

# PROJECT INFORMATION



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| <b>Client</b>              | <i>Burger and Wallace Construction</i>        |
| <b>Project</b>             | <i>Lake Michelle, Noordhoek, Western Cape</i> |
| <b>Liner Specification</b> | <i>1,0mm Vitaline HDPE</i>                    |
| <b>Size</b>                | <i>51 300m<sup>2</sup></i>                    |
| <b>Date Completed</b>      | <i>2005</i>                                   |
| <b>Consultants</b>         | <i>De Villiers Sheard</i>                     |

## Application Details

Lake Michelle has a unique setting alongside an existing lake and wetland system. The developers needed to incorporate a new lake system in such a way that the two systems could interact with each other in a completely controlled environment. The existing wetland is protected and any new development could not impact on this in any way.

Engineered Linings were asked to assist in developing a lining system for the new lakes which would not only blend in with the surroundings, but also offer a complete watertight barrier between the new lakes and the existing wetland.

A 1,0 mm thick Vitaline liner was used which was installed in the excavated lakes.

## ENGINEERED LININGS

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# Lake Michelle, Noordhoek



One of the design criteria was that a “soft edge” be incorporated in which reeds and plants could be planted, so that the liner would not be visible. This “soft edge” design allowed for soil to be placed on top of the liner but also meant that it would not slip off the liner once the soil was saturated.

Another feature of the project is the many scenic walkways which follow the perimeter of the lakes and also project out into the water. The liner design incorporated the many poles which were needed to support the walkway system. These poles were jettied into the soil beneath the liner and then each pole was sealed to the liner using a Geosynthetic Clay Liner (GCL), held in place by a confining layer of sand and cement.



Overall the project ran extremely smoothly and the combined effort of the Burger and Wallace contractors, the design engineers, de Villiers Sheard and the engineers from Engineered Linings, ensured that the final lining system met all the required criteria.

## OTHER FEATURES WATER

- Sun International - Lost City - Canals, Ponds, Waterways
- Sun International - Boardwalk Casino - Port Elizabeth - 17 000m<sup>2</sup>
- 2 Spilhaus Ave, Constantia - 134m<sup>2</sup>
- Sun West International - Grand West Casino - 3 700m<sup>2</sup>
- International Business Gateway - 3 000m<sup>2</sup>
- Daimler Chrysler - Century City - 714m<sup>2</sup>
- Calswald Water Feature - Midrand - 2 531m<sup>2</sup>
- House Parker - Somerset West - 840m<sup>2</sup>
- Sibaya Casino - Durban - 5 890m<sup>2</sup>
- Carnival City - Brakpan - 20 000m<sup>2</sup>