



TensarTech TR2 reinforced soil wall system was chosen to form the raised 'islands' to create landscaped animal enclosures

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TensarTech® TR2 on Safari

Tensar's TensarTech TR2 reinforced soil wall system was the ideal solution for creating new landscapes at the largest safari park outside of Africa.

Seih Al Bardi Park

Reinforced soil walls

📍 Sharjah,
United Arab Emirates

CLIENT'S CHALLENGE

Animal enclosures built as part of the expansion of the Seih Al Bardi Park included 145 raised 'islands' to create a natural-looking landscape. The original plan was to build the islands' perimeter slopes from reinforced concrete. However, there were concerns these would be expensive and challenging to build, given the irregular slope profiles, with a high environmental impact, so an alternative was sought.

TENSAR SOLUTION

TensarTech TR2 reinforced soil wall system was chosen to form the 3m to 6m high, 80° slopes. These were then covered with sprayed concrete to create natural-looking rock faces. With a 120-year design life, TensarTech TR2 was flexible enough to form the irregular slope profiles; plus it made slope construction faster and more economical than reinforced concrete. Environmental impact was also lower, particularly as TensarTech TR2 enabled locally-sourced materials to be used as structural fill to form the islands.

BENEFITS

50% cost savings
compared with
reinforced concrete
walls

**Natural looking
landscape**
created with 80°
slopes faced with
sprayed concrete

**Reduced
environmental impact**
by enabling the use of
locally sourced fill



The TensarTech TR2 slopes were given a sculpted finish using sprayed coloured concrete to create a natural looking rock faces

PROJECT BACKGROUND

Al Bardi Park in Al Dhaid, Sharjah opened in 2007 as a nature reserve. In 2017, work began to expand it by 1,400ha, creating the largest safari park outside of Africa, home to 50,000 animals.

New animal enclosures included Savanna, Kalahari, Ngongoro and Giraffe Gorge, and involved building 145 raised 'islands' between 3m and 6m high. The islands' perimeter slopes were to be covered in sprayed concrete, creating natural-looking rock faces.

The original plan was to build the island slopes using reinforced concrete. However, the client, Ruler Office – Sharjah, and its consultant CH2M Hill, were concerned this approach would be expensive and technically challenging to build, as the island slopes were irregular to help give a more natural aesthetic and would have a high environmental impact, so they wanted to explore alternatives.

Tensar worked with CH2M Hill to develop a design using the TensarTech TR2 reinforced soil system. This met all of the project's technical requirements, while being faster and more economical to build, with a lower carbon footprint.

The islands were constructed using locally-sourced fill, reinforced with Tensar uniaxial geogrid mechanically-connected to galvanised steel mesh panels, lined with durable, heavy-duty geotextile to retain the fill behind.

The completed 80° TensarTech TR2 slopes, with a total face area of 36,000m², have a 120-year design life. The sprayed and sculpted concrete facing (which was structurally independent of the TensarTech TR2 slopes) was then applied, with shallower vegetated slopes above to complete the desired finish.

Client:

Ruler Office - Sharjah

Consultant

CH2M Hill

Main Contractor

Darwish Engineering

Installer

POME

(Pioneers of the Middle East)

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