



Tonkin & Taylor

New Zealand Steel Brookside Rd Landfill

The New Zealand Steel mill at Glenbrook, south of Auckland is a major regional industry. The production of a range of iron and steel products totalling approximately 650,000 t/yr generates a large amount of waste and slag by-products. The mill runs a rigorous waste minimisation programme and large volumes of slag are processed for use as high quality basecourse and drainage aggregate.

Washing of the raw ironsand slurry piped from the Waikato North Head mine site some 18 km away, together with the steel manufacturing process results the generation of some 150,000 m³/yr of clay slimes and 30,000 m³/yr of non-reusable wastes. These wastes are disposed to a purpose-designed landfill, with the dry wastes used to form impoundment bunds for tipping and stabilising the slurry wastes. Seepage and stormwater from the landfill are collected and returned to the mill for treatment and discharge via the main plant outfall.

Project Data

Owner - New Zealand Steel Ltd.

Tonkin & Taylor Involvement - Site selection studies, planning and resource consent processes, Northside Diversion Drain extension, development planning, phase design and construction supervision, pump station design, geotechnical design of retention bunds, final landscaping and rehabilitation.

Filling Commenced - 1992.

Landfill Volume - 2.75 Mm³.

Footprint Area - 21 ha.

Fill Type - Non-putrescible steel manufacturing waste, clay slimes from ironsand processing, stormwater pond sludges and minor general non-putrescible waste.

Liner - Compacted clay liner with leachate collection blanket.

Waste Input - 100,000 m³pa (approximately 140,000 t).

Other Features - Progressive capping and rehabilitation to farmland, major stormwater diversions, geotechnical design for impoundment of clay slimes behind bunds formed of dry steel manufacturing wastes, and stormwater treatment systems.



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