SUSTAINABLE AGGREGATES
SOUTH AUSTRALIA

WOODVILLE
Bunnings and Harvey Norman carparks

Products

The pavement for these two adjacent carparks comprised two granular layers in which DPTI specification PM1/20RG (grading based) was used for basecourse and PM2/20RG (grading based) for subbase and a thin hot mix asphalt wearing course.

Application

This project was constructed in 2007/8 by Built Environs who are a strong supporter of the use of recycled pavement materials and have considerable experience in associated construction processes.

The site covers an area of approximately 20,000m^2 and recycled materials were chosen on the basis of close proximity of the recycling facility to the site (7kms) and known performance of the material. In excess of 20,000 tonnes of granular material was used at the site. The use of an alternate granular material would have needed to be sourced from approximately 20kms away.

Environment

Environmental benefits associated with this construction and the adoption of recycled pavement materials were realised in:

a. Disposal of demolition waste to the same recycling facility as purchase of new pavement material allowing back loading in deliveries

b. Reduced material haul (7kms) compared to the nearest quarry source (22kms)

c. 30% reduction in CO_2 emissions in terms of manufacture of recycled pavement materials

d. Avoidance of demolition waste to landfill

Performance

Opened in 2008, this pavement is subjected to many light traffic applications (cars and light trucks) and therefore structural distress has not been observed nor is it likely. Minor random asphalt popping due to aluminium inclusion (Environment Fact Sheet No. 3) was observed and rectified.

Figure 1. Bunnings completed carpark

CONTACT INFORMATION

For information on this project or any application of recycled materials as granular pavement layers please contact:

Andrew Wilson (0439 682 970)

PO Box 542
Enfield Plaza SA 5085