heavier loads than ever before and certainly more than originally intended," he said.

"By fixing just the areas of the road that need fixing, we have fewer in-and-out truckloads which means less fuel consumed, whilst recycling and heavy patching requires fewer materials than constructing a new road."

He said the ability to recycle road materials is important for regional areas such as Armidale, enabling councils to save money and spread their road repair programs over greater distances.

Council is considering using the machine on its local roads and surrounding locations for future projects.



Newspaper:
Armidale Express

Rotamixer™

AUSTRALIA WIDE CONTACT SHARPE BROS® P: 02 4324 6555 OR E: office@sharpebros.com.au

www.sharpebros.com.au