

Union Hill Cyanide Tanks, Waihi



Location: Union Hill, Barry Rd, Waihi

Heritage Status

Historic Places Trust Registration Number: 135

Historic Places Trust Category: Category 1 - Registered Historic Place

HDC Heritage Category: A - Heritage Feature. National or Outstanding Regional Significance

Other:

Physical Description: Six cylindrical concrete tanks, 16.7m high and 3.66m in diameter. Visible in aerial photographs.

Other known names: B&M (Brown & McMiken) air agitation tanks. Pachuca Tanks

Notable features:

Style:

Materials: Ferro- Concrete

Date of Construction: 1905, 1909 two built, 1910 four built

History: The cyanide process for the extraction of gold from crushed ore made possible the economic operation of non-alluvial goldfields in New Zealand, and elsewhere e.g. Australia, United States, Mexico and South Africa. The world's first field trials of the process were held at Karangahake in 1889, and in 1897 the patent was acquired by the New Zealand Government.

District Plan Schedule

Number: HAU003

Heritage Category: A

Heritage Type:

- Wahi Tapu
- Cultural Landscape
- Building
- Group of Buildings
- Structure
- Monument
- Historic Place
- Archaeological Site
- Other

Date Period:

1881-1910

Significance:

- Archaeological
- Architectural
- Cultural
- Historic
- Scientific
- Technological

Thematic Context

- Maori
- Early Settlement
- Industry
- Industry (mining)
- Extraction
- Forestry
- Agriculture
- Transport
- Communication
- Commerce
- Residential
- Social/Cultural
- Civic
- Health
- Educational
- Church/yard
- Other

Historic Heritage Inventory



Union Hill Cyanide Tanks, Waihi

District Plan Schedule

Number: **HAU003**

Heritage Category: **A**

Through the charging of a small royalty, the government had recovered its initial outlay by 1905. The process involved the mixing in the tanks of the finely-ground goldbearing ore in a solution of potassium cyanide. The suspension or slime was continually agitated by compressed air.

The only air agitation tanks still in existence today in New Zealand.

It was then trickled over a bed of coarse metallic zinc on which the dissolved gold was precipitated, to be recovered by mechanical washing. In New Zealand and Australia the tanks were known generally as B & M tanks after their developers, Brown and McMiken, but elsewhere they are commonly referred to as Pachuca tanks.

These tanks are a spectacular physical reminder of the leading role played by New Zealand mining engineers in the development at the turn of the century of a new method of gold extraction from low grade ores. It enabled the Coromandel-Thames-Ohinemuri fields to be more fully exploited, and for a time, to figure as some of the highest producing goldmines in the world. The process was widely employed elsewhere in the world.

The tanks are the largest cyanide tanks (and only air agitation tanks) remaining in New Zealand. Cyanide tanks elsewhere were smaller in size and variously made of wood, iron and steel.

Architect: C F Brown

Designer:

Builder:

Engineer:

History of changes:

Condition: Unknown

Integrity: Substantially intact

Current Uses:

Former Uses: Cyanide Vats (mineral extraction and processing)

Registered owner: Waihi Gold Company Ltd

Legal Description: Pt Sec 356 Blk XVI Ohinemuri SD

Reference Source: NZHPT Building Record Form

Historic Heritage Inventory

Union Hill Cyanide Tanks, Waihi

District Plan Schedule

Number: **HAU003**

Heritage Category: A

Associated Pictures:

