

## Ammerdown Project

2003

Client: RTA Western

Project Partners:



### Project Details

Date: 2003

Location: Ammerdown, Mitchell Hwy Client: NSW Road & Traffic Authority (RTA)

Length: 2.5 km Quantity: 36,000 tonnes Contractor: NSW RTA

Road Description: Mitchell Highway north of Orange  
Major arterial road to Dubbo.  
Repeated pavement failure caused by moisture from high water table and surface ingress.

### Design & Construction:

Full flexible pavement construction.  
Construction undertaken under traffic.  
Unbound granular pavement design, 200mm thickness.  
25-year design life.

Product: MatrixBase (20mm x 0mm quarry aggregates + Power Station Ash)



Supply & spread, compact, trim and traffic.

Mitchell Highway



Supply & spread, compact, trim and traffic.

Mitchell Highway



Construction under traffic.

Mitchell Highway



Road condition in 2013 – 10 years after construction.

Mitchell Highway

## Cost, Productivity and Sustainability Advantages:

|                         |  |
|-------------------------|--|
| Reduced material        | compacted density is 10% lighter   |
| Workability             | simple compaction technique  |
| Improved productivity   | workability and compaction performance under traffic and in the wet<br>reduced construction time |
| Public amenity & safety | reduced construction time  |

All these factors contribute to significantly reduced project costs.

RTA Works Engineer, John Harrison, explained the advantages of MatrixBase:

“ The available quarry products are difficult to work and do not perform well in the wet or under traffic. This means there is considerable rework. By comparison, very little rework is required with MatrixBase.”

## **Project Outcome:**

The addition of fines in MatrixBase improves the workability which makes compaction easy. The required compaction density is easily achieved with minimum time and effort.

This improves construction productivity and reduces construction time and costs.

MatrixBase performs well under traffic, and in wet conditions, with minimum rework required.

Improved safety and public amenity achieved through reduced construction time.

No maintenance since construction – 2004 to 2014.