

**VICTORIAN GOLDFIELDS
PROJECT**

**HISTORIC GOLD MINING SITES
IN
ST ANDREWS MINING DIVISION**

DRAFT 8/7/99

CULTURAL HERITAGE

**DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENT**

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1. Background

1.1 Introduction

This report is based on the results of historical archaeology surveys undertaken from 1996 to 1999. The research, fieldwork and consultation undertaken during this time indicate that the study area experienced intermittent and relatively small-scale gold mining from the early 1850s.

The study area contains the various goldfields and mining centres that once formed the historic mining administrative region known as the St Andrews Mining Division. The main goldfields and their key mining locations are:

- *Warrandyte Goldfield*— Anderson’s Creek and No.1 to No.4 Hills.
- *Caledonia Goldfield*—Queenstown (now known as St Andrews), One Tree Hill, Kingston (now known as Pantons Hill), Kangaroo Grounds, You You Hill, Kingstown, South Morang, Arthur’s Creek, Nillumbik (now known as Diamond Creek), Steele’s Creek, Yarrambet and Kinglake.
- *Upper Yarra Goldfield*— Warburton, Britannia, Yankee Jims, Big Pats, Hoddle’s, McMahons Creek, and Wombat creeks.
- *Mornington Peninsula Goldfield*— Tubbarubba, Tyabb, Mt Martha, and Frankston.
- *Dandenong Goldfield*— Emerald, Nicholson, Berwick, and Gembrook.

The study area is centred on Warrandyte (Victoria’s first official gold discovery location) and stretches northeast from the Mornington Peninsula to the upper reaches of the Yarra River.

The majority of the sites investigated date from the late nineteenth century, and the main site types recorded are associated with re-working shallow alluvial ground and quartz reefing. The recent age of surviving mining relics is a reflection of the temporary and basic nature of the early gold rush activities undertaken and the re-mining that occurred, resulting in the disappearance of earlier sites.

1.2 Site Gazetteer

The work underlying the gazetteer involved a desktop survey of recorded sites, analysis of historical records, fieldwork and community consultation. The assessment process used to determine the cultural heritage significance of historic mining places was designed to achieve the best practical results within the project’s time frame. Places not previously recorded and which were assessed as likely to have significant heritage values were visited, recorded and included in the gazetteer that forms part two of this report.

2. Introduction

2.1 Purpose of report

The study seeks to identify, assess and document the cultural heritage values relating to the historic theme of gold mining in the St Andrews Mining Division. The categories of sites covered by the report are shallow alluvial, deep lead and quartz mining, and cyaniding.

The study will make a significant contribution to a Statewide investigation of the theme of gold mining.

2.2 Aims of report

The aims of the project were to:

- undertake a desk-top survey of known sites,
- conduct research on the historic gold mining-related categories of shallow alluvial, deep lead, quartz reefing and re-treatment of ore,
- compile information on historic mining places,
- identify and record previously unrecorded historic mining places and objects of State and regional significance, and
- document the project's methodology and decision-making processes.

3. Methodology

3.1 Introduction

This study forms part of a Statewide inventory of historic gold mining places and objects, which commenced some eight years ago. The primary aim of the Statewide inventory is to systematically identify and assess sites on public land for the purpose of providing a sound basis for management of such sites. Where possible sites on private land were also considered. The report has been written to assist the Department of Natural Resources (DNRE), Parks Victoria and Heritage Victoria in managing and protecting a very widespread and diverse resource.

3.2 Historical Research

The assessment process was designed to achieve the best practical results within the project's time frame. The first stage of the assessment was an investigation of primary and secondary historical sources, including Mining Surveyors Monthly, Quarterly and Annual Reports; Mines Department maps, plans and reports; photographs and illustrations; published local histories and newspapers. This stage also involved a desktop survey to identify sites already recorded.

3.3 Assessment Process

3.3.1 Site gazetteer

The starting point for compiling the gazetteer was a comprehensive historical survey, which concentrated on Department of Mine's records. For each gold mining locality, a chronology of activity was compiled, detailing gold discoveries, mining parties and machinery, settlement patterns, population levels, and gold production figures. This information was used to target important mining localities and specific sites that had not been previously recorded, and also aided in the interpretation of sites.

The focus of the survey work was entirely on relics of above ground mining operations. For obvious reasons of access and safety, it did not cover any aspects of underground mining. The perspective presented by the inventory is thus biased, for on some types of mining sites, in particular, quartz reefing and deep lead mining, the bulk of operations and human effort took place below ground, hidden away from sight. A physical picture of underground mining technology and features can only realistically be gathered and recorded when new mining ventures take place on old gold mining sites.

3.3.2 Site selection process

The sites identified were those considered likely to have significant heritage values. Some 12 sites were visited and assessed in the following two stage process, resulting in two sites being identified as having potential State significance and recommended for listing on the Victorian Heritage Register:

- a) *Consultation process*—Given the comprehensive historical research undertaken as part of the State-wide survey, additional information was mainly sought through consulting present and former Department of Natural Resources and Environment (NRE) field staff (foresters and land protection officers), Parks Victoria rangers, and local community members. Information sought included:
 - the integrity and condition of sites: in particular, whether the site still exists or has visible remains (including foundations),
 - whether they know of other sites of a similar nature which had physical remains, and
 - names of other informants who may have knowledge of gold mining activity sites in the St Andrews Mining Division.

The consultation process was designed to sieve out sites not worth a visit and those which had played only marginal historical role (and hence not highlighted by the historical assessment) but now may have a high scientific significance due to their intactness or rarity.

- b) *State heritage threshold*—The following significance indicators were further used to refine the list of site to be surveyed:
 - role the place played in the historical development of the region and State's gold mining industry. For any given place significance is greater where evidence of an association or event survives in situ,
 - scientific importance of the data represented in the features of a place and upon the degree to which the place may contribute further substantial information,
 - degree to which the place can be demonstrated as having historical integrity and /or rareness in its intactness or condition better than any other similar place,
 - measure of the awareness in the local community of the site and its role in the history of the locality, and
 - the degree the setting of the place had been modified.

3.4 Site survey

The terms of reference for the project required that previously unrecorded sites assessed as having potential significant heritage values be visited and documented following set guidelines, so that they were comprehensively and uniformly identified, located, described, assessed and photographed. Time and budgetary constraints necessitated that recording be of a fairly basic standard: brief descriptions, rough plans and is possible (vegetation and conditions permitting) by photographs. It was envisaged that more detailed recording of the more significant sites should be undertaken in the future, when all sites have been identified, and the more significant sites have been determined.

3.5 Final ranking

The main thrust of current heritage assessment in Australia is that the more significant cultural places are generally those that retain unique qualities which can best explain the past to present and future generations. Forty-one gold mining heritage places were identified during the course of the project. Only two places were assessed as having the potential for ranking as State significant.

Places were assessed against the following criteria developed by Heritage Victoria to determine whether a place or object is of State significance and should be placed on the Victorian Heritage Register:

- a. The historical importance, association with or relationship to Victoria's history of the place or object.
- b. The importance of a place or object in demonstrating rarity or uniqueness
- c. The place or object's potential to educate, illustrate or provide further scientific investigation in relation to Victoria's cultural heritage.
- d. The importance of a place or object in exhibiting the principal characteristics or the representative nature of a place or object as part of a class or type of places or objects.
- e. The importance of the place or object in exhibiting good design or aesthetic characteristics and/or in exhibiting a richness, diversity or unusual integration of features.
- f. The importance of the place or object in demonstrating or being associated with scientific or technical innovations or achievements
- g. The importance of the place or object in demonstrating social or cultural association.
- h. Any other matter which the Council deems relevant to the determination of cultural heritage significance.

3.6 Victorian Heritage Register

The Heritage Act (1995) provides for the protection and identification of places of heritage significance to the State. It applies to both private and public land and to public authorities, private owners and companies. The Act expands the type of place that can be listed on the register to include buildings, archaeological sites and landscapes. If a site is placed on the Heritage Register a permit must be sought for works from the Executive Director of Heritage Victoria unless those works are covered by an exemption negotiated at the time of registration.

In the course of the project two historic gold mining places were identified as having high heritage values and were recommended for listing on the Victorian Heritage Register.

The table below shows the two sites assessed as having potential for State significance ranking. The Pound Bend Diversion Tunnel is already been listed on the Victorian Heritage Register. The Warrandyte Gold memorial is yet to be considered.

Site No	Name	Goldfield
H	Pound Bend Diversion Tunnel	Warrandyte
	Warrandyte Gold Memorial	Warrandyte

3.7 Victorian Heritage Inventory

The Heritage Act (1995) establishes a Heritage Inventory for all archaeological sites recorded in the State. The Act contains provisions to protect archaeological sites and relics whether known or unknown. The consent of the Executive Director of Heritage Victoria is required to excavate, damage or deface an archaeological relic. Any relics found during excavation have to be reported to the Executive Director, and consent is required to sell relics.

A majority of the historic mining places identified in this report are already, or will be, listed on the Victorian Heritage Inventory. The table below shows these sites. Sites highlighted in bold are already listed on the Heritage Inventory.

Site No	Name	Goldfield
4.0	Black Flat alluvial workings and puddling machine	Warrandyte
5.0	Caledonia Mine	Warrandyte
6.0	Fourth Hill mine workings	Warrandyte
7.0	Victory Gold Mine, Whipstick Hill	Warrandyte
8.0	Queenstown Government Battery	Caledonia
9.0	Smiths Gully Alluvial workings	Caledonia
11.0	One Tree Hill Mine	Caledonia
12.0	Union Company Mine	Caledonia
15.0	Wilton Vale	Caledonia
16.0	Red Crab Mine	Caledonia
17.0	Darnley's Tunnel	Caledonia
18.0	Janefield 3	Caledonia
19.0	Janefield 2	Caledonia
20.0	Smugglers Gully	Caledonia
21.0	Mount Jerusalem Track Mine	Caledonia
22.0	Old Mount Slide Road Mine	Caledonia
23.0	Antimony Mine	Caledonia
24.0	Chalmers Ridge Gold Workings	Caledonia
25.0	Toolangi Chinese Burial	Upper Yarra
26.0	Sailors Reef Mine	Warrandyte
27.0	Great Southern Mine	Warrandyte
28.0	Little Peninsula Diversion Tunnel (Pipeline Tunnel)	Upper Yarra
29.0	Big Peninsula Diversion Tunnel McMahons Creek	Upper Yarra
30.0	Gembrook Tin Mine	Upper Yarra
31.0	Wolfram Mine, Wilks Creek Track	Upper Yarra
32.0	Sovereign Mine	Upper Yarra
33.0	Peninsula Road gold workings	Upper Yarra
34.0	Great Britain Creek gold workings	Upper Yarra
35.0	Browns camp	Upper Yarra
36.0	Snobs Creek Mine	Upper Yarra
37.0	Chester & Lockes Gold Mine	Upper Yarra
38.0	Damper Mine	Upper Yarra
39.0	Cumberland Falls Mine	Upper Yarra
40.0	Victorian Mount Morgan Mine	Upper Yarra
41.0	Golden Bower Mine	Upper Yarra

4. Report Body

4.1 Introduction

The research of primary resource material undertaken was designed to trace the development of the gold mining activities. This data helped produce a picture of the underlying technology and physical remains and to identify potential sites. Fieldwork and community consultation found the surviving gold mining heritage to be quite poor, on all the goldfields. This was due to the relative small scale and short-lived nature of the operations, changes in land use and urban expansion from Melbourne.

The following historical overview is designed to provide a context for the surviving historic mining places and objects.

4.2 Historical Overview

Warrandyte Goldfield

Alluvial Mining

Gold discoveries were being reported in the Plenty Ranges around the Warrandyte area as early as 1841¹. It was not, however, until 1851 that the colonial government legalised gold mining and that the first officially sanctioned goldfields in Victoria were opened at Warrandyte and Clunes.

A mining party led by Louis Michel and party were declared the first official discoverers of gold at Warrandyte. Louis Michel originally named the goldfield the Victoria, after the new colony.² His party discovered the first gold in quartz and then in the gravel banks of Anderson's Creek. The first gold licences were issued at Anderson's Creek in September. There were about 300 diggers at Anderson's Creek when gold discovered at Ballarat; by December, only three remained.³

Warrandyte goldfield was largely ignored by gold diggers for several years as all eyes were on the incredibly rich goldfields, such as Ballarat, Bendigo, Beechworth and Castlemaine. When gold diggers commenced returning to the Warrandyte area in 1854 they were experienced in mining ways and within a two-year period the entire district's main gold-bearing areas had been discovered and named.

By January 1855 Thompson's, Whipstick, Fiddlers and New Chum gullies were open and Strodes and Bartlett's flats were being worked. The first collection of township buildings was at Bartlett's Flat, above the present site of Warrandyte today. Quartz reefs at Anderson's Creek were possibly opened in 1854—there was certainly reef mining activity and a quartz crusher in operation by February 1856. The quartz reefs were mostly located on a line of hills, known as 1st Hill (above present main street), 2nd Hill (Geraghtys), 3rd Hill (Mastertons), and 4th Hill (Richmonds). Geraghty and Moore's tunnel on Fourth Hill in 1856 was reported to be the first substantial quartz mining operation in the St Andrews district.

When gold diggers started to make Warrandyte home they formed themselves into small companies and mined in new ways that required more ground, capital and system. From the onset Warrandyte mines were particularly keen to get to the alluvial gold deposits in the bed of Anderson's Creek. This form of mining is called sluicing and can involve working the actual bed (by diverting the stream), the banks, and adjoining slopes. Equipment used through time included various forms of sluice boxes and powerful jets of water (hydraulic sluicing) to blast away deposits. Warrandyte mines sometimes went to extraordinary means to retrieve alluvial gold and their efforts over a fifty-year period constitute one of the most enduring themes of the goldfield.

The norm for sluicing operations along the Yarra River around Warrandyte appears to have been building cofferdams (watertight enclosure built in rivers and then pumped dry). These cofferdams were often referred to as paddocks and were pumped dry by small waterwheels.

Little evidence survives today of the cofferdams, but there is evidence of Warrandyte's two most adventurous hydraulic sluicing ventures. Clarke & Brown (Yarra Yarra Mining Co) were undertaking the first of these in 1859. These men employed about 25 men to cut a canal to divert the river. The canal was nearly 400 feet long, 12 feet deep and had a top width of 50 feet. In 1860, the local mining surveyor provides the following report on the company's operations:

¹ Flett, p. 27

² Context Pty Ltd, p. 48.

³ Flett, pp. 27-35.

*a steam engine of about 8-hp, which works a pair of lifts, drives a Start's patented puddling machine with a Russian cradle attached, and draws washing stuff across the river up an inclined tramway from the bottom of the river from the right bank, to a height of about 30 feet above the river bed at the left bank where it is delivered into a puddling machine.*⁴

Little was recorded on what gold was obtained by the Yarra Yarra Mining Company but its mining operations created an island in the river, which still survives today. The second tangible evidence of past sluicing at Warrandyte is a diversion tunnel at Pound Bend. This tunnel relates to mining in early 1870s undertaken by the Evelyn Tunnelling Gold Mining Company. In 1870 this company excavated a tunnel through a ridge that created a sharp bend in the Yarra River and constructed a large dam to divert the water through the tunnel. Although successfully draining a large section of the riverbed, the venture failed due to the cost of mining through the deep mud that covered Yarra riverbed and the company wound up late in 1872.⁵

Hydraulic sluicing was also carried out on the goldfield but compared to other fields was only minor activity. One of the earliest attempts at Warrandyte appears to have been in 1871 when by a party of men erected a flume at an elevation of 50 feet above the level of the Yarra for the purpose of pumping by water power and conducting water for sluicing the Whipstick Gully.⁶

Quartz mining

Quartz mining was the other notable mining activity carried out at Warrandyte. During the 1860s to the early 1880s, prospecting and mining for quartz gold was extensively carried out but with only very limited success. Most reefs were worked down to the water table and then abandoned. Both shaft mining and tunnelling was undertaken.

The early quartz mining plant used was quite small and crude. In 1860, the principal mill was a 4-head battery and small Chilean mill for amalgamating.⁷ A year later, this equipment was pronounced defective, as it can hardly crush the quartz.⁸ Wilkinson erected a more successful crushing works and this comprised of calcining apparatus and an efficient crushing machine of six stamps.⁹ In 1875 there was only one crushing machine available at Warrandyte—it was driven by water power and located at a level above water, which rendered it useless when the river flooded.¹⁰

Quartz mining received a boost in 1877 when two dykes of auriferous diorite were discovered on north bank of Yarra at Warrandyte.¹¹ This led to a small mining boom with old claims taken up again and new shafts sunk. Companies to operate during this time included First Hill, PigTail, Fourth Hill, Crown, and Northern. The PigTail Co appears to have had the most success: the company worked to 150 feet, with yields up to 8 oz/ton. The mine's prospectors were said to have netted £6,000. The reef was worked for length of several hundred feet, but not explored much beyond a slide which cut the reef off at about water-level.¹² Another company that achieved some success was the revived Yarra Tunnelling Company who operated close to the riverbank and used a water wheel to power its crushing equipment.

⁴ Mining Surveyors' Reports (St Andrews Division), April 1860.

⁵ Context Pty Ltd, p. 53.

⁶ Mining Surveyors' Reports (St Andrews Division), March 1871.

⁷ Mining Surveyors' Reports (St Andrews Division), November 1860.

⁸ Mining Surveyors' Reports (St Andrews Division), April 1861.

⁹ Mining Surveyors' Reports (St Andrews Division), October 1861.

¹⁰ Mining Surveyors' Reports (St Andrews Division), September 1875.

¹¹ Mining Surveyors' Reports (St Andrews Division), September 1877.

¹² Murray.

Warrandyte quartz miners had their most success at the turn-of-the-century. The government assisted in this by installing a battery at Warrandyte as an encouragement to prospecting. The government battery was initially driven by waterwheel and then by a portable steam engine.¹³ The first notable Warrandyte quartz mine was the Victory mine which produced 1,870 oz in three years. The Victory closed down in 1904. In the same year, Warrandyte's richest mine, the Caledonia, was floated and commenced sinking its main shaft.

The Caledonia mine was situated a mile northeast of the township of Warrandyte, on a flat on the east side of the Yarra. The Caledonia mined with success until 1910 and erected substantial steam-powered mining plant including a winch, pumping engine and a large crushing battery. Its success created a small mining boom and other companies - including the North Caledonia, South Caledonia, Caledonia Consols, Yarra Tunnel, the PigTail or Hornabrook's Reward, and the New Victory - commenced working reefs in the vicinity.

The Caledonia mine's Main shaft was sunk to 620ft. At its peak the mine employed 250 men. It gave good returns until 1908 when it was hampered by excessive water. Assistance from the government in 1909 was to no avail and the machinery and equipment was sold that April. Its closure meant the end of large-scale gold mining in Warrandyte.¹⁴

Upper Yarra Goldfield

Alluvial mining

The Upper Yarra Goldfield was opened in 1859 and mining developed around several main tributary creeks with the Yarra River: Britannia, Yankee Jims, Big Pats, McMahon's and Wombat (Upper Yarra). In November 1859 the rush to the upper Yarra commenced with 200 diggers working a mile of Britannia Creek. Diggers at junction of Britannia Creek and Little Yarra soon established the township of Britannia. In the same year, gold was unearthed in other creeks near Britannia, including Scotchmen's (richest place on goldfield), Hoddle's, and Sheep Station.¹⁵ The following year rich gold was obtained from Yankee Jim's Creek.

Miners quickly worked their way up and down the Yarra from Britannia - the trend being toward prospecting new ground rather than re-working old ground. In 1860, the mining population was about 500 diggers and there were rushes to Big Pat's Creek (named after its discoverer, Patrick O'Hannigan); Woori Yallock near its junction with McCrea's Creek; and Yankee Jim's Creek, later site of first Warburton township (now Old or West Warburton). Payable gold also found in Wombat Creek, a south tributary of Yarra, just west of Alderman's Creek, where the 'country was rough, tracks dangerous and the scrub dense'—this was McMahon's (Creek).¹⁶

The mining populations of the various mining centres were quite fickle, with much movement between places on news of rich discoveries. For example, in February 1861 the greater proportion of mining population on Britannia goldfield moved to Starvation Creek and its tributaries, the rest being reported scattered about between the Little Yarra and Yankee Jim's Creek.¹⁷

¹³ Department of Mines Annual Report, 1910.

¹⁴ Context Pty Ltd, p. 50.

¹⁵ Flett, p. 59.

¹⁶ Flett, p. 59.

¹⁷ Mining Surveyors' Reports (St Andrews Division), February 1861.

During the 1860s the alluvial miners concentrated their efforts on working the creek beds and banks through diverting streams or constructing cofferdams. At some places puddling machines were also tried. A favoured sluicing place was McMahon's Creek where operations were undertaken to divert the stream and sluice loose shale on the bottom of creek. A major diversion scheme was undertaken here in 1864 when miners successfully drained the Yarra River by tunnel through what is now known as the Great Peninsula.¹⁸

Hydraulic sluicing commenced in the Upper Yarra region in the early 1870s. As early as 1871 there are reports of miners constructing water races to work claims. In 1873, a very extensive hydraulic sluicing operation commenced at Warburton by the Warburton Hydraulic GMC. This company's race conveyed water for about 7 miles to an elevation of about 320 feet above the claim.¹⁹ In 1876 the company rejuvenated its water supply system by erecting a 1,000 feet, 50ft high flume 50ft high across Warburton saddle.²⁰

In 1876, a company calling itself the Yarra Yarra GMC re-worked areas at Yankee Jims Creek on a large scale. Their 5 miles race from Big Pat's Creek, delivered about 2,300 litres/minute with water pressure sufficient to sent jets about 30ft in the air. The company was sluicing through 30 feet of old workings washing away soil, old timbered shafts and drives to get to the bed of creek. The surplus dirt was sluiced into the creek and washed downstream. Hydraulic sluicing was also in progress at Starvation and Hoddles creeks during this time.

By the early 1880s the large sluicing companies had mostly exhausted their ground. The handful that continued past 1882 had great difficulties in working due to accumulated surplus dirt. The last two surviving companies - Britannia Hydraulic Sluicing and Warburton Hydraulic Sluicing - were forced to cut deep and expensive drainage culverts (called tail-race) through solid granite boulders.²¹ Both these companies ceased operations in 1884. After this, the mining records on the Upper Yarra Goldfield contain little reference to hydraulic sluicing except for some brief reports on operations carried during 1906-7 at both McMahon's and Hoddles creeks.

The Upper Yarra Goldfield also witnessed some small-scale and unsuccessful deep lead mining during the 1870s-80s at Yankee Jim's and Hoddles creeks. The latter place was worked by the Melbourne Quartz and Alluvial GMC, and the London Co. The former company was draining their workings by horse and whim.²² The City of Melbourne Company also worked at Hoddles Creek. Another mining operation, known as Welden's party, drove a tunnel 4,000 feet to drain and work a lead known as Branden's Lead, the depth being 80ft.²³

Quartz mining

Quartz reefing developed very slowly. The first quartz reefs were discovered in July 1860 (in the vicinity of Britannia Creek²⁴) and some three years later the Darling goldfield opened, with discovery of quartz reefs at Wombat Creek, the highest point of gold digging on the Yarra. First reef worked on the Darling Goldfield was the Xmas Reef.²⁵

During the 1860s prospectors were busy opening up reefs through the Upper Yarra Goldfield. Although none of the reefs proved very rich or substantial they did cause a number of small rushes which led to machinery installations. Quartz Mining never progressed from the small scale and was undertaken by small co-operative parties of working miners either working new reefs or giving old mines another go.

¹⁸ Mining Surveyors' Reports (St Andrews Division), September 1864.

¹⁹ Mining Surveyors' Reports (St Andrews Division), March 1873.

²⁰ Mining Surveyors' Reports (St Andrews Division), June 1876.

²¹ Mining Surveyors' Reports (St Andrews Division), June 1882.

²² Mining Surveyors' Reports (St Andrews Division), December 1885.

²³ Mining Surveyors' Reports (St Andrews Division), June 1889.

²⁴ Mining Surveyors' Reports (St Andrews Division), July 1860.

²⁵ Flett, p. 60.

The most notable quartz reefing rush of the 1860s was to the east side of Donovan's Creek.²⁶ The main mines to develop were the Golden Bower and Star Quartz. Prospectors of the former mine erected water-powered battery on the creek and drove adit 60 feet below the reef outcrop. The stone became unpayable only 12 ft below the adit level and company ceased operations in 1870.

Another small reefing rush took place in 1874 when rich reefs were discovered at junction of McMahon's Creek and the Yarra. The town of Reefton began as a result of this rush, inspired by the rich yields from Lee and Carroll's Reef, which went 20 ounces to the ton.²⁷ By 1875 the first crushing machinery had being erected at Reefton²⁸ and several companies - including the Reefton, Central, All Nations, Great Northern, and Aurora (Talbot & Co.) - were tunnelling towards the reef. The Central Company mined with some success. It struck a reef after driving their tunnel for 500 feet and by 1879 was installing apparatus to operate upon pyrites.²⁹

In 1878, prospectors discovered new reefs at Hoddles Creek and the Pigtail Company erected a battery, pumping and winding gear. At the same time, the Muddy Creek Company, at McMahon's Creek were cutting a six-mile water race to supply its battery.³⁰

During the 1880s, Hoddles Creek appeared to be the main focus of quartz mining. Mines operating at Hoddles Creek during this period included those belonging to the Kong Meng, London, Pioneer, and City of Melbourne companies. The Hoddles Creek field gained further impetus at the end of the decade when four new reefs were discovered: the Sunday Reef, Hidden Treasure line, and two others.

By the turn-of-the-century quartz mining Upper Yarra quartz mining had still not progressed passed the small-scale stage. Mines flourished for brief periods of time as rich shoots of gold were found. Mines mentioned during this period included the Lady Hopetoun (Warburton); Hoddles Creek and Mountain Queen (Hoddles Creek; Strike (McMahon's Creek); Golden Bower Syndicate (Donovans Creek). By 1910 most of these and other small co-operative companies had closed down. From 1913 to 1917, a new company gave the Golden Bower mine a go. They cut a 10-mile race from Cumberland Creek and the water was carried into adit and used to drive a Pelton wheel at the winze for winch and pumping. This novel arrangement proved successful and for a time the company extracted ore averaging 26.3 dwt/ton. Eventually water troubles and the south pitch of the shoot made further sinking with the existing appliances impractical and the company ceased to work.

The last notable period small-scale mining in the area took place in 1948 when the Gem Prospecting Company's antimony mine at Hoddles Creek commenced production. This company operated for several years.

²⁶ Mining Surveyors' Reports (St Andrews Division), December 1867.

²⁷ Flett, p. 60.

²⁸ Mining Surveyors' Reports (St Andrews Division), March 1875.

²⁹ Mining Surveyors' Reports (St Andrews Division), December 1879.

³⁰ Mining Surveyors' Reports (St Andrews Division), September 1878.

Caledonia Goldfield

Alluvial mining

The Caledonia goldfield takes in a large tract of country north of Warrandyte. It covers a very hilly area extending from the Yarra River, north across Kangaroo Grounds, to above St Andrews (first known as Queenstown), and embraced all the country between Diamond Creek and Watsons Creek. Despite small quantities of gold found at Scotts Hill, Kangaroo Grounds in 1851, the field was not rushed until early 1855. The first large influx of diggers came with a rich strike of gold in Old Caledonia Gully (now Smiths Creek).³¹ Soon the gold diggers had opened up numerous other localities including Ironbark Gully, Back (Diamond) Creek, Watson's Creek, New Caledonia Gully, Yow Yow, Wild Dog, Cherry Tree Gully, Happy Valley, Red Shirt Gully and One Tree Hill or Distil Creek. The latter place became the richest alluvial place on the diggings.

The first village of the Caledonia rush was known as Market Square, and was situated on the east side of Ruggy's Gully about 1½ miles below St Andrews.

Over the next decade alluvial miners prospected their way up and down the various creeks and gullies, more concerned with finding new gold rather than re-working old ground. Once found, new deposits were quickly worked out. By 1860 places like Long Gully, Stoney Creek (running into Pound Bend near Warrandyte), Dry Creek, Swipers Gully (later known as Research), Ford's Gully, Spanish Gully, New Watery Gully, Fryers Creek, and Surveyors Gully had all been worked. By 1865 the list of alluvial gold locations had grown to include Hugh Glass's Gully on the Plenty River at South Morang; a series of gullies on Mountain Creek, above Mt Slide just east of Kinglake; and Fern-tree Gully, at One-Tree-Hill.

Alluvial mining had by 1860 become so precarious that few miners could procure the necessities of life from it. The odd party was lucky, as was the reported case of three men earning sufficient amount from mining in Fern-tree Gully in four months to return to England.³²

The re-working of old alluvial ground was not been a very prominent feature of the Caledonia goldfield. Mining records contain only scant mention of attempts by miners to continue alluvial mining past the initial gold rush stage. In 1860 a party was reported as making preparations for extensive sluicing in Wild Dog Gully. Their mining infrastructure included a hydraulic hose and the construction of the field's first water race.³³ In 1865 only 6 puddling machines were at work on the goldfield.³⁴ A favoured puddling location was Whiskey Gully.³⁵ A steam-powered puddling machine was also reported as being erected on the Old Caledonian Creek.

The only development in alluvial mining that took place after the 1860s was at the end of the century when some deep lead mining took place at South Morang. The deep lead mining operations were confined to tunnelling under the basalt from Plenty River and kicked off in 1895 when a company known as James Freehold washed five loads of wash dirt for a return of 5 oz 4 dwt. This convinced the Mines Department that the area was worth prospecting and they undertook some drilling in 1897. By 1903 five parties had undertaken mining operations - of these two had abandoned their mines, and of the other three only one, the Wilton's Freehold, was obtaining any payable gold.³⁶ Wilton's Freehold mine closed down in 1904 and so ended the field's only deep lead mining period.

³¹ Flett, pp. 42-3.

³² Mining Surveyors' Reports (St Andrews Division), January 1861.

³³ Mining Surveyors' Reports (St Andrews Division), January 1860.

³⁴ Mining Surveyors' Reports (St Andrews Division), June 1865.

³⁵ Mining Surveyors' Reports (St Andrews Division), June 1869.

³⁶ Department of Mines Annual Report, 1903.

The last recorded alluvial mining operation on the Caledonia field was by Nairne & party. In 1908 this party was conducting small-scale hydraulic sluicing operations in Ghosts Gully (Steele's Creek).³⁷

Quartz mining

Quartz miners discovered the first quartz reefs during 1855.³⁸ At the beginning there was no crushing machinery on the field, so ore was carted 30 miles to Langlands' Foundry in Melbourne. Crushing cost £3 per ton and cartage about the same. Despite going about 3 oz to the ton, it did not pay.³⁹ The first quartz crusher was erected at Back Creek in February 1856.

Over the next few years small parties of working miners developed the quartz reefs and there were soon three main reefing centres. In 1860, at You You Hill, there were several tunnelling parties at work and at least one of them - Holmes, Randle and Ricards - were sufficiently confident to have erected quartz crushing machinery. Their works included a 500-foot long tunnel, with tramway extended along its length and 150 yards from tunnel mouth to Slater's Gully. At the tramway's terminus was a mill with eight stampers and Wilkinson's patented calcining plant. The tramway embankment also served as a wall for the reservoir.⁴⁰

One Tree Hill was also a very busy place between 1859 to 1861. One of hill's reefs, Swedish Reef produced amazing yields: during 1859 one party extracted 15 lb weight of gold from 60 lb of quartz; and a year later another party got over 5 lb of gold from one bucketful of quartz.⁴¹

By 1864 mining records show that quartz reefing had virtually stopped on both You You and One-tree hills and that the only locality where it was being prosecuted with any vigour was Oram's Reef (Kingstown). This reef had been discovered in 1858 and in 1864 boasted at least crushing plant, described as a 'battery of 6 revolving stampers, with 6 feet of copper table and 12 feet of ripple board driven by 10-hp, high-pressure, horizontal engine'.⁴²

From the mid 1860s until the 1870s quartz mining rarely progressed beyond the prospecting stage. The most prominent feature was the discovery of a new reef about 3 miles from Diamond Creek, called the Pioneer.⁴³ Two companies -Pioneer and Union - were working this reef in 1870, both of whom had installed substantial mining plant. One of companies had a crushing plant located at the end of their tunnel where the ore trucks could be emptied immediately into hopper of battery.⁴⁴ Both companies had stopped mining by 1875.

Oram's Reef had another surge of life between 1877 to 1885. The principal mines were Oram's Reef Company (Pantons Hill) which operated at the beginning of the period, and the Bacchante and Phoenix companies during the early eighties. The latter mines closed down when the rich shoot of gold being petered out. A notable failure of the period was the Diamond Creek Company. In 1882 this company planned to work Phipps Reef and installed a 10-head battery and a 30-hp engine for pumping and winding.⁴⁵ Four years later the company was reported as mysteriously collapsing without even striking a pick.⁴⁶

³⁷ Department of Mines Annual Report, 1908.

³⁸ Flett, pp. 43-45.

³⁹ Amos, in *Records of Castlemaine Pioneers*.

⁴⁰ Mining Surveyors' Reports (St Andrews Division), September 1860.

⁴¹ Kenny (1921), p. 263.

⁴² Mining Surveyors' Reports (St Andrews Division), September 1864.

⁴³ Mining Surveyors' Reports (St Andrews Division), September 1866.

⁴⁴ Mining Surveyors' Reports (St Andrews Division), March 1870.

⁴⁵ Mining Surveyors' Reports (St Andrews Division), June 1883.

⁴⁶ Mining Surveyors' Reports (St Andrews Division), September 1866.

Nothing much happened on the quartz mining during the nineties but by early 1900s it was actively being carried out at Arthur's and Diamond creeks. At the later place, the career of the goldfields most productive mine commenced in 1907. Between July of this year and June 1914, the Diamond Creek mine yielded 29,833 ounces of gold from 23,163 tons of quartz. In January 1915 fire destroyed the plant and mining operations ceased.⁴⁷ The mine's winze workings went to 955ft.⁴⁸

Like most places quartz mining virtually stopped on the Caledonia goldfield during the First World War and took a long time to revive itself after the war. The Golden Stair mine, at Greensborough, was the most prominent mine of the 1920s. This mine operated on a small scale for about a decade. The mine yielded only small quantities of rich quartz, which was carted off, to Queenstown to be crushed at the government battery.

The field's next productive period occurred from 1939-47. This period commenced with the discovery of a new reef outcropping in an orchard at Yarrambat. The prospectors formed a company called the Golden King and installed an 8-head battery with an electric generator driven by an oil engine. A second company was also formed called the Golden Crown. The latter mine proved to be the most successful and operated until 1950. The success of the Golden Crown helped promote prospecting in the area and two other mines - the Black Cameron mine at Smith's Gully and Big Ben mine, Kinglake - also progressed to the mining stage. The Big Ben Company was the most successful and in 1948 installed a new crushing plant was to handle the output of stone from its mine.⁴⁹ The Black Cameron, despite yielding prospecting crushings of over 2 oz per ton did not go onto to mine profitably.⁵⁰

Dandenong Goldfield

The Dandenong Goldfield was a small and modest field. From 1851 to 1858 there were occasional reports of gold discovered in the Dandenong area. One of the first in 1851 concerned a party of Germans who reputedly obtained thousands of pounds worth of gold at 'Moondie Yallock'—around junction of Menzies Creek and Woori Yallock Creek, about two miles north of Emerald.¹ Digging for gold was also reported from Cardinia Creek and at Emerald or Ti-tree Creek as it was then called. In 1858, it was reported that, 'Mining operations have extended to Dandenong, near Fern Tree'.²

The first rush took place in early 1859 with diggers working Macclesfield or Cockatoo Creek (about same locality as where Germans had got their gold in 1851). In February there were 250 diggers working, and the 'Little Yarra' or Woori Yallock Creek was being mined for 10 miles. Almost immediately the township of Emerald township was surveyed on site of the main diggings. Diggers were also working at McCrea's Creek, six miles from Emerald during this time. Gold at McCrea's and Shepherd's creeks (called the Nicholson goldfield) turned out to be poor, suitable only for sluicing.³

After the first flush of the rushes to the Emerald and Nicholson goldfields most miners deserted the place. In 1869, the district's mining surveyor cited heavy timber and dense scrub as one of the reasons why area was being neglected.⁴ The odd new discovery of what always turned out small and quite poor yields that took place through the rest of the century did little to change this trend.

The only time the place sprang to life gold-wise was in 1872-73 when gold bearing ground was discovered in Haunted Gully, 4 miles southeast of Berwick.⁵ This led to other gullies in the vicinity being successfully prospected including Sailor's Gully, Welcome, Burke's, Walkers, Mayfields, and Barnes.⁶

⁴⁷ Howitt.

⁴⁸ Howitt.

⁴⁹ *Mining & Geological Journal*, September 1948.

⁵⁰ *Mining & Geological Journal*, March 1950.

The early seventies saw attempts at both quartz and deep lead mining. Both these forms of mining were attempted at Gembrook. The Sons of Freedom Company drove a tunnel into a hill in the hope of striking an auriferous reef. The Gembrook Deep Lead Company drove a tunnel for a distance of 800 feet under the basalt without finding any payable washdirt. Another company, Creighton's Freehold, erected pumping and winding engine and sank without success 200-ft deep shaft.⁷

There was also some activity around Cockatoo just before the First World War. In 1911 the Nangana Company commenced prospecting by shafts and tunnels some auriferous dyke exposures.⁸ The company erected a gas suction milling plant in 1912 but failed to mine profitably and closed down in the following year. The dyke system was also given another go in the 1930s when Sherlock & Party worked Kirk's Dyke. They worked the dyke by a tunnel and had a modest ore treatment plant consisting of a 3-head battery driven by a petrol engine.⁹

Mornington Peninsula Goldfield

Mornington Peninsula Goldfield was a very minor alluvial and reef goldfield. Gold mining commenced in the area in 1862 when alluvial gold was discovered at Tubbarubba and Bulldog Creek described as 'remote alluvial patch six to eight miles from Snapper Point'.¹⁰ Two years later quartz reefs and indicators were also discovered and reef mining also commenced on the southeast side of Mount Martha and in the parish of Tyabb, about eight miles east of Frankston.

The 1860s discoveries were followed by isolated occurrences of reef mining in the Frankston–Mornington area until early into the twentieth century. During the early 1870s new prospecting claims were registered for Tubbarubba Creek, Kangarong and Dromana.¹¹ In 1896 three reefs were discovered and worked in Cole's paddock, not far from Frankston.

The Mornington G.M.C erected the district's first (and apparently only) crushing battery in 1905. It was reported as being a 10-head battery and the mine as being located about seven miles inland from Mornington.¹²

FOOTNOTES

- 1 Flett, p. 46
- 2 Flett, p. 47
- 3 Flett, pp. 46-58
- 4 Brough Smyth, pp. 109-10
- 5 Mining Surveyors' Reports, December 1872
- 6 Mining Surveyors' Reports, September 1873; Flett, p. 40
- 7 Mining Surveyors' Reports, September 1883
- 8 Department of Mines Annual Report, 1911
- 9 Kenny, 1937/3
- 10 Flett, p. 39
- 11 Flett, p. 40
- 12 Department of Mines Annual Report, 1905

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**VICTORIAN GOLDFIELDS
PROJECT**

**HISTORIC GOLD MINING SITES
IN
ST ANDREWS MINING DIVISION**

SITE GAZETTEER

**DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENT**

JUNE 1999

1. Introduction

Time and budget constraints meant that fieldwork was restricted to previously unrecorded sites that were considered to have significant heritage values. The table below shows all sites that were identified during the desktop survey. The places highlighted in bold are those places recorded and included in the gazetteer.

No.	Name	Location	Ranking
1.0	Pound Bend Diversion Tunnel	Warrandyte 7922:413.214	Heritage Register – State significance Diversion tunnel
2.0	'The Island' Diversion	Warrandyte 7922:437.218	Planning Scheme – Regional significance Diversion cutting
3.0	Warrandyte Gold Memorial	Warrandyte 7922:428.203	Heritage Register – State significance Stone cairn
4.0	Black Flat alluvial workings and puddling machine	Warrandyte 7922:444.219	Heritage Inventory – Regional significance Band of alluvial sinkings, puddling machine site with associated dam and paddocking.
5.0	Caledonia Mine	Warrandyte 7922:441.220	Heritage Inventory – Regional significance Collapsed adit, mullock heap, re-located boiler, one air shaft and collapsed and filled glory hole
6.0	Fourth Hill mine workings	Warrandyte 7922:430.205	Heritage Inventory – Regional significance Adit
7.0	Victory Gold Mine Whipstick Hill	Warrandyte 7922:430.212	Heritage Inventory – Regional significance Engine bed and remains of boiler setting, adit, shafts, carting tracks and at least two hut platforms
8.0	Queenstown Government Battery	St Andrews 7922:475.347	Heritage Inventory – Regional significance Tailings and cyaniding relics, battery foundations and weir
9.0	Smiths Gully Alluvial workings	St Andrews 7922:471.353	Heritage Inventory - Regional Sluiced workings, water race and at least one hut site
10.0	Black Cameron Mine	St Andrews 7922:475.354	Planning Scheme – Regional significance Operational mine
11.0	One Tree Hill Mine	St Andrews 7922:504.336	Heritage Inventory – Regional significance Shafts, stopes, costeans and main adit
12.0	Union Company Mine	Diamond 7922:373.276	Heritage Inventory – Regional significance Mullock heap, mining and battery foundations, cyanide vats and tailings
13.0	Golden Stairs Company mine	Yarrambet 7922: 343.310	Planning scheme – Local significance
14.0	Relocated head frame (ex Claytons Mine)	Yarrambet 7922:	Planning scheme – Local significance Small steel head frame
15.0	Wilton Vale	Hurtsbridge 7922:338.341	Heritage Inventory –H7922-0149 Farm complex comprising site of original homestead (1860s) and subsequent dwelling beside it (1919?). The site includes gold mining adits and a dump.
16.0	Red Crab Mine	Hurtsbridge 7922:336.338	Heritage Inventory – H7922-0159 Mining tunnel about 70 metres long
17.0	Darnley's Tunnel	Yarrambet 7922:329.327	Heritage Inventory – H7922-0158 Mullock heap and filled-in tunnel with air shaft further up the hill

18.0	Janefield 3	Morang South 7922:315.278	Heritage Inventory – H7922-0068 Bluestone and gravel road. Probably old track to gold diggings
19.0	Janefield 2	Morang South 7922:310.276	Heritage Inventory – H7922-0067 Mining paddocks and adits in quartz gravel ridges of the Plenty Gorge.
20.0	Smugglers Gully	Yarrambet 7922:333.327	Heritage Inventory Approximately 1 kms of shallow alluvial workings on south side of Smugglers Gully. At least 5 hut sites
21.0	Mount Jerusalem Track Mine	Steels Creek 7922:558.400	Heritage Inventory – H7922-0178 Mine shafts, costeans and tunnels
22.0	Old Mount Slide Road Mine	Kinglake 7922:562.427	Heritage Inventory – H7922-0177 Mine shafts, costeans and tunnels
23.0	Antimony Mine	Kinglake 7922:563.418	Heritage Inventory – H7922-0176 Adit remains at creek level, above adit are 3 or 4 shafts and some costeans
24.0	Chalmers Ridge Gold Workings	Kinglake 7922:563.403	Heritage Inventory – H7922-0175 Adit, many shafts and costeans, and a water race draining into a large dam.
25.0	Toolangi Chinese Burial	Toolangi 7922:663.415	Heritage Inventory – H7922-0086 Site of the burial of a Chinese gold prospector, 2 mounds covered in soil
26.0	Sailors Reef Mine	Warrandyte 7922:428.203	Heritage Inventory-H7922-0157 Mine workings
27.0	Great Southern Mine	Warrandyte 7922:425.198	Heritage Inventory – H7922-0156 Three shafts
28.0	Little Peninsula Diversion Tunnel (Pipeline Tunnel)	McMahons 8022.968268	Heritage Inventory – H8022-0044 30 metre long diversion tunnel
29.0	Big Peninsula Diversion Tunnel McMahons Creek	McMahons 8022.958.261	Heritage Inventory – H8022-0044 25 metre long diversion tunnel
30.0	Gembrook Tin Mine	Gembrook 8022:755.064	Heritage Inventory – H8022-0054 Two narrow costeans
31.0	Wolfram Mine, Wilks Creek Track	Marysville 8022:903.413	Heritage Inventory – H8022-0053 Two adits, one open cut, adits connected by a short tramway, battery foundations, remains of large boiler, ruins of three huts, remains of sluice, wooden truck and foundations of elevated chute.
32.0	Sovereign Mine	Marysville 8022:032.417	Heritage Inventory – H8022-0052 Several shafts, a hut, cyanide slurry tanks and other relics, and water race from Cumberland Creek
33.0	Peninsula Road gold workings	McMahons Creek 8022:966.280	Heritage Inventory – H8022-0051 Many of these features have been made accessible by the 'Upper Yarra Goldfields Walk'; workings include water races, adits, open cut mines, shafts and small dams
34.0	Great Britain Creek gold workings	Reefton 8022:090.374	Heritage Inventory – H8022-0050 Evidence of camp sites and sluicing along Great Britain Creek
35.0	Browns camp	Reefton 8022:074.368	Heritage Inventory – H8022-0049 Several hut sites and bottle dumps (dug by treasure hunters), water race and track.
36.0	Snobs Creek Mine	Reefton 8022:037.355	Heritage Inventory – H8022-0034 Overgrown mine site with six shafts evident. Two huts, three-head battery and a water pump erected after 1939 bushfires.
37.0	Chester & Lockes Gold Mine	Marysville 8022:061.419	Heritage Inventory – H8022-0048 Remains of blacksmith shop, mining relics and shafts

38.0	Damper Mine	Reefton 8022:117.315	Heritage Inventory – H8022-0047 Carting track, sluiced workings, hut sites, adit and shaft
39.0	Cumberland Falls Mine	Marysville 8022:029.412	Heritage Inventory – H8022-0046 An old hut, a car body, pump house shed and cyanide tanks located close to mine shafts
40.0	Victorian Mount Morgan Mine	Marysville 8022:032.404	Heritage Inventory – H8022-0045 Tunnels and shaft
41.0	Golden Bower Mine	Cambarville 8022:070.395	Heritage Inventory – H8022-0012 Lower and upper adits, shafts and water races

PLACE NO. & NAME: 1.0 Evelyn Tunnelling and Mining Company, Pound Bend
Warrandyte Goldfield
VHR H1260
HI No. H7922-0174

LOCATION: Pound Bend Road, Warrandyte
MUNICIPALITY: Manningham Shire
LAND STATUS: Warrandyte State Park

HISTORY:

Evelyn tunnel was formed when a tunnel was driven nearly 200 m through rock at the neck of Pound Bend peninsula, to divert the river and expose the riverbed to extract gold. An initial survey in 1859 examined the feasibility of cutting a tunnel through the neck of the isthmus. In 1870 the Evelyn Tunnel GMC started work, completing the tunnel within a few months. The venture failed to produce the financial reward anticipated, due to the costs of mining through the deep mud that covered the riverbed. The company wound up late in 1872. In 1884 the idea of using the tunnel to generate electricity was proposed, and in 1888 had formed a company for the purpose. The Melbourne Water Power Co. aimed to supply power to all of Melbourne from the scheme, but the venture did not proceed. The idea arose again in the 1920s, this time to supply the Warrandyte community, which was not able to fund the provision of power through the SEC. This idea also failed to go ahead. The Evelyn tunnel is “probably the earliest and most successful” of at least three such tunnels constructed on the Yarra River for the same purpose: others are at Big Peninsula (McMahons Creek, Upper Yarra) and the Pipeline tunnel (near Warburton-Wood Point road).

DESCRIPTION AND INTERPRETATION:

Evelyn Tunnelling and Mining Company – The Evelyn Tunnelling and Mining Company dug through 145 metres of hard rock to divert the Yarra River. This left five kilometres of the old riverbed exposed. *Diversion tunnel*—still diverting water

INTEGRITY/CONDITION: Still open and in good condition

CULTURAL SIGNIFICANCE:

Site 1.0 has

Scientific significance—Diversion sluicing was the prevailing gold rush technology where streams run all year round. Over time, diversions became more and more adventurous, enabling the miners to change and control stream courses. At some locations miners cut or tunnelled through sharp beds in the rivers (such bends commonly referred to as an isthmus). These operations opened up long lengths of the stream beds for mining. Because of the great costs involved diversion tunnels and cuttings were not common in Victoria. The Pound Bend diversion tunnel is only one of thirteen known sites of this type in Victoria.

Social value—Because of the scale of human endeavour evidenced by the site, and its evocative setting and accessibility, it is now a popular recreational destination. The site is part of the Warrandyte State Park.

SIGNIFICANCE RANKING: Site listed on Victorian Heritage Register
Site listed on Heritage Inventory

Assessor: David Bannear Date: 1998

PLACE NO. & NAME: 2.0 'The Island' Diversion Cutting
Warrandyte Goldfield
HI No. H7922-0228

LOCATION: Warrandyte-Ringwood Road, Warrandyte
MUNICIPALITY: Manningham Shire
LAND STATUS: Crown Land

HISTORY:

In December 1859 Clarke & Brown commenced operations at Thompson's Creek, on the Yarra. They employed about 25 men to cut a canal to divert the river. The canal was designed to have a top width of 50 feet, a depth of 12 feet, a bottom width of 14 feet. The company formed for the venture was called the Yarra Yarra Mining Company. By April of the following year, the company had completed the erection of a steam engine of about 8-hp to operate pumping machinery, drive a Start's patented puddling machine, and operate a haulage plant. The latter was designed to draw washing stuff from the bottom of the river, up an inclined tramway, to a height of about 30 feet above the riverbed into the puddling machine. The company appears to have mined with limited success, and in June 1860 they had suspended operations. With more powerful plant, two steam engines, the company recommenced work in November 1860. The company was no more successful the second time, and was defunct by October 1861. For the next few years, until the mid 1860s, various sections of the company's ground were worked by small parties. These small parties obtained some "excellent results"

DESCRIPTION AND INTERPRETATION:

'The Island' Diversion Cutting

The cutting has left a small island in a bend of the Yarra River. Subsequent flooding has widened the original canal or cutting dug by the Yarra Yarra Mining Company, the canal is now the main river course and the original river is a willow-choked backwater of the Island.

INTEGRITY/CONDITION: Visible landscape feature

CULTURAL SIGNIFICANCE:

Site 2.0 has

Scientific significance— Diversion sluicing was the prevailing gold rush technology where streams run all year round. Over time, diversions became more and more adventurous, enabling the miners to change and control stream courses. At some locations miners cut or tunnelled through sharp beds in the rivers (such bends commonly referred to as an isthmus). These operations opened up long lengths of the stream beds for mining. Because of the great costs involved diversion tunnels and cuttings were not common in Victoria. The Pound Bend diversion tunnel is only one of thirteen known sites of this type in Victoria.

SIGNIFICANCE RANKING: Site listed on the Heritage Inventory

Assessor: David Bannear Date: 1998

PLACE NO. & NAME: 3.0 **Warrandyte Gold Memorial**
Warrandyte Goldfield
HI No. *H7922-0227*

LOCATION: Gold Memorial Road, Warrandyte
MUNICIPALITY: Manningham Shire
LAND STATUS: Warrandyte State Park

HISTORY:
Erected in 1935 to mark the site of the first payable goldfield, discovered in August 1851 by Louis Michel and named the Victoria Field after the new colony.¹

DESCRIPTION AND INTERPRETATION:

Warrandyte Gold Memorial
Stone cairn

INTEGRITY/CONDITION: Good

CULTURAL SIGNIFICANCE:

Site 1.0 has

Historical significance—Warrandyte was the first goldfield discovered in Victoria and this is an event of State significance. The monument was erected to commemorate this event. The Anderson's Creek strike was named the Victoria Goldfield in honour of the new colony. Louis Michel, the discoverer of the gold was acknowledged as the first publicly pronounced discoverer of payable gold in Victoria.

SIGNIFICANCE RANKING: Site listed on the Heritage Inventory

Assessor: David Bannear Date: 1999

¹ Context Pty Ltd, p. 48.

PLACE NO. & NAME: 4.0 **Black Flat alluvial workings and puddling machine**
Warrandyte Goldfield
HI No. *H7922-0221*

LOCATION: Tills Road, Warrandyte
MUNICIPALITY: Manningham Shire
LAND STATUS: Warrandyte State Park

HISTORY:

The Black Flat mining area contains a number of individual sites. The area was worked for gold from the 1870s. There were a number of mining operations, most of which are now located within the Warrandyte State Park; a few sites are on private land in Tills Road.

DESCRIPTION AND INTERPRETATION:

Black Flat alluvial workings

Band of alluvial sinkings, puddling machine site with associated dam and paddocking.

INTEGRITY/CONDITION: Good

CULTURAL SIGNIFICANCE:

Site 1.0 has

Historical significance—Diggings for alluvial gold was the earliest mining carried out at Warrandyte. This is the best surviving example of this type of mining at Warrandyte.

Scientific significance—relatively undisturbed patch of shallow alluvial workings.

SIGNIFICANCE RANKING: Site listed on the Heritage Inventory

Assessor: David Bannear **Date:** 1999

DESCRIPTION AND INTERPRETATION:

Caledonia Gold Mine

Mine workings—Collapsed adit and largely filled glory hole

Mullock heap—Large heap on freehold land

Mining machinery—relocated boiler on freehold land

INTEGRITY/CONDITION: Poor

CULTURAL SIGNIFICANCE:

Site 1.0 has

Historical significance— The mine was the richest in Warrandyte and its closure in 1914 marked the end of large-scale gold mining at Warrandyte.

Scientific significance—Still retains some features

SIGNIFICANCE RANKING: Site listed on the Heritage Inventory

Assessor: David Bannear Date: 1999

PLACE NO. & NAME: **6.0** **Fourth Hill Tunnel**
Warrandyte Goldfield
HI No. **H7922-0223**

LOCATION: Tunnel Street, Warrandyte
MUNICIPALITY: Manningham Shire
LAND STATUS: Warrandyte State Park

HISTORY:

In 1856, Patrick Geraghty and William Moore commenced a mining venture on Fourth Hill, excavating a tunnel to intersect with the line of the reef. The tunnel was reworked during the 1880s. It is now known as the Fourth Hill tunnel. The tunnel extends for approximately 100 m into the hillside, and is accessible via Tunnel Street.

1856-8: Geraghty and Moore's tunnel on Fourth Hill was reported to be the first substantial quartz mining operation in the St Andrews district.¹

December 1859: At Anderson's Creek a claim of 600 yards x 200 yards of quartz ground worked on Fourth Hill by Moore and Gerraty (Geraghty).²

January 1860: At Fourth Hill, Anderson's Creek, Moore and Gerraghty have extended their tunnel to 108 feet.³

March 1869: Water-powered crushing machine at Fourth Hill unable to engage more than two stamps, due to lack of water.⁴

September 1869: Loyal Liberal Co., north of Warrandyte, are waiting on the erection of machinery. Union Co., Fourth Hill, are waiting completion of machinery.⁵

1880s: Geraghty and Moore's tunnel on Fourth Hill was reworked by other parties during the 1880s, including Sloan and party and Chatty and Smith.⁶

DESCRIPTION AND INTERPRETATION:

Fourth Hill Tunnel

Mine workings—Adit and levelled mullock heap.

INTEGRITY/CONDITION: Poor

CULTURAL SIGNIFICANCE:

Site 1.0 has

Historical significance— It was reported to be the first substantial quartz mining operation in the St Andrews district.

Scientific significance—a well preserved adit

SIGNIFICANCE RANKING: Site listed on the Heritage Inventory

Assessor: David Bannear Date: 1999

¹ Context Pty Ltd, p. 52.

² Mining Surveyors' Reports (St Andrews Division), December 1859.

³ Mining Surveyors' Reports (St Andrews Division), January 1860.

⁴ Mining Surveyors' Reports (St Andrews Division), March 1869.

⁵ Mining Surveyors' Reports (St Andrews Division), September 1869.

⁶ Context Pty Ltd, p. 52.

PLACE NO. & NAME: 7.0 **Victory Gold Mine**
Warrandyte Goldfield
HI No. *H7922-0224*

LOCATION: Whipstick Gully Road
MUNICIPALITY: Manningham Shire
LAND STATUS: Warrandyte State Park

HISTORY:

Victory mine (previously known as Young Colonial, and Warrandyte claim) worked from about 1896 and produced 1,870 oz in three years. It was one of Warrandyte's most successful mines of the period. The main shaft was sunk to 220ft.

DESCRIPTION AND INTERPRETATION:

Victory Gold Mine

Machinery foundations— Engine bed and the remains of the boiler setting

Mine workings— adit and several shafts, carting tracks and at least two hut platforms

Habitation sites— carting tracks and at least two hut platforms

INTEGRITY/CONDITION: Good, some public risk issues with the tunnel

CULTURAL SIGNIFICANCE:

Site 1.0 has

Historical significance— The Victory Mine was Warrandyte's most successful mining operation.

Scientific significance— Contains the district's most intact and visible remains of historic quartz mining operations. The two hut sites have some archaeological potential

SIGNIFICANCE RANKING: site listed on the Heritage Inventory

Assessor: David Bannear Date: 1998

PLACE NO. & NAME: 8.0 **Queenstown Government Battery**
Caledonia Goldfield
HI No. H7922-0230

LOCATION: Smiths Gully Road, opposite Queenstown cemetery
MUNICIPALITY: Nillumbik Shire
LAND STATUS: Crown land

HISTORY:

From 1897 the Victorian government provided assistance to quartz gold prospectors through the installation and operation of small quartz crushing facilities (known as government or State batteries) in localities where no privately-owned battery was available for public use. Their number peaked between the wars, with a maximum of 33 in operation. Government crushing facilities were quite small concerns, at first being equipped with only three heads of stamps, rising in 1904 to a standard of five head. The batteries were originally powered by steam, but producer gas, oil, and electricity eventually replaced steam-power.

The operation of government batteries was never economical. For example, the Mines Department's annual report of 1910 shows that, between 1897 to 1910, £52,717 was spent on the erection, operation, and maintenance of 24 plants, with only £7,905 incoming for the crushing of 36,074 tons of stone. In order to reduce expenditure, the Mines Department encouraged the establishment of local committees to manage and operate the batteries. Small cyaniding plants were installed at some of the batteries, in an effort to raise additional income by processing battery tailings.

At the end of the Second World War, the numbers of government batteries had declined and by the 1980s, the number of government batteries was reduced to the point that they were all managed by one man. He retired in the mid-1980s and the batteries have seen little operation since. At present there are six substantially intact former State Batteries in Victoria: Maldon, Bright, Mount Egerton, Creswick, Rutherglen, and Wedderburn.

The Queenstown Government Battery was opened soon after the First World War. Like most government batteries the facility was used intermittently. The weatherboard battery house was burnt down in a bushfire in 1962 and the machinery was subsequently removed to be used elsewhere.

DESCRIPTION AND INTERPRETATION:

Queenstown Government Battery

The remains of the Queenstown Government Battery are located at the commencement of the Smith's Gully Walking Track.

Battery—timber mortar blocks (5-head battery), concrete mounting blocks and floor. In the creek below the battery is a concrete weir. The foundations are located on the east side of the walking track.

Cyanide works—small dumps of battery sand, one galvanised iron vat, and a poison tank. The relics are located on the west side of the track

INTEGRITY/CONDITION: Reasonable

CULTURAL SIGNIFICANCE:

Site 4.0 has

Historical significance—the Queenstown Government Battery was an integral part of the area's quartz mining industry during the early twentieth century

Scientific significance— sufficient relics survive to provide a general impression of what took place on the site.

Social value— The heritage values of the place is enhanced when viewed as part of a precinct, which contains the Black Cameron mine, alluvial workings along Smith's Gully, and Queenstown Cemetery.

SIGNIFICANCE RANKING: Site listed on the Heritage Inventory

Assessor: David Bannear Date: 1999

PLACE NO. & NAME: 9.0 **Smiths Gully Gold Workings**
Caledonia Goldfield
HI No. *H7922-0231*

LOCATION: Smiths Gully Road, opposite Queenstown Cemetery
MUNICIPALITY: Nillumbik Shire
LAND STATUS: Warrandyte State Park

HISTORY:

The Caledonia goldfield takes in a tract of country north of Warrandyte. It covers an very hilly area extending from the Yarra River, north across Kangaroo Grounds, to above St Andrews and embraces all the country between Diamond Creek and Watsons Creek. Despite small quantities of gold found at Scotts Hill, Kangaroo Grounds in 1851, the field was not rushed until early 1855. The first large influx of diggers came with a rich strike of gold in Old Caledonia Gully (now known as Smiths Gully).

DESCRIPTION AND INTERPRETATION:

Smiths Gully Gold Working

Alluvial workings—three patches of bank sluicing and associated water races
Hut sites—remains of at least one hut site

INTEGRITY/CONDITION: Poor

CULTURAL SIGNIFICANCE:

Site 1.0 has

Historical significance— Location of the field's first gold rush.

Scientific significance—Still retains some evidence of gold mining operations and habitation

SIGNIFICANCE RANKING: Site listed on Heritage Inventory

Assessor: David Bannear Date: 1999

PLACE NO. & NAME: 10.0 Black Cameron Mine
Caledonia Goldfield
HI No. H7922-0225

LOCATION: Black Cameron Mine Road
MUNICIPALITY: Nillumbik Shire
LAND STATUS: Freehold land

HISTORY:

The field's next productive period occurred from 1939-47. This period commenced with the discovery of a new reef outcropping in an orchard at Yarrambat. The prospectors formed a company called the Golden King and installed an 8-head battery with an electric generator driven by an oil engine. A second company was also formed called the Golden Crown. The latter mine proved to be the most successful and operated until 1950. The success of the Golden Crown helped promote prospecting in the area and two other mines - the Black Cameron mine at Smith's Gully and Big Ben mine, Kinglake - also progressed to the mining stage. The Big Ben Company was the most successful and in 1948 installed a new crushing plant was to handle the output of stone from its mine. The Black Cameron, despite yielding prospecting crushings of over 2 oz per ton did not go onto to mine profitably.

The Black Cameron mine was reopened in 1951-52. In 1962 the buildings were burnt in a bushfire. Today the mine is a working facility with plans a foot to crush ore obtained from the One Tree Hill mine on the site.

September 1941: Crushing of 21 tons from the Black Cameron mine at Smith's Gully yielded 127¾ oz of gold.¹

March 1947: Black Cameron mine near Queenstown changed ownership.²

September 1947: At the Black Cameron mine, a new shaft is being sunk—now down 50 feet.³

March 1948: Black Cameron mine taken over by W. Clayton—shaft retimbered to 80 feet and deepened—machinery installed includes new air compressor and winding gear.⁴

September 1948: Shaft at Black Cameron mine now timbered to a depth of 105 feet.⁵

September 1949: Good results continue at Black Cameron mine.⁶

1949: Crushings from Black Cameron mine, Smith's Gully, Queenstown, gave over 2 oz/ton—further development is in progress.⁷

DESCRIPTION AND INTERPRETATION:

Black Cameron Mine

Working Mine—Corrugated iron sheds, crushing and winching machinery, shafts, mullock heaps, water dam, and tailings pond.

INTEGRITY/CONDITION: Active mining operation

CULTURAL SIGNIFICANCE:

Site 4.0 has

Historical significance—the Black Cameron mine contains the last insitu operating quartz crushing battery in the St Andrews district.

¹ *Mining & Geological Journal*, September 1941.
² *Mining & Geological Journal*, March 1947.
³ *Mining & Geological Journal*, September 1947.
⁴ *Mining & Geological Journal*, March 1948.
⁵ *Mining & Geological Journal*, September 1948.
⁶ *Mining & Geological Journal*, September 1949.
⁷ *Mining & Geological Journal*, March 1950.

Scientific significance— an excellent example of a late twentieth century small-scale quartz mine illustrating the mine's various owners' attempts to mine profitably.

Social value— The heritage values of the place is enhanced when viewed as part of a precinct, which contains the Queenstown Government Battery, alluvial workings along Smith's Gully, and Queenstown Cemetery.

SIGNIFICANCE RANKING: Site listed on the Heritage Inventory

Assessor: David Bannear Date: 1999

PLACE NO. & NAME: 11.0 One Tree Hill Quartz Workings
Caledonia Goldfield
HI No. H7922-0226

LOCATION: One Tree Hill
MUNICIPALITY: Manningham Shire
LAND STATUS: One Tree Hill Reserve

HISTORY:

1855: Gold discovered at One Tree Hill or Distil Creek, which became the richest place on the diggings. First village at Caledonia rush was known as Market Square, on east side of Ruggy's Gully, where it joins Old Caledonia Gully, about 1½ miles above Queenstown.¹

August 1859: Yield of gold from Swedish Reef on One Tree Hill is greater than ever: 15 lb weight of gold extracted from 60 lb of quartz.²

1859+: One Tree Hill workings, near Queenstown, are on three parallel reef lines, known as Swedish, Moonlight, and Buck reefs respectively. The hill forms part of divide between Watson's Creek and Diamond Creek, the gullies trending NW and S carried alluvial gold, with some nuggets, an unusual occurrence in the goldfields to the east of Melbourne.³

1903: One Tree Hill contain mines in the hands of small parties, none of which is doing very well.⁴

1904: Hidden Mystery mine, One Tree Hill, meeting with encouraging prospects.⁵

1908: Madame Dobson Co., One Tree Hill, erected crushing plant but, other than milling remnants of stone from the old slopes, little or nothing was done.⁶

1913: Gerlach & party, One Tree Hill, are extending tunnel in a quest to reach Swedes lode.⁷

1919: The One Tree Hill group of reefs have (in the past) been worked from open stopes on the surface to an adit driven from Fern Tree Creek about 250ft below the cap of the hill. On the north side of One Tree Hill, about 200ft below the crown of the range, an adit known as Gurlach's has been driven to cut the One Tree Hill reefs on their northerly extension beyond the open stopes. A Melbourne company is at present exercising an option over this ground. Homeward Bound line of reef, between open stopes and Gurlach's adit, currently being prospected by shaft, about 100ft deep. Lancashire Lass line, between Homeward Bound and Gurlach's, yielded up to 20 oz/ton to shallow depths.⁸

1922-3: A fourth line of reef, the Mystery, was discovered at depth on One Tree Hill—between December 1918 and July 1922, 152 tons from the Mystery Reef returned 440 oz. The workings on the hill include shafts on the various lines, with the present working adit from the western side of the hill; also a short adit and a lower main adit from the eastern side of the hill (see plan on file). Kenny advised that if further development of the One Tree Hill reefs was successful, a five-head battery could be erected at 'the old battery site on the western side of the hill'—presently crushing at Queenstown government battery?⁹

1932: Smile of Fortune Reef, One Tree Hill, outcrops about ¼ mile NW from Swedish Reef workings—surface workings extend along the line for a distance of about 150ft—present owners of the mine are testing the reef at a lower level by sinking a shaft on the north end of the old workings, to a depth of 93ft—mine is equipped with a 25-hp crude oil engine and compressor plant—Queenstown State battery is a short distance away by a fair road.¹⁰

March 1942: At Smyth's Gully, near Queenstown, some rich returns have been obtained. A crushing from the One Tree Hill mine returned approximately 115 oz of gold from 21 tons of stone.

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¹ Flett, pp. 43-45.

² Kenny (1921), p. 263—quoting J. Easton report, 1914.

³ Kenny (1921), p. 263.

⁴ Department of Mines Annual Report, 1903.

⁵ Department of Mines Annual Report, 1904.

⁶ Department of Mines Annual Report, 1908.

⁷ Department of Mines Annual Report, 1913.

⁸ Whitelaw.

⁹ Kenny (1925), p. 387.

¹⁰ Kenny (1937/4).

DESCRIPTION AND INTERPRETATION:

One Tree Hill Quartz Workings

Quartz workings—concentrated patch of reef workings on the side of the track leading to the One Tree Hill main tunnel. Workings include shafts and stopes

One Tree Hill Adit—adit, mullock heap, large dam embankment and carting track

INTEGRITY/CONDITION: Good. The workings are very overgrown and some a quite accessible. Risk mitigation works required

CULTURAL SIGNIFICANCE:

Site 1.0 has

Historical significance—early quartz mining location, later associated with the Queenstown Government Battery.

Scientific significance—well preserved quartz workings with possibility of habitation sites

SIGNIFICANCE RANKING: site listed on the Heritage Inventory

Assessor: David Bannear Date: 1999

PLACE NO. & NAME: 12.0 Union Mine
Caledonia Goldfield
HI No. H77922-0232

LOCATION: Diamond Creek
MUNICIPALITY: Nillumbik Shire
LAND STATUS: Crown Land

HISTORY:

June 1870: Union Co., Diamond Creek, sinking new shaft.¹

September 1870: Union Co. Diamond Creek, erected pumping machinery.²

March 1871: Pioneer and Union mines, Diamond Creek are both erecting additional machinery.³

June 1872: Union Co, Diamond Creek, reorganised.⁴

December 1875: Union Co., Diamond Creek, abandoned their enterprise and are removing machinery from mine.

1903: Old Union Co.'s mine (Diamond Creek) now in the hands of a syndicate endeavouring to float a new company with a view to further exploration.⁵

1904: Old Union mine was floated—mining began in March but ceased in November.⁶

1905: Union Co. erected a serviceable winding and pumping plant.⁷

1905: Union Co. working shaft on northern bank of Diamond Creek, Nilumbik. Southward from this shaft, which is the end of the workings in this direction, the Union line of reef has been traced for ¾ mile across the alluvial flat, and payable stone, from 2 to 3 ozs per ton, is said to have been found; but surface water was too heavy for the appliances used. Allendale mine, nearly a mile further south, is supposed to be on same line of reef. Whole course of reef appears to be on private property. Shaft now being worked is deepest on reef, 500ft—others not worked below 300ft. Several branch lines extensively worked.

The Union lode is of unusual character. It consists of a felspathic dyke, resembling the so-called diorites of Wood's Point and Walhalla, with a quartz vein on the hanging-wall side, and another on the foot-wall side. Close to the main shaft is an adit where earlier an earlier party is said to have obtained £60,000 worth of gold between surface and adit level on one shoot of stone. The last crushing recently taken from a stope below the tunnel gave a return of 542 oz from 520 tons. It is intended to sink the main shaft below 500-ft level and to work the mine on a more extended scale.⁸

1906: Union Co. replaced old corroded pumps, erected 10-head battery and high-pressure boiler.⁹

1907: Union mine erected new 10-head battery.¹⁰

1908: Work ceased at Union mine.¹¹

1909: Diamond Creek Co. sank its shaft to 450 feet and erected pumping plant—company now owns lease to Old Union Co. and the next sink will go below Union workings.¹²

DESCRIPTION AND INTERPRETATION:

Union Company Mine Two main periods of mining: 1870-75 and 1903-09.

¹ Mining Surveyors' Reports (St Andrews Division), June 1870.

² Mining Surveyors' Reports (St Andrews Division), September 1870.

³ Mining Surveyors' Reports (St Andrews Division), March 1871.

⁴ Mining Surveyors' Reports (St Andrews Division), June 1872.

⁵ Department of Mines Annual Report, 1903.

⁶ Department of Mines Annual Report, 1904.

⁷ Department of Mines Annual Report, 1905.

⁸ Dunn.

⁹ Department of Mines Annual Report, 1906.

¹⁰ Department of Mines Annual Report, 1907.

¹¹ Department of Mines Annual Report, 1908.

¹² Department of Mines Annual Report, 1909.

Mine—mullock heap, concrete engine and winding beds, timber mortar blocks for 10-head battery, and shaft site. Benched carting tracks above the battery

Cyanide works—large tailings pond and two uprooted steel agitating vats

Reef workings—stopes and shafts on the hill slope above the mine. Risk mitigation required.

INTEGRITY/CONDITION: Very over grown, mainly by blackberries. The site has some public risk issues – dangerous mine workings and contamination.

CULTURAL SIGNIFICANCE:

Site 4.0 has

Historical significance—the Union Company mine contains the oldest and the best preserved quartz mining relics in the Caledonia Goldfield

Scientific significance— mine contains a range of relics that belong to operations undertaken during the early twentieth century.

SIGNIFICANCE RANKING: Site listed on Heritage Inventory

Assessor: David Bannear Date: 1999