

Case Study

Hoddle Street, Melbourne

Shell Mexphalte - helps to paint the town red in Melbourne, Australia, improving safety on the roads



Shell Mexphalte CP1 binder was used to create the red asphalt to surface the new bus lane on one of the city's main arterial routes. Clear delineation of lanes for different traffic uses is helping to improve traffic flow in one of Australia's busiest cities.

Colourful and durable solution helps to improve traffic flows

Critical success factors

- Colour properties
- Strength, elasticity and flexibility
- Fine tuned product with fuel resistant additive
- Close co-operation with contractor
- Quality control of manufacturing process

Application Inner city traffic management

Dimensions 1.4 km section of highway

Product family Shell Mexphalte

Product grade CP1

Client VicRoads

Contractor Boral Asphalt



Shell Bitumen

Case Study **Hoddle Street, Melbourne**

Strength, durability and aesthetic appeal

Melbourne is Australia's second largest city with a population of over 4 million. Hoddle Street is a busy arterial road that runs for approximately 3.5km. Much of the road is a wide section of three to four lanes in each direction and is subject to heavy traffic flow.

VicRoads, the statutory authority within the Victorian Government responsible for managing the road network, evaluated the options for the works along 1.4km of road on Hoddle Street.

VicRoads, North West Metropolitan Region selected a red asphalt incorporating Shell Mexphalte CP1 as the binder, in a coloured 7mm Stone Mastic Asphalt (SMA). A red granite aggregate from East Gippsland was also selected in combination with Shell Mexphalte CP1 to enhance the desired colour and to maximise colour retention over time.

Specialist product for a specialist job

Shell Bitumen developed the Mexphalte C binder specifically for use in coloured asphalts. Shell Mexphalte CP1 is a synthetic binder that has been developed for producing coloured and decorative asphalt whilst having **superior engineering properties** to that of conventional bitumen.

Shell worked with Boral Asphalt, the main contractor responsible for the manufacture and paving of the asphalt... Thanks to dedicated teamwork, the bus lane now has a fine and smooth appearance.

The transparent synthetic binder is modified with a polymer called Styrene Butadiene Styrene (SBS) thermoplastic copolymer – which increases the **elasticity** and **flexibility** of the asphalt, substantially improving its fatigue characteristics and permanent deformation resistance.

In resurfacing Hoddle Street, the Shell Mexphalte CP1 binder was added to a 7mm Stone Mastic Asphalt (SMA). A red granite aggregate from East Gippsland was selected, to be used in combination with Shell Mexphalte CP1 to enhance the desired colour and to maximise colour retention over time.



After discussions with the Roads and Traffic Authority in New South Wales, the team also agreed to further enhance the red asphalt mix with a fuel resistant additive to combat the deformation of the asphalt due to fuel spills from buses.

Teamwork delivers a high quality bus lane

Shell worked with Boral Asphalt, the main contractor responsible for the manufacture and paving of the asphalt.

Monitoring temperatures was also vital to ensure the desired temperatures were met in order to achieve targeted compaction levels. Temperature also influences the appearance of the finished pavement. If the temperature is too low at paving, this would normally result in a coarser finish.

Thanks to dedicated teamwork, the bus lane now has a fine and smooth appearance.

A brighter future for Melbourne's road network

The creation of coloured bus lanes is part of the state governments 30 year sustainable growth plan, *Melbourne 2030*. The plan has identified that colour coding road surfaces is key to improving traffic flows. Red bus lanes, green cycle lanes and yellow pedestrian areas are planned.

Given the success of Hoddle Street, it is expected that Shell's Mexphalte CP1 will be playing a key role in helping to make Melbourne a more colourful and safer place.

For more information about how Shell Bitumen can help your business, please visit www.shell.com/bitumen

Delivering Innovation to your Advantage.



Shell Bitumen