

# Case Study

# Geofabrics

Project: **82 Stacker Embankment Stabilisation**  
 Date: October 2006  
 Product: **ELCOSEAL X3000**  
 Client: Hamersley Iron / Rio Tinto  
 Location: Tom Price, Pilbara Region, WA

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## ELCOSEAL®

Geofabrics Australasia has been successfully supplying **ELCOSEAL®** Geosynthetic Clay Liners into major Australian lining projects, since 1996.

In line with the significant investment in mining infrastructure, **ELCOSEAL®** GCL's have also been used in many unique mining applications, such as the Tom Price 82 Stacker Embankment Stabilisation Project.

Tom Price mine is situated about 1500km north of Perth, in the Hamersley ranges. The elevation of Tom Price town is 747 metres, making it the highest town in Western Australia.

In 1966, iron ore mining operations commenced at Tom Price and the open pit mine has a current capacity of 28Mt per annum, employing 870 staff.

Efficient materials handling is critical to the economic viability of any mining operation.



Tom Price mine has rail loadout capabilities which include ore stockpile reclaimer and stacker conveyors for rapid loading into rail bins. These facilities can be up to 300metres long and typically require an embankment foundation to support the stacker.

Waterproofing of the foundation embankment of Stacker 82 was necessary to retain moisture within the clay upper embankment to prevent shrinkage cracking, erosion and potential undermining of the stacker foundations.

**ELCOSEAL® X3000** GCL was installed for this purpose, due to the steepness of the embankment slopes and the heavy loadings applied to the GCL. **ELCOSEAL® X3000** was laid, in 5m lengths, down the 1V:1.5H embankments. The GCL also had to be suitable for placement under a rail, concrete sleeper and rock ballast system on which the Stacker travels.

Approximately 14,000m<sup>2</sup> of **ELCOSEAL® X3000** was supplied to the Stacker 82 Embankment project.



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