

---

# WARDEN BATTERY AND TREATMENT WORKS SITE



WARDEN BATTERY AND  
TREATMENT WORKS SITE



WARDEN BATTERY AND  
TREATMENT WORKS SITE

---

## Location

CASSILIS ROAD TONGIO, EAST GIPPSLAND SHIRE

## Municipality

EAST GIPPSLAND SHIRE

## Level of significance

Heritage Inventory Site

## Heritage Inventory (HI) Number

H8423-0006

## Heritage Listing

Victorian Heritage Inventory

---

Hermes Number 11051

Property Number

---

## History

Heritage Inventory History of Site: The Warden battery began its working life as the Hope battery, erected by the Rose of Australia Syndicate in 1889, when the Cassilis quartz reefs were first coming to life. In 1893, it was purchased by McCulloch and Eckberg, who operated it on the same site as a public treatment works, adding a chlorination plant. In 1894, the plant consisted of a 10-head battery, hydraulic separator, Frue vanners, and a large settling pit, and was described as 'the best fitted plant to treat the sulphide ores... and will probably shortly be furnished also with the necessary furnaces, apparatus, &c., to work them on metallurgical principles'. A Cyanogen (cyanidation) plant was added soon after, to treat tailings from the settling pit. As a public treatment works, the battery and plant were instrumental reviving the Cassilis reefs, many of which had been idle since 1890, when miners found it difficult to retrieve gold from the complex ore. Prospectors were able to prove the value of abandoned claims, by having ore tested at McCulloch and Eckberg's up-to-date works. In 1896, the Warden GMC purchased the plant, which by then consisted of battery with boiler and steam engine, two Wilfley tables, five Frue & Triumph vanners, two Watson & Denny grinding pans, chlorination plant, 160-ton capacity cyanide plant, and 38 x 10 ft open-hearth roasting furnace with flue and chimney stack. The Warden Co. added an Otis rotary mill (ex Mt Hepburn Co.) and fitted their battery and mine with electric light. The Warden mine was located on Mt Markey, about 1 mile east of Cassilis, with the battery at the mouth of a gully which headed on the opposite side of the ridge. Ore was sleighed uphill from the mine, then tipped down a chute to the head of the gully, and finally carted by drays to battery. The Warden battery crushed and treated ore for most mines on the Markey line of reef during the 1890s-1900s, and their treatment process consistently achieved a higher average yield than the far more expensive plants associated with the Mt Hepburn mine. The Warden mine was one of the main mines at Cassilis until 1905, after which it was tried with less success until 1913.

*This place/object may be included in the Victorian Heritage Register pursuant to the Heritage Act 2017. Check the Victorian Heritage Database, selecting 'Heritage Victoria' as the place source.*

*For further details about Heritage Overlay places, contact the relevant local council or go to Planning Schemes Online <http://planningschemes.dpcd.vic.gov.au/>*