



Perth, WA

# MudMaster

McDowall Affleck

CONSULTING ENGINEERS | PROJECT MANAGERS

Responsive. Reliable. Results.



## Phibion

### Overview

The patented MudMaster® is an amphibious vehicle that can safely traverse low strength materials such as tailings, dredge spoils, snow and marshlands. It uses two counter-rotating Archimedes screws to provide traction and buoyancy on any surface. The MudMaster® has been specifically designed to also impart a deep consolidating force on the soil to liberate entrained water thereby allowing the soil to increase in density and strength. The MudMaster® machine and technology is now exported for use around the world.

Currently in operation at BHP Billiton, Rio Tinto, United Company Rusal and Alcoa sites.

### Type of Engineering Work

Mechanical Engineering

### Work Timeframe

Ongoing with machines built regularly

### Contract Value

Commercial in confidence

### McDowall Affleck Contact

Ben Veale



### Scope of Work

- Mechanical design, 3D modelling and drafting of the complete MudMaster machine
- Production of drawings for manufacture
- Certification of the design of the machine to relevant Australian Standards
- Inspection of various components during manufacture to ensure the machine meets specification

### Project Challenges

- Every MudMaster machine includes improvements and upgrades from the previous build
- Incorporating these changes into the design and 3D model, and maintaining a database of each version of machine required an in-depth knowledge of the history of the project

### How we managed this

McDowall Affleck modelled the MudMaster in Autodesk Inventor and maintained a comprehensive database of each machine.

### Value Engineering

- McDowall Affleck worked closely with Phibion over many years to develop the mechanical design of the MudMaster
- The technology of the MudMaster has revolutionised the tailings management industry

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