



WATERPROOFING LEACHATE COLLECTION SYSTEM

CASE STUDY

PROJECT:	Bisasar Road Landfill – Durban	DATE:	Dec 1998–May 1999
CLIENT:	Durban Solid Waste	QUANTITY:	
CONSULTANT:	Wilson Pass & Associates	PRODUCT:	Enviromat™ X1000
CONTRACTOR:	Stedone Construction		

The leachate collection/cut-off system was proposed at the toe of the Bisasar Road Landfill site to prevent leachate escaping the unlined landfill section and contaminating the groundwater.

The leachate cut-off/collection system consisted of a 3.5m deep trench the down stream face of which was lined with **Enviromat™ X1000**, which acted as the impermeable layer. A 400g/m² geotextile protection layer was placed between the **Enviromat™ X1000** and the rough trench side to prevent damage to the Geosynthetic Clay Liner. Stone filled Gabion baskets were used to fill the trench to collect and drain the leachate from the trench.

Enviromat™ X1000 was used as the impermeable membrane ($k = 1 \times 10^{-11}$ m/s) because it was easy to place, is not easily damaged and had been used extensively in landfill applications internationally.

Leachate seeping into the open trench made working conditions extremely difficult for the contractor



The **Enviromat X1000** was pegged on the surface and suspended into the