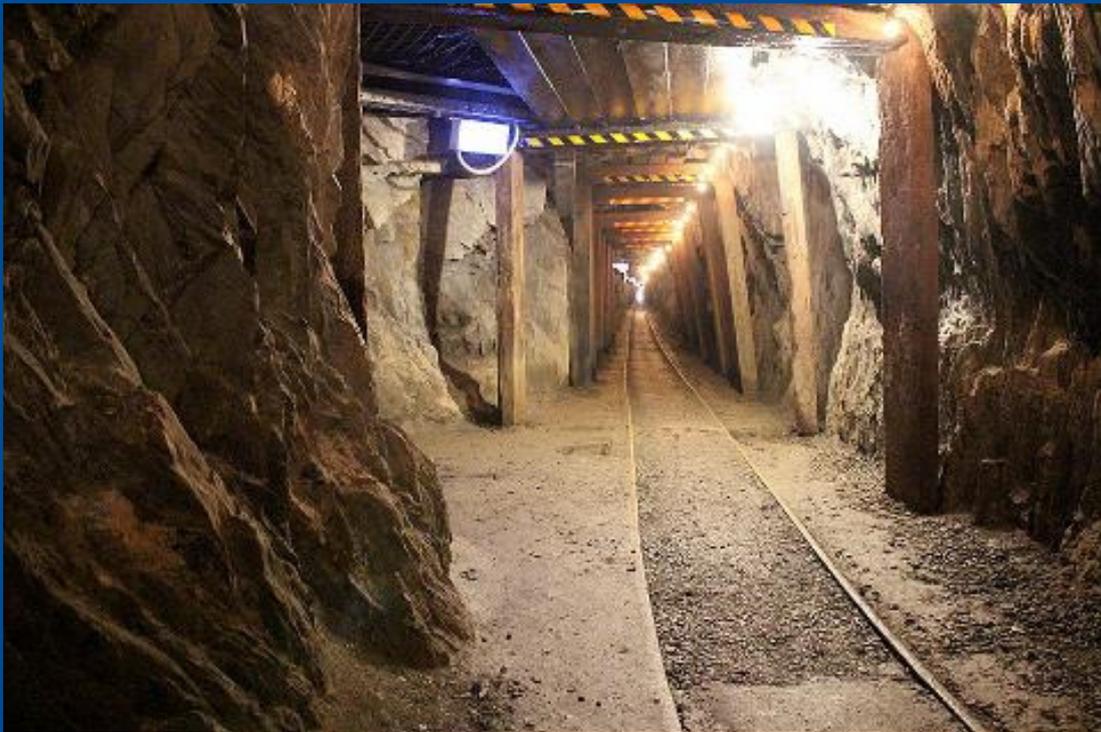


Statement of Recommendation from the Executive Director, Heritage Victoria

Long Tunnel Extended Gold Mine Reserve
Stringers Creek, Walhalla, Baw Baw Shire
Gunaikurnai Country



Executive Director recommendation

Under section 37 of the *Heritage Act 2017* (**the Act**) I recommend to the Heritage Council of Victoria (**Heritage Council**) that Long Tunnel Extended Gold Mine Reserve, located at Stringers Creek, Walhalla is of State-level cultural heritage significance and should be included in the Victorian Heritage Register (**VHR**) in the category of Registered Place and Registered Archaeological Place.

In accordance with section 38 of the Act I include in this recommendation categories of works or activities which may be carried out in relation to the place without the need for a permit under Part 5 of the Act.

I suggest that the Heritage Council determine that:

- Long Tunnel Extended Gold Mine Reserve is of State-level cultural heritage significance and is to be included in the VHR in accordance with section 49(1)(a) of the Act
- the proposed categories of works or activities which may be carried out in relation to the place for which a permit under the Act is not required will not harm the cultural heritage significance of the place under section 49(3)(a) of the Act.



STEVEN AVERY
Executive Director, Heritage Victoria

Date of recommendation: 19 May 2025

The process from here

1. The Heritage Council publishes the Executive Director's recommendation (section 41)

The Heritage Council will publish the Executive Director's (ED) recommendation on its [website](#) for a period of 60 days.

2. Making a submission to the Heritage Council (sections 44 and 45)

Within the 60-day publication period, any person or body may make a written submission to the Heritage Council. This submission can support the recommendation, or object to the recommendation and a hearing can be requested in relation to the submission. Information about making a submission and submission forms are available on the [Heritage Council's website](#).

3. Heritage Council determination (sections 46, 46A and 49)

The Heritage Council is an independent statutory body. It is responsible for making the final determination to include or not include the place, object or land in the VHR or amend a place, object or land already in the VHR.

If no submissions are received the Heritage Council must make a determination within 40 days of the publication closing date.

If submissions are received, the Heritage Council may decide to hold a hearing in relation to the submission. The Heritage Council must conduct a hearing if the submission is made by a person or body with a real or substantial interest in the place, object or land. If a hearing does take place, the Heritage Council must make a determination within 90 days after the completion of the hearing.

4. Obligations of owners of places, objects and land (sections 42, 42A, 42B, 42C, 42D and 43)

The owner of a place, object or land which is the subject of a recommendation to the Heritage Council has certain obligations under the Act. These relate to advising the ED in writing of any works or activities that are being carried out, proposed or planned for the place, object or land.

The owner also has an obligation to provide a copy of this statement of recommendation to any potential purchasers of the place, object or land before entering into a contract.

5. Further information

The relevant sections of the Act are provided at the end of this report.

Description

The following is a description of the Long Tunnel Extended Gold Mine Reserve at the time of the site inspection by Peter Davies in October 2024.

The Long Tunnel Extended Gold Mine Reserve is located on the traditional land of the Gunaikurnai people.

The Long Tunnel Extended Gold Mine Reserve at Walhalla is an area of approximately 8 ha located at 165 Main Road, Walhalla. It contains substantial physical remains of the Long Tunnel Extended Company gold mine, which operated from 1871 to 1911. The Long Tunnel Extended Gold Mine Reserve is now the location of a successful and popular tourist enterprise where visitors are guided to explore the accessible underground workings.

The Long Tunnel Extended Gold Mine Reserve is located on the western hillslope above Stringers Creek. It consists of an open surface area and extensive underground workings. The underground workings of the Long Tunnel Extended Company gold mine extend to a depth of c.930m below ground – now partially infilled through shaft collapse. The most intact parts of the Long Tunnel Extended Gold Mine Reserve are the accessible underground tunnels and machinery chamber.

Surface area

The main features preserved in the open surface area of the Long Tunnel Extended Gold Mine Reserve that relate directly to the original operation of the mine include a large heap of mullock (Figure 1) and a tramline formation upgraded to form part of the Alpine Walking Track. The top of the mullock heap forms a level platform for buildings, carparking and machinery relics (Figure 2, 3). There are also nine small ore trucks and steel tram rails at the top of the mullock heap which may derive from the mine, but their provenance has not been confirmed (Figure 4).

Subsurface area

The underground part of the mine consists of well-preserved tunnels and a substantial machinery chamber. These represent the primary accessible underground features of the mine. All the lower workings, however, are flooded with some areas partially collapsed and are no longer accessible.

The underground part of the Long Tunnel Extended Company gold mine includes the main adit or tunnel, which extends on a slight incline almost 280 metres from the portal north-west to the machinery chamber (Figure 9). The tunnel is about 2 metres wide and 1.6 to 2.0 metres high (Figure 10). It is mostly self-supporting but there are heavy timbers installed in places to stabilise the formation. Steel tram rails extend all the way along the floor of the tunnel and out to the top of the mullock heap. There is also large diameter PVC piping along the floor for drainage, and a suspended conduit cradle for electric cable and lighting. About halfway along the tunnel there are two branching adits, one to the north and one to the south, originally dug to explore the reef. These are well-preserved, stable and accessible as part of the mine tour. There are also some examples of historical graffiti carved on the walls of the main adit (Figure 11).

The main adit terminates at the original machinery chamber. This area measures roughly 40 metres in length and 15 metres in width, with a ceiling about 4 metres high (Figure 12, 13). The chamber originally contained up to five steam boilers, a winding engine, air compressor and pumping equipment. It also provided access to the Main Shaft, which descended more than 930 metres in depth. This shaft is now partially filled in and is no longer accessible. The western end of the chamber near the main shaft is also filled with collapsed rock from the roof and is not accessible. There is a brick-lined vertical flue, completed in 1879, that rises 152 metres to the surface, along with an inclined ventilation passage to the surface, completed in 1901 (Figure 16). The inclined ventilation passage is intact and provides an emergency exit from the chamber. The chamber was reused briefly for exploratory mine work in the 1980s and remains part of the mine today.

Features in the chamber include a reconstructed brick boiler foundation (Figure 14) and various machinery relics. Parts of the roof are stabilised with rock bolts and steel mesh, along with stacked timber sets or cribs and heavy timber pillars and crossbeams (Figure 15).

A substantial amount of original fabric was removed when the mine closed in 1911. See 'Intactness' section of this report.

Relocated and reconstructed historical sheds/machinery

Much of the physical fabric on the surface area of the Long Tunnel Extended Gold Mine Reserve represents either reconstructed or relocated buildings or objects. This material is useful for tourism purposes but for the most part is not directly associated with the Long Tunnel Extended Company gold mine and has limited cultural significance.

Reconstructed structures not original to the place include:

- Several timber sheds, one of which serves as an office and small museum space operated by the Long Tunnel Extended Gold Mine Committee of Management (Figures 2, 5).

Relocated objects not original to the place include:

- a portable steam engine that was probably relocated in 1977 from the Harbinger mine site on Dry Creek, located east of Jericho in the Jordan River valley (Figure 6);
- a 10-head stamp battery made at the Langlands foundry in Melbourne, also relocated from Dry Creek (Figure 7);
- a stationary steam engine;
- a 5-head stamp battery (Figure 8);
- a Cornish boiler; and
- two piles of stamp heads; and various other machinery relics.

Description images



Long Tunnel Extended Gold Mine Reserve, Mine Entrance (Peter Davies)



Figure 1. Mullock heap of the Long Tunnel Extended Gold Mine (Peter Davies)

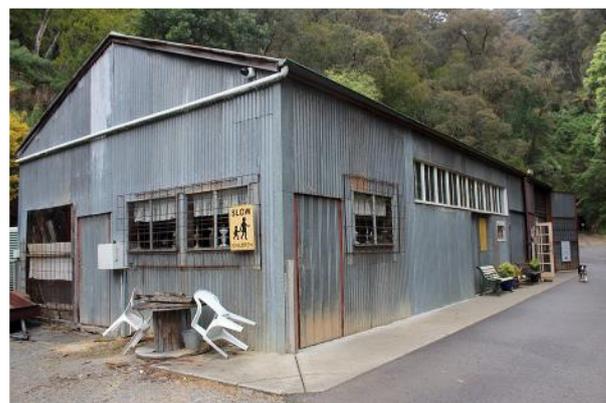


Figure 2. Long Tunnel Extended Gold Mine Reserve Museum (Peter Davies)



Figure 3. Machinery relic of uncertain origin relocated to the Long Tunnel Extended Gold Mine Reserve (Peter Davies)



Figure 4. Ore trucks on top of the mullock heap (Peter Davies)



Figure 5. Paling and corrugated iron shed from 1980s on site of Long Tunnel Extended stamp battery (Peter Davies)



Figure 6. Portable steam engine relocated to Long Tunnel Extended Gold Mine Reserve (Peter Davies)



Figure 7. Ten-head stamp battery built by Langland's Foundry in Melbourne in 1888 and relocated to the Long Tunnel Extended Gold Mine Reserve from the Harbinger mine (Peter Davies)



Figure 8. Five-head stamp battery relocated to Long Tunnel Extended Gold Mine Reserve (Peter Davies)



Figure 9. Entrance to the main adit of the Long Tunnel Extended Gold Mine (Peter Davies)

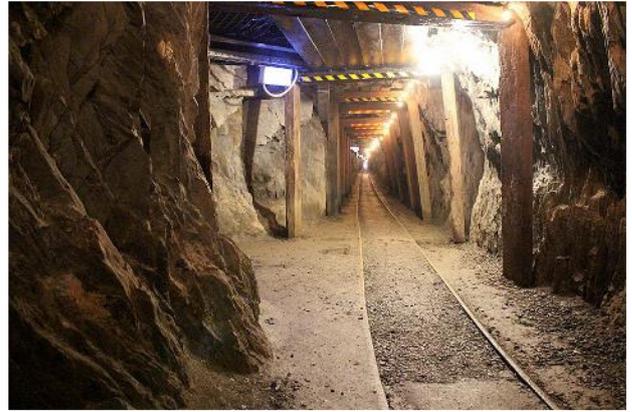


Figure 10. Main adit looking back to entrance (Peter Davies)

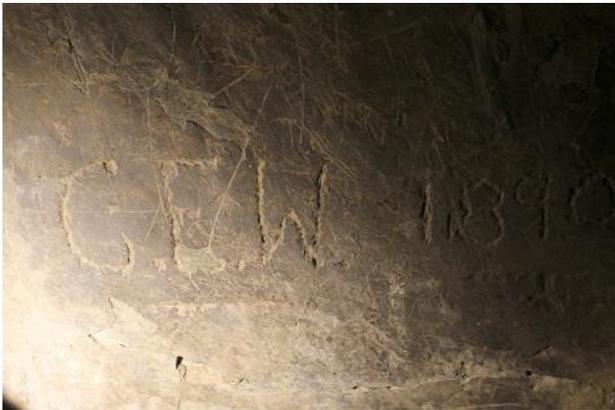


Figure 11. Historical graffiti on the wall of the main adit (Peter Davies)

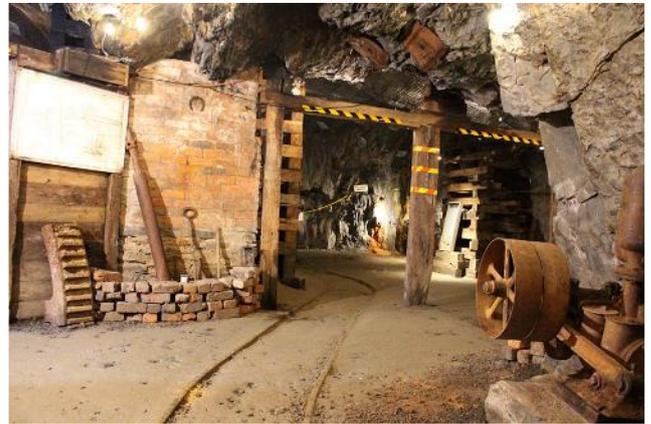


Figure 12. Machinery chamber at the end of the Long Tunnel Extended company's main adit (Peter Davies)



Figure 13. Tram rail junction in the machinery chamber (Peter Davies)

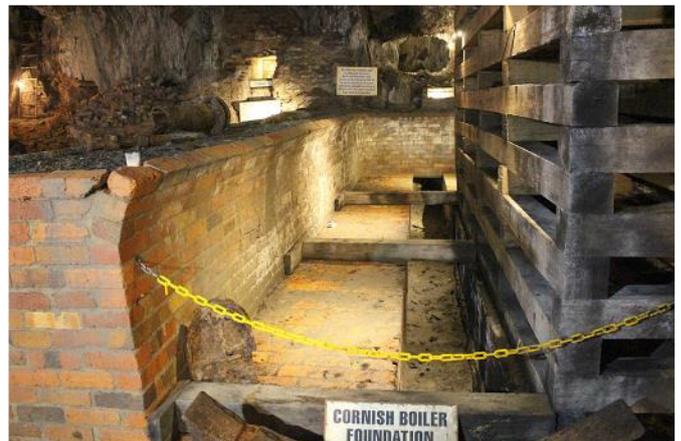


Figure 14. Brick boiler foundation reconstructed in the machinery chamber (Peter Davies)



Figure 15. Timber sets or cribs in machinery chamber of Long Tunnel Extended gold mine (Peter Davies)



Figure 16. Brick lined flue and ventilation shaft (Peter Davies)

History

Gold discovery in Victoria

Gold was first discovered at several locations in Victoria during 1851, igniting one of the great nineteenth-century gold rushes. People flocked to Victoria from around the world, with the population of the colony increasing from 77,000 to 540,000 in the decade to 1861. As the initial rush matured into a substantial mining industry, gold transformed Victoria into one of the richest places in the British Empire. Gold stimulated political reforms including universal male suffrage and the secret ballot. It also paved the way for widespread home ownership and underpinned the birth of the union movement. Few miners made fortunes, but most found the social and economic opportunity they craved. Victorian mines eventually produced around 78 million ounces of gold (approximately 2500 tons), representing one quarter of all the gold mined globally in the nineteenth century and around 2% of all the gold mined in history. The gold rush was one of the most important events in Australian history.

Gold mining techniques

The gold rush in Victoria was based on two main types of gold sources in Victoria: quartz reefs and alluvial deposits. Quartz reefs are ore bodies hosting gold-quartz mineral veins deposited several hundred million years ago. Alluvial deposits comprise gold-bearing sands and gravels eroded into creeks and gullies from exposed quartz reefs. Most alluvial deposits in Victoria and around the world are geologically shallow, found within the top 20 metres or so of the ground surface. Victoria was unusual for also having 'deep lead' alluvial deposits where ancient rivers were capped by layers of basalt or sediment from later volcanic or depositional activity. Deep leads are generally more than 30 metres below ground level.

Alluvial mining

Alluvial gold in creeks and gullies was the easiest to find and recover and formed the basis for early production on most goldfields during the 1850s. Miners used pans, cradles, rockers and puddling mills to separate gold from the washdirt. These techniques needed large volumes of water, and miners often went to great lengths to secure adequate supplies. Ground and hydraulic sluicing extended these methods from the mid-1850s onwards. In ground sluicing, miners diverted a flow of water over a working face to loosen the overburden and wash the dirt into long timber boxes lined with ripples to recover the tiny gold flakes. Hydraulic sluicing directed a flow of water into pipes that narrowed to a nozzle, with the high-pressure water blasting the washdirt into boxes to retrieve the gold. Dredges worked directly in riverbeds and adjacent floodplains and used buckets on conveyor belts to lift the gravels and process them on a floating barge.

Deep lead alluvial mines processed the deposits in similar ways to shallow alluvial workings, using cradles, shakers and puddling mills. Miners first had to gain access to the gravels at depth and raise them to the surface. Where gravels had been consolidated into 'cements' they required crushing in stamp batteries before washing. Deep alluvial mining thus required the kinds of technology and equipment generally found in quartz mines to initially access and recover the deposits.

All kinds of alluvial mining produced vast quantities of semi-liquid waste or sludge, most of which remains deposited across the Victorian goldfields and downstream rivers today.

There are five key types of alluvial mining:

- *Shallow workings*: shafts up to 10 metres deep, often surrounded by piles of mullock or waste rock. Often close together, these workings characterise the small claim sizes of the early gold rush period. There may be puddling troughs nearby for treating heavy clays.
- *Deep leads*: shafts more than 30 metres deep and potentially 100s of metres below the surface, with a single large mullock heap and potentially footings from winding engines and other surface equipment.
- *Ground sluicing*: voids created by directing streams of water over the ground. Characterised by low cliffs (<5 m), ditches and dams, and large piles of cobbles on the base of the void.
- *Hydraulic sluicing*: voids created by high-pressure hosing to undermine hillsides; characterised by high, steep cliffs (>5 m) and large piles of cobbles on the base of the void, accompanying ditches and dams from the water supply system.
- *Dredging*: uneven, hummocky ground with no or poor topsoil.

Reef mining

Quartz reef mining involved the extraction of gold-bearing ore via shafts and tunnels and hauling it to the surface for processing. This involved the extensive use of boilers, steam engines, winders, and other machinery to dislodge the ore and to move personnel and mined material from the ore body to the surface.

Once recovered, the ore was fed into the mortar box of a stamp battery and crushed into a sandy slurry, then forced onto amalgamating tables covered with copper sheets coated with mercury. The fine gold particles adhered to the mercury and water carried away the sand and minerals. The gold-mercury amalgam was then heated and smelted to refine the gold. The diverse and complex ores of the Victorian goldfields meant each mine had to adjust its processing techniques to extract as much gold as possible.

There are two key types of quartz reef mining:

- *Shaft and adit mining*: reefs are accessed through vertical shafts or horizontal tunnels (adits) from the surface, with horizontal drives into the ore body. Surface evidence may include the opening to the shaft or adit, large mullock piles, machinery foundations and tailings (waste produced after processing). This is the most common form of quartz reef mining in Victoria.
- *Open-cut mining*: reefs are close to the ground surface and accessed directly. Surface evidence includes large voids, large mullock piles, machinery foundations, and tailings (waste produced after processing).

Stringers Creek and Cohens Reef

The catchment of Stringers Creek, from its northern headwaters south to the junction with the Thomson River, is only approximately 19 square kilometres, but the steep terrain and high rainfall of Walhalla means flooding, erosion and landslips are common and destructive. The area is also vulnerable to bushfire.

Alluvial gold was first discovered in Stringers Creek in January 1863. The creek is a small, highly confined tributary of the Thomson River in West Gippsland, with the Left Hand and Right Hand creek branches joining in the Walhalla township. Prospecting and tunnelling along Cohens Reef on the western slope above the town began soon after, with trial crushing commencing by June 1863.

Cohens Reef was the quartz mining centre of the entire Gippsland goldfield. The reef consists of a north-south trending trough of compressed sediments uplifted and folded into a series of synclines and anticlines. Auriferous quartz was later injected along faults and fractures of the enclosing sediments. Dozens of gold mines operated within and around Walhalla over the years, but the field was dominated by three companies working adjacent claims along Cohens Reef: the Walhalla Company (1864-1881), the Long Tunnel Company (1864-1913), and the Long Tunnel Extended Company (1871-1911; Figure 17 - 19). The three companies produced, in total, more than 1.4 million ounces (45 tons) of gold, which was almost 2% of all the gold found in Victoria. The Long Tunnel Company was the richest gold mine in Victoria and one of the richest in Australia. The Long Tunnel Extended Company gold mine was the fifth richest gold mine in Victoria.

For comparative purposes, by 1951 the ten richest gold mines in Victoria, in order of gold yield (troy ounces) were:

1. Long Tunnel Mine, Walhalla	815,569
2. Band of Hope and Albion Consols, Ballarat	519,558
3. Port Phillip Company Mine, Clunes	514,886
4. Garden Gully United, Bendigo	440,923
5. Long Tunnel Extended Co Mine, Walhalla	440,312
6. Madame Berry, Creswick	387,314
7. Lord Nelson, St Arnaud	331,313
8. Pleasant Cross Reef, Stawell	323,413
9. Johnson's Reef, Bendigo	323,316
10. Magdala, Stawell	315,467

(Source: *Mining and Geological Journal* 4(4) 1951:13).

None of these sites are currently listed on the Victorian Heritage Register.

'Long Tunnel Extended' and 'Long Tunnel'

Despite their similar names, the Long Tunnel Extended Company and Long Tunnel Company were two separate companies with different owners. Both mined the same ore body in Cohen's Reef for many years, which required replication of resources. But they cooperated in pumping efforts to keep the lower mine levels dewatered, and each developed drives (tunnels) through the other's ground. The Long Tunnel Company crushed ore on a contract basis for the Long Tunnel Extended Company for 22 years. The Long Tunnel Company's inclined shaft, built in 1902-1904 to intersect the lower geometry of Cohens Reef, passed through the ground of the Long Tunnel Extended Company gold mine and physically joined the underground shafts.

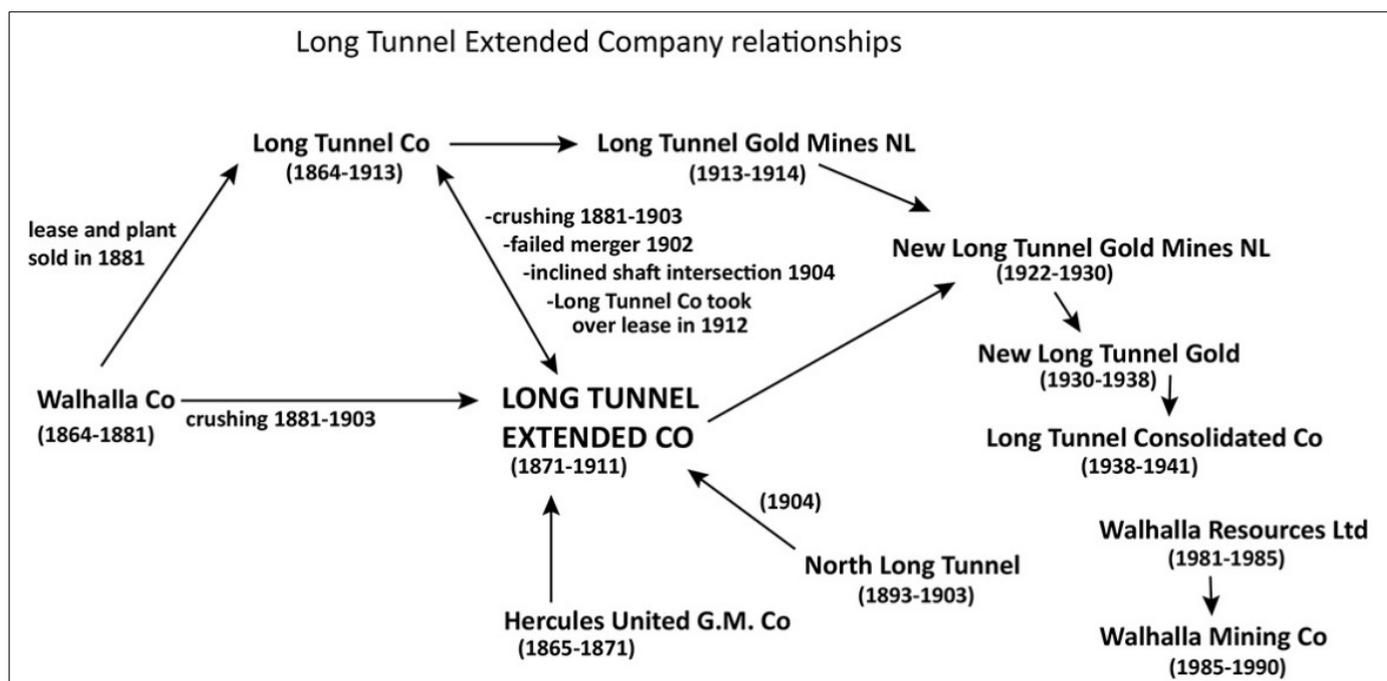


Figure 17. Relationship between companies mining Cohen's Reef

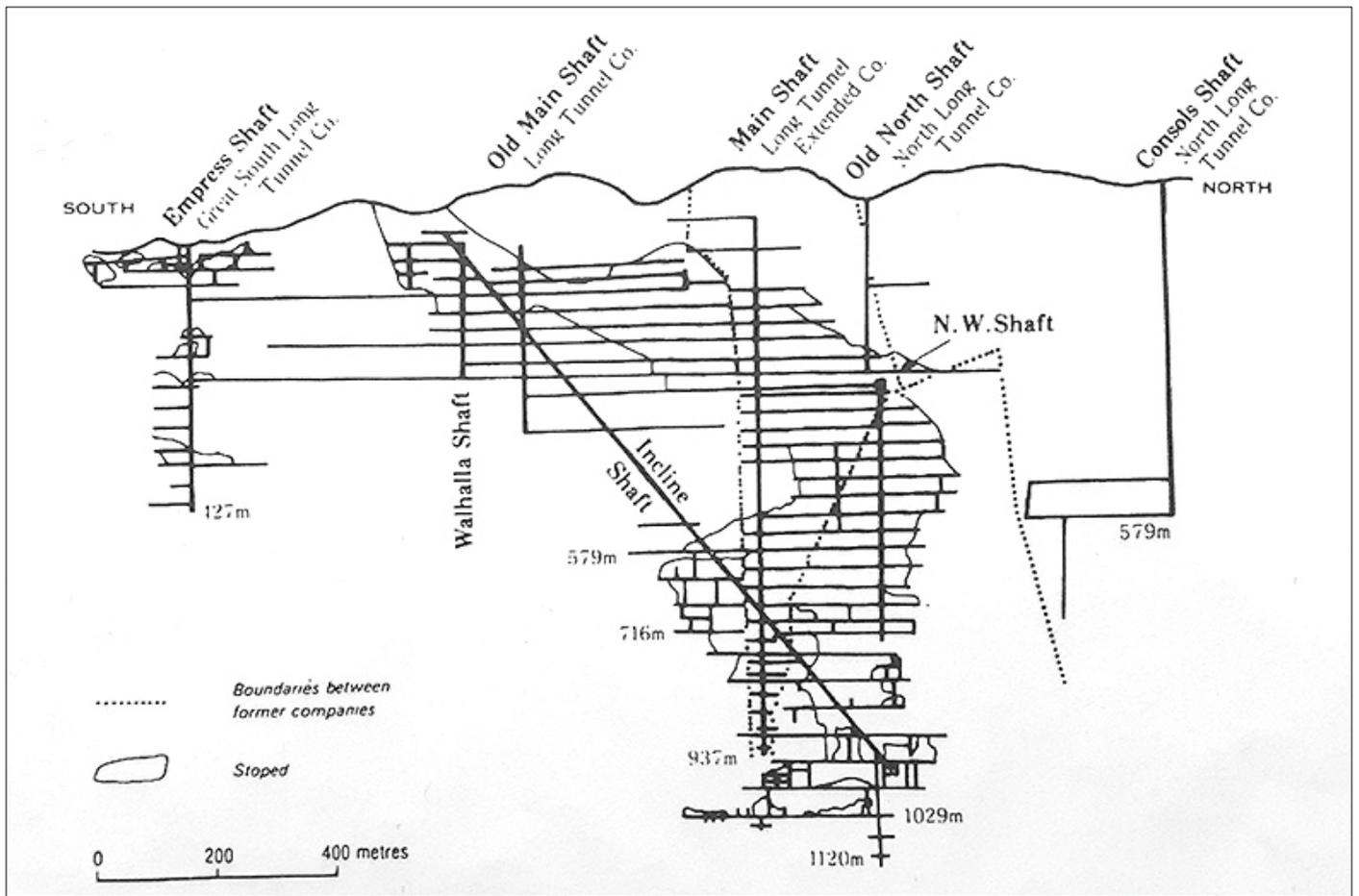


Figure 18. Longitudinal and vertical projection of mine shafts on Cohens Reef (source: Griffiths 1976)

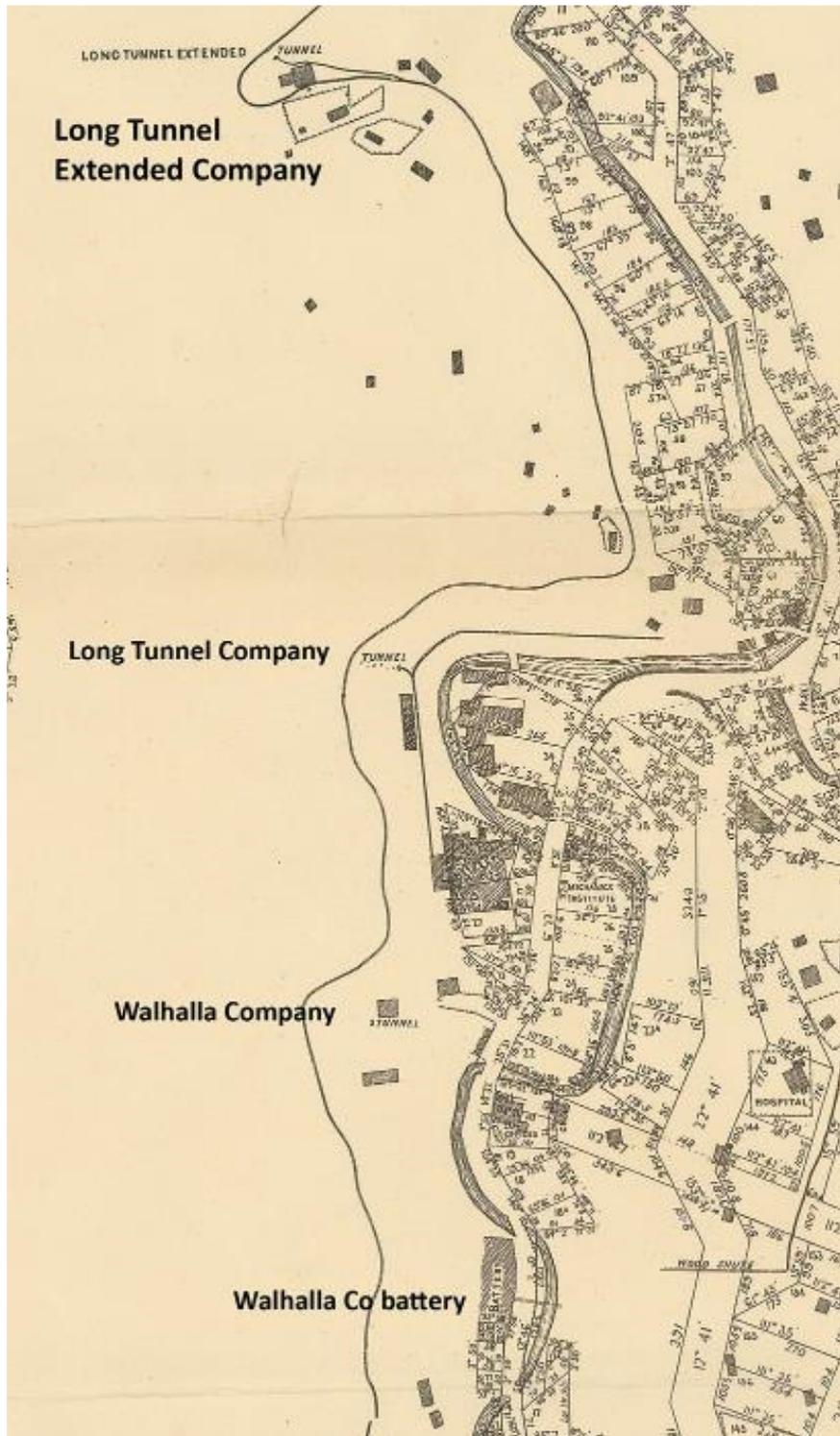


Figure 19. Detail from Resurvey of Township of Walhalla, County of Tanjil, 1902, showing positions of Long Tunnel Extended, Long Tunnel and Walhalla Company mines (State Library Victoria)

The Long Tunnel Extended Company (1871)

The Long Tunnel Extended Company was registered in May 1871 to mine a small, 25-acre (10 ha) lease previously worked by the Hercules United Gold Mining Company (Figure 20). The new company was initially formed with a share list dominated by Melbourne investors. They began by extending the 480-foot-long (146 m) access tunnel excavated by the Hercules company. Progress in developing the mine was slow in the 1870s, and gold production did not begin until 1881. The Long Tunnel Extended Company operated within a complex web of operational, management, company, ownership and physical relationships with neighbouring mines. It must therefore be understood as one of several neighbouring companies engaged in underground mining along Cohens Reef.

The Walhalla, Long Tunnel Extended and Long Tunnel companies each constructed underground chambers accessed by an adit or tunnel from the surface to permit digging of mine shafts and the installation of machinery (Figure 18). The chambers were a response to the severe lack of level ground in Walhalla between the creek and the hillslope. By 1876 the Long Tunnel Extended mine's adit extended 280 metres into the hillside, and the company excavated an underground machinery chamber. The chamber initially measured 28 x 80 feet (8.5 m x 24 m) and 4.5 metres in height. In 1878 the company installed the first underground boiler and a winding engine. In the following year a 152-metre ventilation flue was completed from the chamber to the surface.

The Long Tunnel Extended Company mined Cohens Reef via adits, shafts and drives. The main horizontal adit to the outside was dug on a slight incline so it would be self-draining, and to make it easier to push loaded ore trucks out. Shafts were used to raise and lower miners, materials, mullock (waste rock) and ore from levels below. Shafts were generally rectangular and lined with timber bracing. As the shafts deepened, plats or landings were cut at depth intervals of every 100 feet (30 m) to begin a new drive (horizontal tunnel) or level (Figure 18).

Production of gold (1881)

The Long Tunnel Extended Company mine began producing gold in 1881. Due to limited level ground on the surface, the company did not install a crushing plant until 1903. Instead, they paid £200 per month for crushing at the Long Tunnel Company's No.2 battery. In 1888 both the Long Tunnel and Long Tunnel Extended companies began to develop chlorination processes to treat pyritic ores and the old Empress Company battery to the south was modified for this work. The yields, however, were modest and there was little use in the process (Adams 1980:66-67).

A major fire broke out in Walhalla on 24 November 1888. No lives were lost but there was extensive damage to buildings and infrastructure. Most buildings were rebuilt by 1890. The following year (1891) saw major flooding along Stringers Creek. The town was inundated by flood water and debris of colluvial sediment, mullock, tailings and firewood. It washed away buildings, bridges and roadways, and four men drowned. The Long Tunnel Company's No.2 battery was flooded, disrupting ore processing from the Long Tunnel Extended Company mine.

By the 1890s the Long Tunnel Extended Company employed over 100 men and was working to a depth of over 900 metres (Figure 17). The mine included horizontal underground workings that extended 27,000 feet (8.2 km) in length.

The Walhalla mining companies burnt enormous quantities of firewood for steam power. By 1899 more than 34,000 tons of fuelwood were consumed each year. Firewood was secured from an extensive system of firewood tramways (constructed from 1865) which ran more than 60 kilometres long, and the hills around Walhalla were stripped bare. A firewood tramway and an ore tramway ran on parallel contours past the Long Tunnel Extended Company mine main adit portal.

Early 1900s

Between 1902 and 1904 the Long Tunnel Company constructed an inclined shaft (see 18). This was a major engineering achievement, excavated at 49° from horizontal to mine deep ore bodies more economically. The shaft intersected with and passed through the ground of the Long Tunnel Extended Company and improved ventilation for the miners working underground.

The Long Tunnel Extended and Long Tunnel companies tried and failed to amalgamate in 1902, with arguments over pumping and the charge for ore crushing helping to scuttle the proposal.

In 1903 the Long Tunnel Extended Company erected a 20-head crushing mill below and in front of the mine (Figure 22). Site preparation included the excavation of 4000 cubic metres of rock and soil to accommodate the large building. The mill housed two Cornish boilers with a 50-foot-high steel smokestack. Gold saving devices included copper-plate tables, Wilfley tables, grinding pans and canvas strakes. The company also installed a fifth boiler in the underground chamber, while an engine and dynamo were used for telephone, lighting and electric haulage. The chamber at the top of the main

shaft was extended in 1905 to a length of 43 metres to accommodate the five boilers, pumping and winding gear, and compressors to power 26 rock drills.

In 1904 the Long Tunnel Extended Company acquired the neighbouring North Long Tunnel Gold Mining Company and gained the latter's timber rights, tramway and a new locomotive that served the mine. They built a new steel poppet head, along with three Cornish boilers and a winding engine to dewater the mine.

The decline of the Long Tunnel Extended Company Mine

The narrow-gauge Victorian Government railway from Moe finally arrived in Walhalla in 1910. By this time gold yields in the Long Tunnel Extended Company mine were declining and in 1911 the company decided to cease operations. Total production from the mine was 431,399 ounces (approximately 12 tonnes) of gold from 353,907 tons (approximately 360 tonnes) of ore. The plant and equipment were sold off in July 1912 in an auction that attracted little interest. The Long Tunnel Company took over the lease.

The Long Tunnel Company was subsequently wound up in February 1913. A new company, Long Tunnel Gold Mines NL took over the lease in April 1913 and operated until December 1914. The equipment was sold in 1915 to other mines and to farmers. Further attempts were made to mine the lease, with the New Long Tunnel Gold Mines NL formed in 1922. They erected a 10-head battery on the old Long Tunnel Extended Company battery site in 1929, but then the Depression brought mining to a standstill. The company remerged as New Long Tunnel Gold NL in 1930, and operated until 1938, crushing 2000 tons of ore in the battery on the former Long Tunnel Extended Company mine site.

From the 1920s and 1930s, sawmilling and tourism replaced goldmining as the main industries of Walhalla. The last train departed Walhalla in 1943, and by 1962 the population was down to 12 people. A sawmill operated on the plant site of the former Long Tunnel Company until the 1960s. The Long Tunnel Extended Company mine site was thus largely abandoned from 1938 to the early 1970s.

Tourism revival

Renovation of buildings in Walhalla and the railway began in the 1970s. The government gazetted a 14-acre (5.6 ha) parcel of land at the former Long Tunnel Extended Company mine 'for Tourism purposes' on 13 December 1972. In 1974 the Long Tunnel Extended Gold Mine Reserve Committee of Management was established to develop and manage the Long Tunnel Extended Museum. Rehabilitation of the mine site began in mid-1975 (Lloyd and Coombes 2010). This involved:

- grading of the mullock heap
- construction of car park, toilets, walking track and signposts
- erection of huts and sheds for workshop, store and display
- construction of a new steel access bridge across Stringers Creek
- clearing and timbering of the main adit portal
- removal of loose and potentially dangerous rock in the adit and drive
- clearing rock debris from the machinery chamber to the original floor level
- construction of drains
- layering and ballasting the steel railway tramway
- installation of lighting
- relocation and installation of stamp battery from Dry Creek on the Jordan, along with other mining relics.

Almost 2000 tonnes of mullock and debris were removed from the mine and dumped on the mullock heap.

By 1983 the Long Tunnel Extended Gold Mine Reserve had been expanded to almost 8 hectares (Figure 23). In that year Walhalla Resources Ltd began work on reopening the Long Tunnel Company adit. By this stage the hillside was honeycombed with old mine workings and lower levels were flooded to creek level. The company became the Walhalla Mining Company in 1985. The company tried to use the Long Tunnel Extended main shaft for ventilation. Paul Steinbacher, an engineer on the works, was killed in a rock collapse in the Long Tunnel Extended mine main shaft on 18 September 1986. His body was recovered six months later. In 1987 access was gained to the Long Tunnel Extended mine main shaft and Level 6, but works were abandoned in 1990. Exploration work recommenced along Cohens Reef in the 1990s, including drilling in the Long Tunnel Extended mine chamber in the early 2000s, but no mining occurred. A landslide in 2001 buried the head of the Long Tunnel Company's inclined shaft.

As part of developing the tourism experience on the site, numerous mining-related objects and structures not originally associated with the Long Tunnel Extended Company mine were located at the place to assist tourists to understand the mining process (see list in 'Description'). These have no cultural heritage significance in the context of the place and have interpretative value only.

Historical images

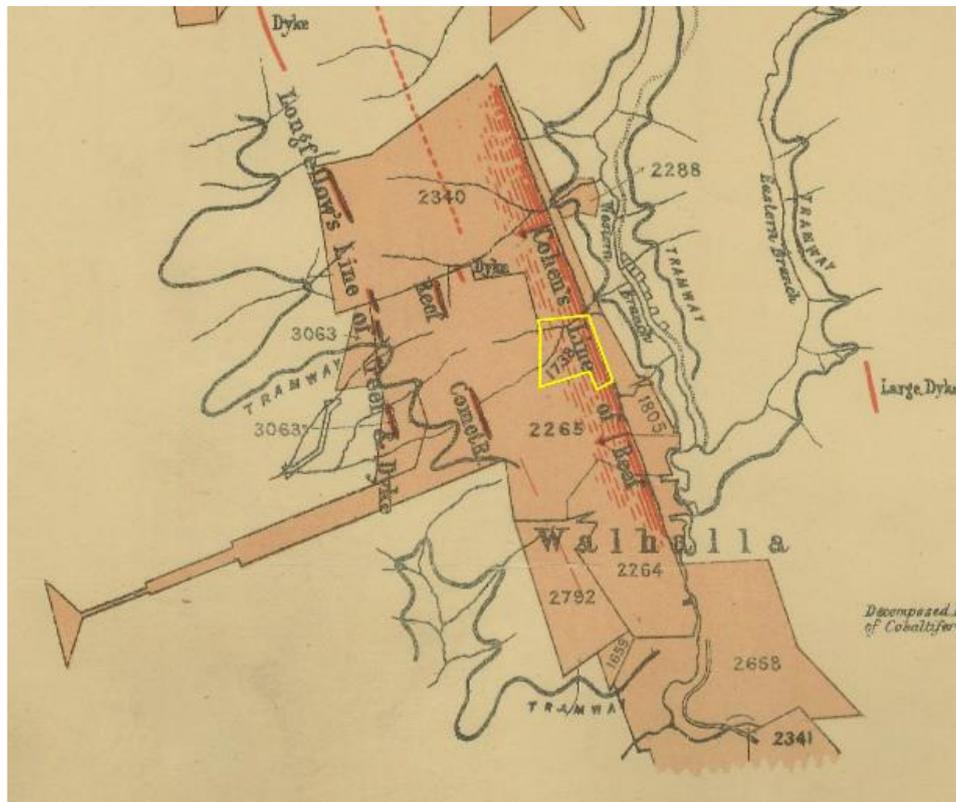


Figure 20. Detail from 'Plan Walhalla to Toombon showing topographical and geological features, quartz reefs, etc,' surveyed by R.A.F. Murray 1888. Lease area of Long Tunnel Extended mine marked in yellow (State Library Victoria)



Figure 21. Miners in the Long Tunnel Extended Company mine (State Library Victoria)

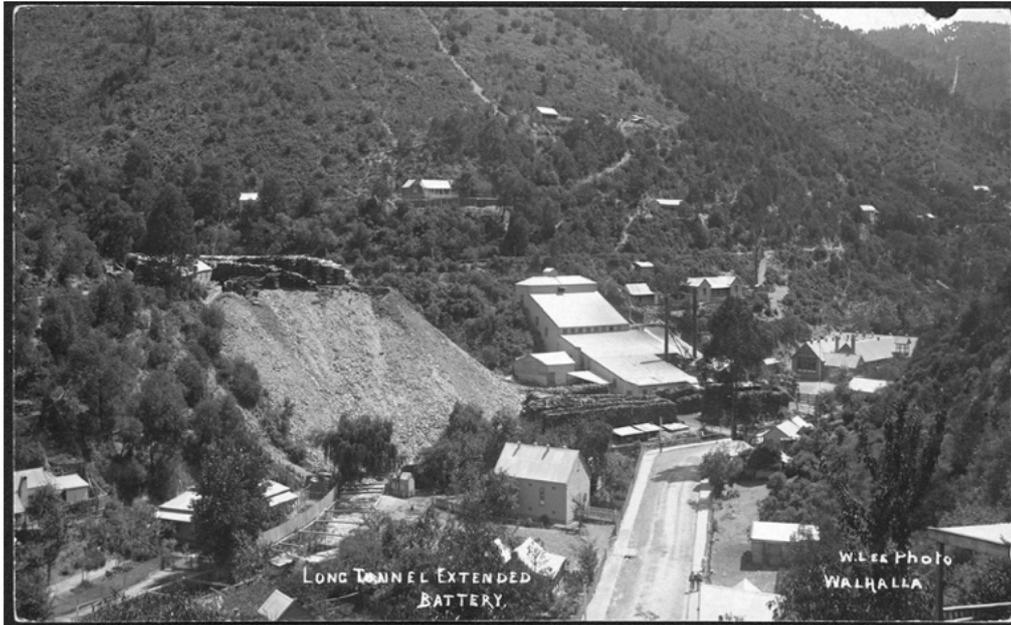


Figure 22. Long Tunnel Extended mullock heap and battery c.1908 (State Library Victoria)

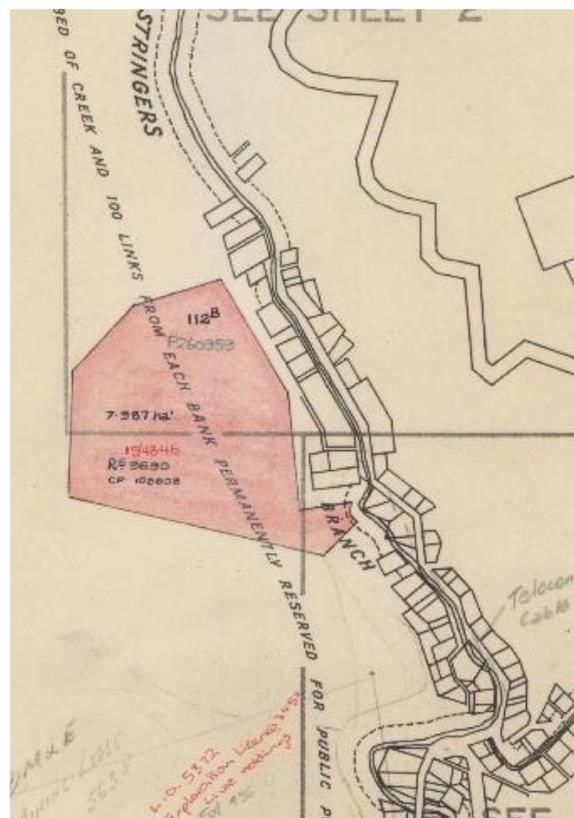


Figure 23. Portion of Walhalla Township Plan 1983, showing modification and enlargement of the gazetted 8 ha reserve for Long Tunnel Extended Gold Mine Reserve (Public Records Office. VPRS 16171/P0001/10, Walhalla-1(Tp)LOImp5819.pdf)

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Further information

Traditional Owner Information

The place is located on the traditional land of the Gunaikurnai people. Under the *Aboriginal Heritage Act 2006*, the Registered Aboriginal Party for this land is the Gunaikurnai Land and Waters Aboriginal Corporation.

Native Title

Native title is the recognition in Australian law that some Aboriginal and Torres Strait Islander people continue to hold rights and interests in land and water. Native title is not granted by governments. It is recognised through a determination made by the Federal Court of Australia under the *Native Title Act 1993* (Cth).

In 2010, acknowledging the difficult nature of having native title determined under the Native Title Act, the Victorian Government developed an alternate system for recognising the rights of Victorian Traditional Owners. The *Traditional Owner Settlement Act 2010* (Vic) allows the government and traditional owner groups to make agreements that recognise Traditional Owners' relationship to land and provide them with certain rights on Crown land.

On 22 October 2018, the Federal Court recognised that the Gunaikurnai people hold native title over much of Gippsland. On the same day, the Victorian Government entered into a Recognition and Settlement Agreement (RSA) with the Gunaikurnai people under the *Traditional Owner Settlement Act 2010* (Vic). The agreement was the first to be made under the Act.

Victorian Aboriginal Heritage Register

The place is in an area of Aboriginal cultural heritage sensitivity associated with local waterways.

Integrity

The integrity of the Long Tunnel Extended Gold Mine Reserve is very good. The cultural heritage values of the Long Tunnel Extended Gold Mine Reserve can be easily read in the extant fabric of the mine tunnel.

The main adit, exploratory adits and machinery chamber of the Long Tunnel Extended Gold Mine Reserve have been stabilised for public safety with timber and steel supports where necessary. These elements do not reduce the integrity of the workings but serve instead to emphasise the conditions under which miners originally worked.

The above ground surface area of the Long Tunnel Extended Gold Mine Reserve has less integrity than the underground area. Most of the machinery and buildings have been relocated or reconstructed. Despite this they contribute in an interpretive sense to an understanding of how the mine originally operated. (August 2024)

Intactness

The intactness of the Long Tunnel Extended Gold Mine Reserve is fair.

The underground workings at the Long Tunnel Extended Gold Mine Reserve that remain accessible are largely intact and well-preserved, except for sections at the rear of the machinery chamber. The main drives and shafts below this level, however, are flooded and inaccessible. The original machinery in the chamber has been removed and some replacement items have been installed for interpretation purposes.

The surface area of the Long Tunnel Extended Gold Mine Reserve is dominated by the mullock heap and ore tramway formation. These large elements have been upgraded to support tourist visits but are otherwise highly intact. Most of the machinery relics at the place have been relocated from elsewhere, while sheds and buildings were constructed in the 1970s and 1980s.

Missing original fabric

There are major elements missing from the original mine operation. These include the first battery house (1903-1911) and the second battery house (1929-1938); tailings from 353,000 tons of quartz ore; original buildings including the blacksmith shop, office, store and large firewood stack (all removed after the mine closed); and the original boilers, steam engines, pumps, winders, cages and other equipment, which were sold after the mine closed. (August 2024)

Condition

The condition of the Long Tunnel Extended Gold Mine Reserve is very good.

The accessible underground workings of the place are in much the same condition as when the mine was last actively worked in 1938. On the surface, the mullock heap retains the original flat top and steep slope down to Stringers Creek, while the ore tramway, now upgraded to a walking track, retains its original alignment.

Note: The condition of a place or object does not influence the assessment of its cultural heritage significance. A place or object may be in very poor condition and still be of very high cultural heritage significance. Alternatively, a place or object may be in excellent condition but be of low cultural heritage significance.

Other information

Heritage Overlay	HO8 (Walhalla Township Precinct) Baw Baw Shire Council
Other Overlays	Bushfire Management Overlay.
Other Listings	Victorian Heritage Inventory H8122-0092
Other Names	There are no other widely known names for the place
Date of construction/creation	1871
Builder	Hercules Mining Company and Long Tunnel Extended Mine Company

Statutory requirements under section 40

Terms of the recommendation (section 40(3)(a))

The ED recommends that Long Tunnel Extended Gold Mine Reserve is included in the VHR

Information to identify the place or object or land (section 40(3)(b))

Number: PROV H2464

Category: Registered place and registered archaeological place

Name: Long Tunnel Extended Gold Mine Reserve

Location: Stringers Creek, Walhalla

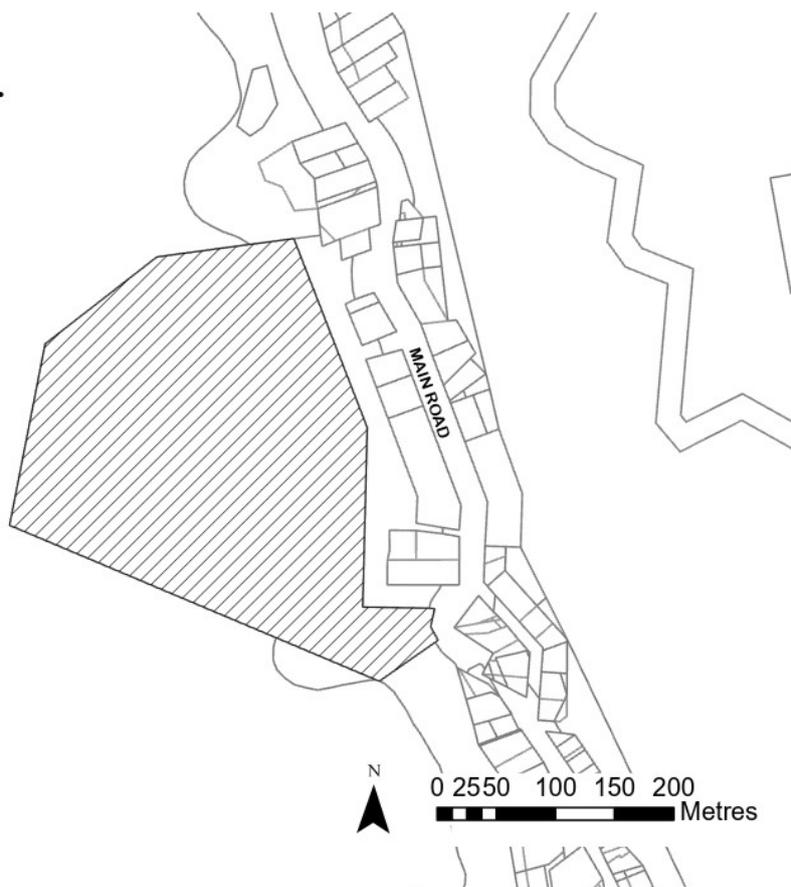
Municipality: Baw Baw Shire

Proposed extent of registration

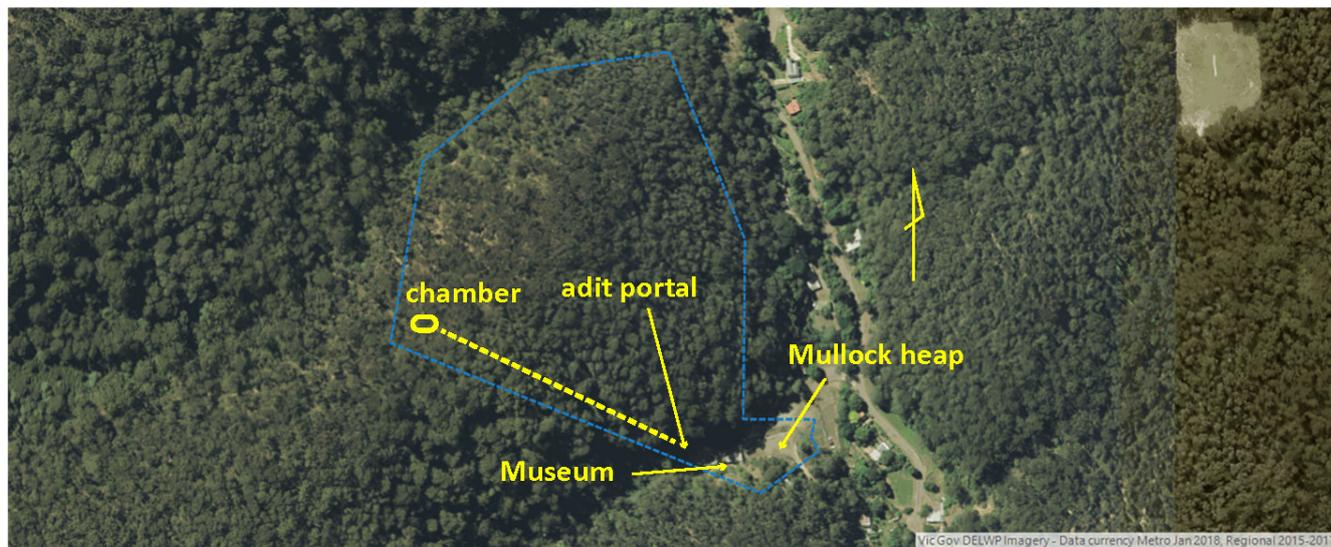
The ED recommends that the extent of registration for Long Tunnel Extended Gold Mine Reserve be gazetted as:

All of the place shown hatched on Diagram 2464 encompassing all of crown allotment 112B township of Walhalla.

DIAGRAM 2464



Non-statutory information about the proposed extent of registration



Aerial view of Long Tunnel Extended Gold Mine Reserve

Note: This aerial view provides a visual representation of the place. It is not a precise representation of the recommended extent of registration. Due to distortions associated with aerial photography some elements of the place may appear as though they are outside the extent of registration.

Rationale for the proposed extent of registration

The recommended extent of registration comprises an area of approximately 8 hectares at 165 Main Road, Walhalla, gazetted as the Long Tunnel Extended Gold Mine Reserve and managed by the Long Tunnel Extended Gold Mine Committee of Management. This area contains the essential above ground and below ground archaeological features of the Long Tunnel Extended Gold Mine.

The recommended extent of the registration is the same as nominated extent of registration.

It should be noted that everything included in the proposed extent of registration including buildings, mullock heap, upgraded tramway, main adit portal, main adit, secondary drives, and underground machinery chamber is proposed for inclusion in the VHR. A permit or permit exemption from Heritage Victoria is required for any works within the proposed extent of registration, apart from those identified in the categories of works or activities in this recommendation.

Reasons for the recommendation, including an assessment of the State-level cultural heritage significance of the Choose an item. (section 40(3)(c))

Following is the ED's assessment of Long Tunnel Extended Gold Mine Reserve, Beechworth against the tests set out in [The Victorian Heritage Register Criteria and Thresholds Guidelines \(2022\)](#). A place or object must be found by the Heritage Council to meet Step 2 of at least one criterion to meet the State level threshold for inclusion in the VHR.

CRITERION A: Importance to the course, or pattern, of Victoria's cultural history.

Step 1 Test for Criterion A

No.	Test	Yes/No	Reason
A1)	Does the place/object have a clear association with an event, phase, period, process, function, movement, custom or way of life in Victoria's cultural history?	Yes	The place/object type has a clear association with the following in Victoria's cultural history: a) The Long Tunnel Extended Gold Mine Reserve, Beechworth has a clear association with the Victorian Gold Rush, which played a major role in the social, political, economic, environmental and cultural development of Victoria. In particular, Long Tunnel Extended Gold Mine Reserve has a clear association with the alluvial mining industry which accounted for 40% of all the gold recovered in the State.
A2)	Is the event, phase, period, process, function, movement, custom or way of life of historical importance, having made a strong or influential contribution to Victoria?	Yes	This phase is of historical importance for having made a strong and influential contribution to Victoria. a) The Victorian Gold Rush and subsequent gold mining industry fundamentally shaped the social, political, economic, cultural and environmental development of the State
A3)	Is there evidence of the association to the event, phase, period, process, function, movement, custom or way of life in Victoria's cultural history?	Yes	There is evidence of the association between the place and this historical phase: a) The place includes well-preserved physical evidence of alluvial gold mining, including water races, tail races, pebble dumps and sluicing voids. The place also includes several sludge dams that represent early evidence for the management of mining waste. The history of the place is well-documented in primary and secondary sources.

If A1, A2 and A3 are all satisfied, then Criterion A is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	Yes	Criterion A is likely to be relevant.
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Step 2 State-level test for Criterion A

No.	Test	Yes/No	Reason
SA1)	Does the place/object allow the clear association with the event, phase, period, process, function, movement, custom or way of life of historical	Yes	a) The place allows the association with the Victorian Gold Rush and subsequent historical gold mining industry to be better understood than most other similar places. The extensive remains of water races and tail races, pebble dumps and sluicing voids

importance to be understood better than most other places or objects in Victoria with substantially the same association?

clearly demonstrate the process of large-scale alluvial gold mining that occurred over almost 100 years at Baarmutha. The remains of sludge dams clearly demonstrate how miners were forced to manage the waste tailings from their operations following the introduction of the *Mines Act 1904*, introduced in part in response to the extent of sludge deposits downstream of the Three Mile Creek operations.

If SA1 is satisfied, then Criterion A is likely to be relevant at the State level

Executive Director's Response:	Yes	Criterion A is likely to be relevant at the State level.
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CRITERION B: Possession of uncommon, rare or endangered aspects of Victoria's cultural history.

Step 1 Test for Criterion B

No.	Test	Yes/No	Reason
B1)	Does the place/object have a clear association with an event, phase, period, process, function, movement, custom or way of life of importance in Victoria's cultural history?	Yes	The place has a clear association with the following historical phases which are of importance in Victoria's cultural history: a) The Long Tunnel Extended Gold Mine Reserve has a clear association with Victorian Gold Rush and the state's subsequent historical alluvial gold mining industry.
B2)	Is there evidence of the association to the historical phases etc identified at B1)?	Yes	There is evidence of the association between the place and the historical phase: a) The place contains well-preserved evidence of alluvial gold mining in the form of water races, tail races, pebble dumps, sluicing voids and sludge dams.
B3)	Is there evidence that place/object is rare or uncommon, <u>or</u> has rare or uncommon features?	No	B3(i) The place is not rare or uncommon. A number of sites throughout the State retain evidence of alluvial gold mining. The place type is not rare or uncommon B3(ii) There is not evidence that the place has rare or uncommon features. The Long Tunnel Extended Gold Mine Reserve includes features that are commonly found in association with historical alluvial mining sites, including tail races, sluicing voids and sludge dams.

If B1, B2 AND B3 are satisfied, then Criterion B is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	No	Criterion B is not likely to be relevant.
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CRITERION C: Potential to yield information that will contribute to an understanding of Victoria’s cultural history.

Step 1 Test for Criterion C

No.	Test	Yes/No	Reason
C1)	Does physical fabric and/or documentary evidence and/or associated oral history or cultural narratives relating to the place/object indicate a likelihood that the place/object contains evidence of cultural heritage significance that is not currently visible and/or well understood or available from other sources?	Yes	<p>The physical fabric relating to Long Tunnel Extended Gold Mine Reserve indicates a likelihood that the place contains evidence of cultural heritage significance that is not currently visible and/or well understood or available from other sources.</p> <p>The nature of the remnant physical fabric of Long Tunnel Extended Gold Mine Reserve – particularly the form of large sluicing voids, remnant pillars of unworked ground, water races and pebble dumps, long tail races and sludge dams – indicates that further information on the history and operation of the Three Mile Creek mining area may be obtained through further investigation.</p>
C2)	And, from what we know of the place/object, is the physical evidence likely to be of an integrity and/or condition that it could yield information through detailed investigation?	Yes	<p>From what we know of Long Tunnel Extended Gold Mine Reserve, the physical evidence is likely to be of an integrity and condition that it could yield information through detailed investigation.</p> <p>The place is in a reasonably remote creek valley on public land and appears to have had little disturbance since it was abandoned in c.1950. Although the place is heavily overgrown, intensive geo-spatial analysis of LiDAR/DEM completed in 2019, combined with archaeological ground-truthing, has already demonstrated significant information about the place and additional analysis has the potential to yield further information.</p>

If both C1 AND C2 are satisfied, then Criterion C is likely to be relevant (but not necessarily at the State level)

Executive Director’s Response:	Yes	Criterion C is likely to be relevant.
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Step 2 State-level test for Criterion C

No.	Test	Yes/No	Reason
SC1)	Does the information that might be obtained through investigation have the potential to yield knowledge of significance to Victoria?	Yes	<p>The information that might be obtained through investigation does have potential to yield knowledge of significance to Victoria.</p> <p>The Long Tunnel Extended Gold Mine Reserve has the potential, through archaeological and geospatial analysis, to yield significant new evidence about historical alluvial gold mining activity in Victoria.</p>

If SC1 is satisfied, then Criterion C is likely to be relevant at the State level

Executive Director’s Response:	Yes	Criterion C is likely to be relevant at the State level.
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CRITERION D: Importance in demonstrating the principal characteristics of a class of cultural places and objects

Step 1 Test for Criterion D

No.	Test	Yes/No	Reason
D1)	Is the place/object one of a class of places/objects that has a clear association with an event, phase, period, process, function, movement, custom or way of life in Victoria's history?	Yes	The Long Tunnel Extended Gold Mine Reserve belongs to the class alluvial gold mining site which has a clear association with the Victorian Gold Rush and subsequent gold mining industry.
D2)	Is the event, phase, period, process, function, movement, custom or way of life of historical importance, having made a strong or influential contribution to Victoria?	Yes	The Victorian Gold Rush and subsequent historical gold mining industry played a fundamental and transformative role in the social, cultural, economic, political, demographic and environmental history of Victoria.
D3)	Are the principal characteristics of the class evident in the physical fabric of the place/object?	Yes	The principal characteristics of the class are evident in the physical fabric of alluvial gold mining sites. The principal features of Long Tunnel Extended Gold Mine Reserve include sluicing voids, mining earthworks, remnant pillars of unworked ground, pebble dumps, water races, tail races and sludge dams. These demonstrate the key characteristics of historical alluvial gold mining.

If D1, D2 AND D3 are satisfied, then Criterion D is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	Yes	Criterion D is likely to be relevant.
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Step 2 State-level test for Criterion D

No.	Test	Yes/No	Reason
SD1)	Is the place/object a notable (fine, influential or pivotal) example of the class in Victoria?	Yes	The Long Tunnel Extended Gold Mine Reserve is a fine example of a historical alluvial gold mining precinct in Victoria. The place includes a large and highly legible range of features typical of a historic alluvial gold mining site, including a very large, deep and well-preserved sluicing void that demonstrates the nature and scale of historical alluvial gold mining, water races, tail races and pebble dumps, as well as sludge dams along Three Mile Creek that are well-preserved and easily understood examples of their type. The key characteristics of Long Tunnel Extended Gold Mine Reserve are of higher quality and – due to the length of operation and intersection with the reform of environmental laws – are of a higher level of historical relevance than is typical of alluvial gold mining sites in Victoria.

If SD1 is satisfied, then Criterion D is likely to be relevant at the State level

Executive Director's Response: Yes Criterion D is likely to be relevant at the State level.

CRITERION E: Importance in exhibiting particular aesthetic characteristics.

Step 1 Test for Criterion E

No.	Test	Yes/No	Reason
E1)	Does the physical fabric of the place/object clearly exhibit particular aesthetic characteristics?	No	<p>The physical fabric of Long Tunnel Extended Gold Mine Reserve does not exhibit particular aesthetic characteristics.</p> <p>The place is heavily overgrown in most places, and it does not demonstrate noted aesthetic characteristics.</p>

If E1 is satisfied, then Criterion E is likely to be relevant (but not necessarily at the State level)

Executive Director's Response: No Criterion E is not likely to be relevant.

CRITERION F: Importance in demonstrating a high degree of creative or technical achievement at a particular period.

Step 1 Test for Criterion F

No.	Test	Yes/No	Reason
F1)	Does the place/object contain physical evidence that clearly demonstrates creative or technical achievement for the time in which it was created?	No	<p>The Long Tunnel Extended Gold Mine Reserve does not contain physical evidence that clearly demonstrates creative or technical achievement for the time in which it was created.</p> <p>Miners at Three Mile Creek used standard sluicing techniques to separate gold from the washdirt. These were in common use across the Victorian goldfields at the time.</p>
F2)	Does the physical evidence demonstrate a high degree of integrity?	Yes	<p>The physical evidence at Long Tunnel Extended Gold Mine Reserve demonstrates a high degree of integrity.</p> <p>The features at the place, including sluicing voids, tail races, pebble dumps and sludge dams, are well-preserved and reveal the technical achievements at the miners in using large volumes of water to sluice gold-bearing deposits.</p>

If both F1 and F2 are satisfied, then Criterion F is likely to be relevant (but not necessarily at the State level)

Executive Director's Response: No Criterion F is not likely to be relevant.

CRITERION G: Strong or special association with a particular present-day community or cultural group for social, cultural or spiritual reasons

Step 1 Test for Criterion G

No.	Test	Yes/No	Reason
G1)	Does the place/object demonstrate social value to a community or cultural group in the present day in the context of its cultural heritage significance? Evidence must be provided for all three facets of social value listed here:		
i)	Existence of a community or cultural group; <u>and</u>	No	There is no evidence of a well-defined community or cultural group with a linkage to Long Tunnel Extended Gold Mine Reserve.
ii)	Existence of a strong attachment of a community or cultural group to the place or object; <u>and</u>	No	There is no evidence of a strong community or cultural attachment to Long Tunnel Extended Gold Mine Reserve.
iii)	Existence of a time depth to that attachment.	No	There is no evidence of strong social or cultural attachment dating to any time since the abandonment of the mining along Three Mile Creek in the 1940s. The Long Tunnel Extended Gold Mine Reserve was mined from the 1850s to the 1940s but there is no evidence of strong attachment since that time.

If all facets of G1 are satisfied, then Criterion G is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	No	Criterion G is not likely to be relevant.
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CRITERION H: Special association with the life or works of a person, or group of persons, of importance in Victoria's history.

Step 1 Test for Criterion H

No.	Test	Yes/No	Reason
H1)	Does the place/object have a direct association with a person, or group of persons who has made a strong or influential contribution in their field of endeavour?	Yes	H1(i) There is a direct association between Long Tunnel Extended Gold Mine Reserve and John Pund. John Pund was the founder and owner of Pund & Co, an alluvial mining company that operated in the valley of Three Mile Creek for 50 years. At times he worked in partnership with William Telford, of the Rocky Mountain Extended Company at Beechworth, and with John Alston Wallace, the most important mining entrepreneur in north-eastern Victoria. H1(ii) John Pund made a strong or influential contribution in his field. John Pund represented a class of successful alluvial miners on the Beechworth goldfield. He developed and controlled large volumes of water along Three Mile Creek and created early examples of sludge dams to control mining waste.

H2)	Is there evidence of the association between the place/object and the person(s)?	Yes	<p>There is evidence of the association between Long Tunnel Extended Gold Mine Reserve and John Pund in the remnant fabric of the place and in historical records and secondary sources.</p> <p>John Pund, of Pund & Co., was the principal sluice miner at Three Mile Creek for 50 years. He was directly responsible for most of the sluicing scars extant in the valley.</p>
H3)	Does the association relate: <ul style="list-style-type: none"> • directly to achievements of the person(s); <u>and</u> • to an enduring and/or close interaction between the person(s) and the place/object? 	Yes	<p>H3(i) The Long Tunnel Extended Gold Mine Reserve relates directly to the achievements of the John Pund and his company.</p> <p>Pund & Co were responsible for creating most of the sluicing scars and voids along Three Mile Creek, along with developing the water race and tail race systems in the valley.</p> <p>H3(ii) The association relates to a close and enduring interaction between the Pund & Co and Long Tunnel Extended Gold Mine Reserve.</p> <p>John Pund operated Pund & Co for 50 years, between 1865 and 1915. Subsequent operations, by GSG Amalgamated, occurred from 1919 to the late 1940s.</p>

If all facets of H1, H2 AND H3 are satisfied, then Criterion H is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	Yes	Criterion H is likely to be relevant.
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Step 2 State-level test for Criterion H

No.	Test	Yes/No	Reason
SH1)	Are the life or works of the person/persons important to Victoria's history?	No	<p>While contributing to the broader story of the boom and environmental reform on the Victorian goldfields, the life or works of John Pund are not important in Victoria's broader history.</p> <p>The effects of Pund's life and work were felt mostly at the local scale.</p>
SH2)	Does this place/object allow the association between the person or group of persons and their importance in Victoria's history to be readily appreciated better than most other places or objects in Victoria?	No	N/A

If SH1 and SH2 are satisfied, then Criterion H is likely to be relevant at the State level

Executive Director's Response:	No	Criterion H is not likely to be relevant at the State level.
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Comparisons

These places were selected as comparators to Long Tunnel Extended Gold Mine Reserve because they are well-preserved and significant examples of alluvial workings in Victoria.

HUMBUG HILL HYDRAULIC GOLD SLUICING SITE, CRESWICK & CABBAGE TREE (VHR H1228)

The Humbug Hill Hydraulic Gold Sluicing Site near Creswick consists of extensive scours along the southern flanks of the hill resulting from alluvial ground sluicing. The most intensive mining occurred in the 1850s and 1860s, after which Chinese miners continued work on a smaller scale until the 1880s. Miners diverted water to the claim via several water races from the hills and gullies to the east. A gully draining from the lowest end of the claim has been deeply excavated by high pressure water.



Figure 15. Sluicing void at the Humbug Hill Hydraulic Gold Sluicing Site (Peter Davies)

PINK CLIFFS HYDRAULIC GOLD SLUICING SITE, HEATHCOTE (VHR H1352)

The McIvor Hydraulic Sluicing Company worked a large claim near Heathcote in the 1870s and 1880s. Water for sluicing was delivered via a water race almost 50 kilometres long from the hills near Tooboorac. The site today is dominated by the remnant, highly coloured granite bedrock which was exposed by hydraulic sluicing operations.



Figure 16. Sluicing landscape at the Pink Cliffs Gold Sluicing Site near Heathcote (Peter Davies).

PIONEER AND UNION HYDRAULIC GOLD SLUICING SITE, MITTA MITTA (VHR H1229)

The Pioneer and Union Hydraulic Gold Sluicing Site at Mitta Mitta consists of a vast network of sluicing faces, pebble dumps, tail races and water races. Water for sluicing was brought to the site by a 20km long water race and then directed by high pressure pipelines and nozzles at the gold bearing deposits. The technology was introduced into Victoria in about 1855. The Pioneer Company, in 1884, were the first to use this type of mining on the Mitta Mitta goldfield. The Pioneer Claim is reputedly to have been the largest operation of its type in the State, with approximately 20 hectares of ground being mined between 1859 and 1913 leaving walls up to 75 metres in height.



Figure 17. Sluicing canyon created by hydraulic sluicing works performed by the Pioneer and Union Company (VHD)

ORIENTAL CLAIMS HYDRAULIC SLUICING SITE, OMEO (VHR H1225)

The Oriental Claims Hydraulic Gold Sluicing Site consists of a vast network of sluicing faces, pebble dumps, tail races and water races. Water for sluicing was delivered to the site by high pressure pipelines and then directed at the gold bearing deposits. The technology was introduced into Victoria in about 1855. The name for the historic area comes from the name of a sluicing company which worked the area from 1876-1904; but the term also acknowledges the significant contribution of Chinese miners to the area's history



Figure 18. Sluced canyon at the Oriental Claims sluicing site near Omen (VHD)

RED KNOB, IRISHTOWN (VHI H7723-0300)

The large pillar of unworked ground near Fryers Creek at Irishtown in the Castlemaine Diggings National Heritage Park, resulted from the sluicing activities of local miner Ray Bradfield in the 1940s. Bradfield planted poplar trees in the valley after he had finished sluicing. The remnant 'knob' of unworked ground provides a dramatic indication of the scale of alluvial mining in the area.



Figure 19. Red Knob remnant of unworked ground at Irishtown in the Castlemaine Diggings National Heritage Park (Peter Davies)

Summary of Comparisons

Ground sluicing, as a form of alluvial working, was relatively common across the Victorian goldfields, especially in higher rainfall regions with access to more reliable water. Hydraulic sluicing, which diverted water into narrowing pipes that ended in a high-pressure nozzle, was much less common. This method was largely confined to a few high rainfall regions in the north-east of Victoria, and several sites near Castlemaine drawing water from the Coliban water system.

The comparative sites described above demonstrate the diversity of scale and the range of features found at alluvial workings in Victoria. These typically consist of large scours or gouges in the surface, with miners using large volumes of water to loosen and direct washdirt into boxed tail races to retrieve the gold. Alluvial mining operations typically consisted of water races delivering water at the top of the system, sluicing gullies forming in the claim area, and tail races at the low point to remove tailings (sludge or slimes). Additional features often include remnant pillars of unworked ground. This form of mining persisted across the Victorian goldfields from the 1850s to the 1940s.

The Long Tunnel Extended Gold Mine Reserve is a large, well-preserved and representative example of alluvial workings. The Pioneer and Union, and Oriental Claims sites are both larger than Baarmutha, represented by canyons created by hydraulic sluicing. The Humbug Hill site at Creswick, the Pink Cliffs sluicing site at Heathcote, and the Red Knob site at Irishtown, are smaller than Baarmutha, with remnant landforms at each place created by ground sluicing. At Baarmutha, the long tail races, steep sluicing banks and remnant pillars of unworked ground along Three Mile Creek, especially those at the eastern end of the site, demonstrate the scale of mining operations.

The Long Tunnel Extended Gold Mine Reserve also has several unusual features. These include several large and well-preserved sludge dams, which demonstrate the response of miners to increasing demands to retain their tailings on site. Other examples of sludge dams are found in Victoria but rarely of such scale and integrity. In addition, historical sources indicate the place was sluiced almost continuously from the 1850s to the 1940s. Physical evidence of the earliest phase of mining in the 1850s has been removed by later activity, but subsequent phases are well represented in the extant fabric. There is also evidence for the use of very long tail races, up to several hundred metres in length, preserved in the valley floor. It is also uncommon to have a good historical understanding of the amount of gold recovered from such alluvial mining operation, in this case about 45,000 ounces or 1.4 tonnes.

Summary of cultural heritage significance (section 40(4))

Statement of significance

What is significant?

The Long Tunnel Extended Gold Mine Reserve is located on the land of the Gunaikurnai people.

The Long Tunnel Extended Gold Mine Reserve is a large and well-preserved example of historical alluvial gold mining in Victoria. The sluicing area begins near the junction of Three Mile and Six Mile Creeks, Beechworth and extends west along the Three Mile Creek for approximately 6.5 kilometres, extending over an area of approximately 140 hectares.

The place includes sluicing voids or cavities, remnant pillars of unworked ground, sludge dams, water races, tail races, small dams and pebble dumps.

How is it significant?

The Long Tunnel Extended Gold Mine Reserve is of historical, archaeological and representative significance to the State of Victoria. It satisfies the following criterion for inclusion in the Victorian Heritage Register:

Criterion A

Importance to the course, or pattern, of Victoria's cultural history.

Criterion C

Potential to yield information that will contribute to an understanding of Victoria's cultural history.

Criterion D

Importance in demonstrating the principal characteristics of a class of cultural places and objects

Why is it significant?

The Long Tunnel Extended Gold Mine Reserve is historically significant for its association with the Victorian Gold Rush, which played a major role in the social, political, economic, environmental and cultural development of Victoria. In particular, the place is significant for its association with the historical alluvial gold mining from the early Gold Rush period of the mid-nineteenth century through to the post-rush mining industry of the early to mid-twentieth century. The remains of water races and tail races, pebble dumps and sluicing voids demonstrate the process of large-scale alluvial gold mining that occurred along Three Mile Creek almost continuously over approximately 100 years. The water races were part of elaborate mining water systems that diverted water from higher up the valley of Three Mile Creek and from Upper Nine Mile Creek at Stanley. [Criterion A]

Within Long Tunnel Extended Gold Mine Reserve, the remains of sludge dams are historically significant for demonstrating how miners were forced to manage the waste tailings from their operations from around the turn of the century with the introduction of the *Mines Act 1904*. The Act was introduced in part in response to the extent of sludge deposits downstream of the Three Mile Creek operations, with the reforms impacting future mining operations on a state, national and international level to this day. [Criterion A]

The Long Tunnel Extended Gold Mine Reserve is archaeologically significant for the extensive and well-preserved remains of alluvial gold mining, especially ground sluicing, in the form of large sluicing voids, water races, tail races, and pebble dumps. The place has the potential to yield significant new information about the historical mining industry with the use of geophysical, geochemical, geospatial and archaeological investigation and analysis. [Criterion C]

The Long Tunnel Extended Gold Mine Reserve is a notable example of an alluvial gold mining site in Victoria. The place clearly demonstrates the principal characteristics of a historical alluvial gold mining landscape. The place includes a large and deep sluicing void that reveals the nature and scale of alluvial mining along Three Mile Creek. The water races, tail races, pebble dumps and sludge dams are highly intact and easily understood examples of their type. Due to the length of mining operations at the site and the intersection of Long Tunnel Extended Gold Mine Reserve with the reform of environmental laws governing mining waste, the place is of a higher level of historical relevance than is typical of alluvial gold mining sites in Victoria. [Criterion D]

Recommended permit exemptions under section 38

Introduction

A [heritage permit](#) is required for all works and activities undertaken in relation to VHR places and objects. Certain works and activities are [exempt from a heritage permit](#), if the proposed works will not harm the cultural heritage significance of the heritage place or object.

Permit Policy

It is recommended that a Conservation Management Plan is utilised to manage the place in a manner which respects its cultural heritage significance.

Permit Exemptions

General Permit Exemptions

General exemptions apply to all places and objects included in the VHR. General exemptions have been designed to allow everyday activities, maintenance and changes to your property, which don't harm its cultural heritage significance, to proceed without the need to obtain approvals under the *Heritage Act 2017*.

Places of worship: In some circumstances, you can alter a place of worship to accommodate religious practices without a permit, but you must notify the ED before you start the works or activities at least 20 business days before the works or activities are to commence.

Subdivision/consolidation: Permit exemptions exist for some subdivisions and consolidations. If the subdivision or consolidation is in accordance with a planning permit granted under Part 4 of the *Planning and Environment Act 1987* and the application for the planning permit was referred to the ED as a determining referral authority, a permit is not required.

Specific exemptions may also apply to your registered place or object. If applicable, these are listed below. Specific exemptions are tailored to the conservation and management needs of an individual registered place or object and set out works and activities that are exempt from the requirements of a permit. Specific exemptions prevail if they conflict with general exemptions.

Find out more about heritage permit exemptions [here](#).

Specific Permit Exemptions

The works and activities listed below under the heading 'Exempt works and activities' are not considered to cause harm to the cultural heritage significance of Long Tunnel Extended Gold Mine Reserve. These are subject to the following guidelines and conditions:

Guidelines for specific permit exemptions

1. Where there is an inconsistency between permit exemptions specific to the registered place or object ('specific exemptions') established in accordance with either section 49(3) or section 92(3) of the Act and general exemptions established in accordance with section 92(1) of the Act specific exemptions will prevail to the extent of any inconsistency.
2. In specific exemptions, words have the same meaning as in the Act, unless otherwise indicated. Where there is an inconsistency between specific exemptions and the Act, the Act will prevail to the extent of any inconsistency.
3. Nothing in specific exemptions obviates the responsibility of a proponent to obtain the consent of the owner of the registered place or object, or if the registered place or object is situated on Crown Land the land manager as defined in the *Crown Land (Reserves) Act 1978*, prior to undertaking works or activities in accordance with specific exemptions.
4. If a Cultural Heritage Management Plan in accordance with the *Aboriginal Heritage Act 2006* is required for works covered by specific exemptions, specific exemptions will apply only if the Cultural Heritage Management Plan has been approved prior to works or activities commencing. Where there is an inconsistency between specific exemptions and a Cultural Heritage Management Plan for the relevant works and activities, Heritage Victoria must be contacted for advice on the appropriate approval pathway.
5. Specific exemptions do not constitute approvals, authorisations or exemptions under any other legislation, Local Government, State Government or Commonwealth Government requirements, including but not limited to the *Planning and Environment Act 1987*, the *Aboriginal Heritage Act 2006*, and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). Nothing in this declaration exempts owners or their agents from the responsibility to obtain relevant planning, building or environmental approvals from the responsible authority where applicable.
6. Care should be taken when working with heritage buildings and objects, as historic fabric may contain dangerous and poisonous materials (for example lead paint and asbestos). Appropriate personal protective equipment should be worn at all times. If you are unsure, seek advice from a qualified heritage architect, heritage consultant or local Council heritage advisor.
7. The presence of unsafe materials (for example asbestos, lead paint etc) at a registered place or object does not automatically exempt remedial works

or activities in accordance with this category. Approvals under Part 5 of the Act must be obtained to undertake works or activities that are not expressly exempted by the below specific exemptions.

8. All works should be informed by a Conservation Management Plan prepared for the place or object. The ED is not bound by any Conservation Management Plan and permits still must be obtained for works suggested in any Conservation Management Plan.

General conditions for specific permit exemptions

1. All works or activities permitted under specific exemptions must be planned and carried out in a manner which prevents harm to the registered place or object. Harm includes moving, removing or damaging any part of the registered place or object that contributes to its cultural heritage significance.
2. If during the carrying out of works or activities in accordance with specific exemptions original or previously hidden or inaccessible details of the registered place are revealed relating to its cultural heritage significance, including but not limited to historical archaeological remains, such as features, deposits or artefacts, then works must cease and Heritage Victoria notified as soon as possible.
3. If during the carrying out of works or activities in accordance with specific exemptions any Aboriginal cultural heritage is discovered or exposed at any time, all works must cease and the Secretary (as defined in the *Aboriginal Heritage Act 2006*) must be contacted immediately to ascertain requirements under the *Aboriginal Heritage Act 2006*.
4. If during the carrying out of works or activities in accordance with specific exemptions any munitions or other potentially explosive artefacts are discovered, Victoria Police is to be immediately alerted and the site is to be immediately cleared of all personnel.
5. If during the carrying out of works or activities in accordance with specific exemptions any suspected human remains are found the works or activities must cease. The remains must be left in place and protected from harm or damage. Victoria Police and the State Coroner's Office must be notified immediately. If there are reasonable grounds to believe that the remains are Aboriginal, the State Emergency Control Centre must be immediately notified on 1300 888 544, and, as required under s.17(3)(b) of the *Aboriginal Heritage Act 2006*, all details about the location and nature of the human remains must be provided to the Aboriginal Heritage Council (as defined in the *Aboriginal Heritage Act 2006*).

Exempt works and activities

The ED proposes the following specific permit exemptions for Long Tunnel Extended Gold Mine Reserve:

1. All vegetation management excluding tree removal which has the potential to destabilise or damage the sluicing void, water races or tail races.
2. Installation of new Parks Victoria wayfinding/directional, informational and heritage interpretation signage.

Appendix 1

Heritage Council determination (section 49)

The Heritage Council is an independent statutory body that will make a determination on this recommendation under section 49 of the Act. It will consider the recommendation after a period of 60 days from the date the notice of recommendation is published on its website under section 41.

Making a submission to the Heritage Council (section 44)

Within the period of 60 days, any person or body with a real and substantial interest in the place or object may make a submission to the Heritage Council regarding the recommendation and request a hearing in relation to that submission. Information about making a submission and submission forms are available on the Heritage Council's website. The owner can also make a submission about proposed permit exemptions (Section 40(4)(d)).

Consideration of submissions to the Heritage Council (section 46)

(1) The Heritage Council must consider—

- (a) any written submission made to it under section 44; and
- (b) any further information provided to the Heritage Council in response to a request under section 45.

Conduct of hearings by Heritage Council in relation to a recommendation (section 46A)

(1) The Heritage Council may conduct a hearing in relation to a recommendation under section 37, 38 or 39 in any circumstances that the Heritage Council considers appropriate.

(2) The Heritage Council must conduct a hearing if—

- (a) a submission made to it under section 44 includes a request for a hearing before the Heritage Council; and
- (b) the submission is made by a person or body with a real or substantial interest in the place, object or land that is the subject of the submission.

Determinations of the Heritage Council (section 49)

(1) After considering a recommendation that a place, object or land should or should not be included in the Heritage Register and any submissions in respect of the recommendation and conducting any hearing, the Heritage Council may—

- (a) determine that the place or object is of State-level cultural heritage significance and is to be included in the Heritage Register; or
- (ab) in the case of a place, determine that—
 - (i) part of the place is of State-level cultural heritage significance and is to be included in the Heritage Register; and
 - (ii) part of the place is not of State-level cultural heritage significance and is not to be included in the Heritage Register; or
- (ac) in the case of an object, determine that—
 - (i) part of the object is of State-level cultural heritage significance and is to be included in the Heritage Register; and
 - (ii) part of the object is not of State-level cultural heritage significance and is not to be included in the Heritage Register; or
- (b) determine that the place or object is not of State-level cultural heritage significance and is not to be included in the Heritage Register; or

- (c) in the case of a recommendation in respect of a place, determine that the place or part of the place is not to be included in the Heritage Register but—
 - (i) refer the recommendation and any submissions to the relevant planning authority or the Minister administering the Planning and Environment Act 1987 to consider the inclusion of the place or part of the place in a planning scheme in accordance with the objectives set out in section 4(1)(d) of that Act; or
 - (ii) determine that it is more appropriate for steps to be taken under the Planning and Environment Act 1987 or by any other means to protect or conserve the place or part of the place; or
 - (ca) in the case of a recommendation in respect of an object nominated under section 27A, determine that the object, or part of the object, is to be included in the Heritage Register if it is integral to understanding the cultural heritage significance of a registered place or a place the Heritage Council has determined to be included in the Heritage Register; or
 - (d) in the case of a recommendation in respect of additional land nominated under section 27B, determine that the additional land, or any part of the additional land, is to be included in the Heritage Register if—
 - (i) the State-level cultural heritage significance of the place, or part of the place, would be substantially less if the additional land or any part of the additional land which is or has been used in conjunction with the place were developed; or
 - (ii) the additional land or any part of the additional land surrounding the place, or part of the place, is important to the protection or conservation of the place or contributes to the understanding of the place.
- (2) The Heritage Council must make a determination under subsection (1)—
- (a) within 40 days after the date on which written submissions may be made under section 44; or
 - (b) if any hearing is conducted, within 90 days after the completion of the hearing.
- (3) A determination made under subsection (1)(a), (ab), (ac), (ca) or (d)—
- (a) may include categories of works or activities which may be carried out in relation to a place, object or land, or part of a place, object or land, for which a permit under this Act is not required, if the Heritage Council considers that the works or activities would not harm the cultural heritage significance of the place, object or land; and
 - (b) must include a statement of the reasons for the making of the determination.
- (4) If the Heritage Council determines to include a place, or part of a place, in the Heritage Register, the Heritage Council may also determine to include land that is not the subject of a nomination under section 27B in the Heritage Register as part of the place if—
- (a) the land is ancillary to the place; and
 - (b) the person who owns the place, or part of the place—
 - (i) is the owner of the land; and
 - (ii) consents to its inclusion.
- (5) If a member of the Heritage Council makes a submission under section 44 in respect of a recommendation, the member must not take part in the consideration or determination of the Heritage Council.
- (6) The Heritage Council must notify the Executive Director of any determination under this section as soon as practicable after the determination.

Obligations of owners (section 42, 42A, 42B, 42C, 42D)

42 Obligations of owners—to advise of works, permits etc. on foot when statement of recommendation given

- (1) The owner of a place, object or land to whom a statement of recommendation has been given must advise the Executive Director in writing of—

- (a) any works or activities that are being carried out in relation to the place, object or land at the time the statement is given; and
- (b) if the place, object or land is a place or additional land, any application for a planning permit or a building permit, or any application for an amendment to a planning permit or a building permit, that has been made in relation to the place or additional land but not determined at the time the statement is given; and
- (c) any works or activities that are proposed to be carried out in relation to the place, object or land at the time the statement is given.

(2) An advice under subsection (1) must be given within 10 days after the statement of recommendation is given under section 40.

42A Obligations of owners before determination or inclusion in the Heritage Register—to advise of permits

(1) This section applies if—

- (a) an owner of any of the following is given a statement of recommendation—
 - (i) a place or object nominated under section 27;
 - (ii) an object nominated under section 27A;
 - (iii) land nominated under section 27B; and
- (b) any of the following occurs within the statement of recommendation period in relation to the place, object or land—
 - (i) the making of an application for a planning permit or a building permit;
 - (ii) the making of an application for an amendment to a planning permit or a building permit;
 - (iii) the grant of a planning permit or building permit;
 - (iv) the grant of an amendment to a planning permit or building permit.

(2) The owner must advise the Executive Director in writing of—

- (a) the making of an application referred to in subsection (1)(b)(i) or (ii), within 10 days of the making of the application; or
- (b) a grant referred to in subsection (1)(b)(iii) or (iv), within 10 days of the owner becoming aware of the grant.

42B Obligations of owners before determination or inclusion in the Heritage Register—to advise of activities

(1) This section applies if—

- (a) an owner of a place, object or land is given a statement of recommendation; and
- (b) within the statement of recommendation period it is proposed that activities that could harm the place, object or land be carried out.

(2) The owner, not less than 10 days before carrying out the activities, must advise the Executive Director in writing of the proposal to do so.

42C Obligations of owners before determination or inclusion in the Heritage Register—to advise of proposal to dispose

(1) This section applies if—

- (a) an owner of a place, object or land is given a statement of recommendation; and
- (b) within the statement of recommendation period a proposal is made to dispose of the whole or any part of the place, object or land.

(2) The owner, within 10 days after entering into an agreement, arrangement or understanding for the disposal of the whole or any part of the place, object or land, must advise the Executive Director in writing of the proposal to do so.

42D Obligations of owners before determination or inclusion in the Heritage Register—requirement to give statement to purchaser

(1) This section applies if—

- (a) an owner of a place, object or land is given a statement of recommendation; and
- (b) the owner proposes to dispose of the whole or any part of the place, object or land within the statement of recommendation period.

(2) Before entering into an agreement, arrangement or understanding to dispose of the whole or any part of the place, object or land during the statement of recommendation period, the owner must give a copy of the statement of recommendation to the person who, under the proposed agreement, arrangement or understanding, is to acquire the place, object or land or part of the place, object or land.

Owners of places and objects must comply with obligations (section 43)

An owner of a place, object or land who is subject to an obligation under section 42, 42A, 42B, 42C or 42D must comply with that obligation.

Penalty: In the case of a natural person, 120 penalty units;
 In the case of a body corporate, 240 penalty units.