



DESIGN & CONSTRUCT TABLELAND MILL BAGASSE PIT & RAMP



fgf carried out a design and construct project of the Bagasse Inload Pit and Ramp and Outload Facility for Bundaberg Walker at the Tableland Sugar Mill. Bagasse is a byproduct of the sugar extraction process and is stockpiled onsite and fed back into the mill as a fuel substitute for cogeneration of power during out of season processing. Construction of the works allowed the bagasse material to be fed and removed from the mill directly via modified body trucks. Previously the bagasse material was rehandled with a loader as it was fed and removed from the mill. The internal dimensions and design loadings for the concrete structures were provided by Bundaberg Walker. fgf's scope of works was structural design, certification and construction of the concrete structures and design and construction of associated road works.

Project works included:

- Design and construction of the inload pit and ramp, outload conveyor trestle footings and outload building slab and piers foundations.
- Excavation and bulk earthworks including ground support design and stability certification. Sections of the excavation were over 6m deep and adjacent to existing operational mill infrastructure.
- Design and construction of stormwater infrastructure in and around the inload pit and ramp.
- Design and construction of roadworks including the truck access to the inload ramp and egress from the outloading facility.
- Establishment and maintenance of environmental controls and soil and water management systems.
- Provision of traffic management and safety signage

Project opportunities and challenges included:

- Project complexity - Initially Bundaberg Walker had designed the pit as a core filled block works structure. fgf proposed and performed a design and construct of cast insitu reinforced concrete wall over the block wall option which proved to be more cost effective and timely in construction. Also the project was constructed during part of the wet season and involved coordination with many trade packages.
- Development of solutions to accommodate varying steel infrastructural and positional conveyor designs changes whilst subject to a challenging construction program.
- Proactive relationship management with many stakeholders

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Location:

Tablelands Sugar Mill -
Mareeba

Client:

Private Client

**Structural Engineering
Consultant:**

Ashley Moller
Associates

Duration:

Jan 2013 – Jun 2013