Koolan Island

Koolan Island, Australia

Seepage barrier creation for remote iron ore facility

The project

The Koolan Island seepage barrier was installed to allow Mt Gibson Iron to resume mining premium grade Iron Ore on Koolan Island, up to 125m below sea level. The mine was last operational in 2014, when the existing seawall was breached resulting in the ocean in Kimberly's Buccaneer Archipelago flooding into the mine.

The challenge

The main challenge for Keller was constructing a seepage barrier up to 50m depth through highly permeable rockfill with boulders in an 11m tidal environment during cyclone season in the Kimberly Region of Western Australia.

The solution

Keller completed rigorous pre-mobilisation preparations to identify high quality plant and an experienced international team of Engineers and operatives to deliver this flag ship project. The Keller team were able to promptly respond with increased resources to facilitate a 24/7 operation for the works to suit our clients needs. Keller completed the seepage barrier, which achieved a significant reduction in the specified sea water ingress as anticipated by the project team. Since the completion of the works our client has successfully reopened the mine and recommenced supplying premium grade iron ore to the market.

Project facts

Owner(s)
Keller

Keller business unit(s)
Keller Australia

Main contractor(s)
Mt Gibson Iron

Solutions
Seepage control

Markets
Industrial

Techniques
Slurry cut-off walls
Permeation grouting