

## Project Profile

# Narrows Crossing – Acid Sulphate Soil Treatment



<b>Client</b>	McConnell Dowell
<b>Location</b>	Gladstone, Queensland
<b>Duration</b>	September 2012 - May 2013
<b>Contract</b>	Treatment of Acid Sulphate Soils
<b>Cost</b>	Schedule of rates

## Project Overview

Treatment of approximately 50,000 cubic metres of acid sulphate soils as part of Bechtel’s LNG facility in Gladstone.

On the back of successfully treating 15,000 cubic metres of acid sulphate soils on Curtis Island in preparation for the construction of Bechtel’s LNG facility, McMahon Services was awarded an additional contract on the mainland.

McMahon Services’ Civil Division successfully treated an additional 50,000 cubic metres of acid sulphate soils in Gladstone at The Narrows Crossing – known for its strict environmental regulations, with the route crossing the Kangaroo Island Wetlands on its way to the facility.

The material was wet/sloppy marine sediment and the acidity was highly heterogeneous. To effectively treat the material, the team utilised our company-owned Komatsu Reterra BZ210-1 G-Mode – a specialist soil conditioner along with a calculated dose of aglime. The liming rate ranged from 90 – 300 kg/tonne.

### McMahon Services

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The developed treatment system was a modification of the Reterra, in order to dose the material with the neutralising reagent at a relatively high ratio. Instead of using the Reterra's own reagent dosing system, an external feed hopper and conveyor system was developed to dose the aglime.

The project demanded significant sampling and record keeping requirements. Careful coordination was needed to deliver samples to a laboratory and to release batches once results were returned. McMahon Services recorded 'zero rejects' for the duration of the nine month project.

McMahon Services' innovative treatment method not only saved significant amounts of storage areas on the busy site but the method also allowed the material to be reused for other critical construction components.

Compared to the traditional 'land farming' method of spreading the lime across the site using a tyne and turn method on a grader, and given the rain encountered, treating the material in any other way would have been, as described by key stakeholders, "disastrous".

The McMahon Services solution provides a cost-effective and long-term solution for the treatment of Acid Sulphate Soils.

**McMahon Services now owns two of only a handful of the Komatsu Reterra G-Mode soil blending machines. The key advantages of our treatment method include:**

- > Minimal footprint required
- > Efficiency and accurate use of liming additive
- > High production rate
- > Improves quality of material
- > High treatment success

