

DUX® in Action!

DUX woven polypropylene geotextiles have been proven time and again as the best way to stabilise soft subgrade material. A few recent local projects are good examples of how DUX woven geotextiles have been used to save the day:

1. At the site for a new shopping centre complex at Dorset Road, Bayswater, Becon Construction used 5,400sqm of DUX to help stabilise very soft existing uncompacted subgrade fill material. Up to 600mm of “soft rock” crushed mudstone was used to bridge over the very soft subgrade and achieve a firm base for building construction.



2. The Ballarat area is notorious for soft variable subgrades, a legacy of the areas mining past. At the new police station project Midwest Earthmovers was faced with worst case conditions including a high water table and areas of uncompacted fill where large steel tanks had been removed. Some 5,000sqm of DUX was placed over the area together with a 200mm layer of crushed rock stabilised with cement for additional strength to achieve a good working platform and thereby allow pavement construction to proceed.



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Churchill Island Access Road

One of the most innovative recent applications of DUX products was seen during re-construction of the tourist access road to Churchill Island, which is located just off Phillip Island. The island is connected to Phillip Island by a low-lying roadway that is inundated by king tides. To construct a permanent, all weather roadway in these difficult conditions consultant Bill Ramsay of M.J.Consulting Engineers designed an initial stabilising layer and drainage blanket consisting of up to 500mm of 100mm ϕ maximum size rock rubble overlying DUX 80kN/m woven. Its super strength combined with its superior hydraulic performance makes it the ideal choice where it is required to bridge across extremely soft subgrade material and also allow the free flow of water.

Then, on top of the rubble layer, a layer of DUX was placed to provide an effective separation layer before placement of a final 200mm thick layer of Class 3, 20mm crushed rock.

Construction was carried out in August 2000 by Goldsmith Constructions, supervised by project manager Gary Tate of Project Services. Some 3,840sqm of 80kN/m DUX and 4,200sqm of DUX 25kN/m was used. Since completion the road has been tested by king tides and passed with flying colours.



Morwell Log Loading Yard

Contractor John Mann, of Mann Constructions used locally available quarry overburden soft rock as pavement material to construct a low-cost hardstand and loading area at the Morwell log loading yard. A layer of up to 1m of very soft silty-clay made construction very difficult, so DUX was placed over an area of 12,000sqm to stabilise the subgrade followed by 400mm of pavement material. The area was then ready for trafficking by the 60 tonne log loaders. This facility handles up to 250,000 tonne/year, loading trains with radiata pine for transport to Geelong and eventually Japan. The soft rock was supplied at a rate of \$4/tonne or \$9/sqm placed, and the DUX was supplied and placed at under \$1.00/sqm, making this a very cost-effective pavement solution.

