At a meeting of the Heritage Council of Victoria on 1 June 2017 it was determined that, in accordance with Section 42 of the *Heritage Act 1995*, the above place is of cultural heritage significance to the State of Victoria and warrants inclusion in the Victorian Heritage Register. This decision was reached having considered the assessment against the Heritage Council’s criteria, other information contained in the attached report and all submissions received in response to the Executive Director’s recommendation.

The Heritage Council endorses and adopts the attached report for the purposes of making its decision.

Professor Stuart Macintyre AO  
Chair, Heritage Council of Victoria
EXECUTIVE DIRECTOR RECOMMENDATION TO THE HERITAGE COUNCIL:

- That Cave Hill Limestone Quarry be included as a Heritage Place in the Victorian Heritage Register under the Heritage Act 1995 [Section 32 (1)(a)].

Tim Smith OAM
Executive Director, Heritage Victoria
Recommendation Date: 17 March 2017

This recommendation report has been issued by the Executive Director, Heritage Victoria under s.32 of the Heritage Act 1995. It has not been considered or endorsed by the Heritage Council of Victoria.
EXTENT OF NOMINATION

All of the place known as the Current Heritage Registration Area as shown in the Lilydale Quarry diagram by Reeds Consulting dated 4th December 2016.
RECOMMENDED REGISTRATION

All of the place shown hatched on Diagram 2366 encompassing part of Lot B on Plan of Subdivision 731531

The extent of registration of Cave Hill Limestone Quarry in the Victorian Heritage Register affects the whole place shown on Diagram 2366 including the land, all buildings and structures (including the exteriors and interiors), roads, trees, landscape elements and other features.

RATIONALE FOR EXTENT

The proposed extent covers all the heritage elements at the Cave Hill Limestone Quarry site including the quarry pit, limestone processing precinct and the farm precinct.
STATEMENT OF CULTURAL HERITAGE SIGNIFICANCE

WHAT IS SIGNIFICANT?
Cave Hill Limestone Quarry including the quarry pit, structures and plant for processing limestone and the production of lime-based products dating to the 1880s (tunnel and battery of pot kilns) and 1920s (no. 1 kiln, picking station, incline hoist, road metal plant and riveted steel hopper), rail siding and section of rail platform, remnants of the late-nineteenth century Cave Hill farm, specifically the dairy and bacon factories and silage store; eastern driveway; and memorial gateposts.

History Summary
Cave Hill Limestone Quarry is a limestone quarry and processing plant established in 1878 by David Mitchell (1829-1916). Mitchell also established a farm at the site, which operated from the 1880s to c. 1921. Mitchell was a Scottish-born building contractor who became a prominent figure in Victorian society, and was the father of Dame Nellie Melba. Mitchell’s building projects included Scots Church (1873-74) and the Royal Exhibition Building (1880). A successful entrepreneur, he was involved in many business ventures including the highly successful Cave Hill Limestone Quarry. During the nineteenth century the production of lime mortars and plasters were integral to construction. Lime production in Victoria started on a small scale in the 1830s, concentrated in coastal locations, notably Geelong. The Cave Hill Limestone Quarry represents the second stage of the lime industry in Victoria, characterised by access to rail transport and management by larger companies. David Mitchell invested in infrastructure such as steam powered cranes, a network of tramlines to transport timber, and a battery of pot kilns that enabled round-the-clock lime burning, despite the limitations of the intermittent technology. The Cave Hill estate also supported a large-scale farming operation. By 1894 dairy and meat-processing ‘factories’ were established at the site. In 1916, following Mitchell’s death, the ownership of Cave Hill passed to the David Mitchell Estate Trust. During the 1920s the plant and equipment continued to be remodelled and mechanised, and Cave Hill Limestone Quarry became one of the leading industrial plants in Australia. In June 1958 the business passed to the David Mitchell Estate Limited. The eastern two-thirds of the property were excised from the quarry site. Much of this land was subdivided into housing estates, and the Lilydale Lake was created. In November 2002, Unimin Australia (now Sibelco) purchased David Mitchell Limited, ending the Mitchell family association. In 2012, the company determined that the quarry would not be viable in the longer term.

Description Summary
The Cave Hill Limestone Quarry is located approximately 1km south-west of Lilydale town centre. It includes a quarry pit, the limestone processing area and a former mixed farm. The place retains a wide diversity of industrial and farm buildings, plant and elements dating from the late-1870s through to the early and latter twentieth century. The lime processing precinct includes multiple layers of infrastructure and plant dating from the late nineteenth century, and in some cases the operational relationships between significant elements is obscured. Significant topographical change occurred at the site between 1878 and 2015 relating to extraction and processing of lime.

Registered Aboriginal Party (RAP)
Cave Hill Limestone Quarry is located within the traditional language boundaries of the Woi wurrung, who made up one of the seven Kulin Nation language groups. There is no Registered Aboriginal Party (RAP) for the site. The Wurundjeri Tribe Land and Compensation Cultural Heritage Council Incorporated is the current applicant for RAP status for the activity area having lodged application for this on 24 August 2007.

Name: Cave Hill Limestone Quarry, Lilydale
Hermes Number: 85447
HOW IS IT SIGNIFICANT?

Cave Hill Limestone Quarry is of historical and technical and significance to the State of Victoria. The place satisfies the following criteria for inclusion in the Victorian Heritage Register.

Criterion A
Importance to the course, or pattern, of Victoria’s cultural history.

Criterion B
Possession of uncommon, rare or endangered aspects of Victoria’s cultural history.

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

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

Criterion H
Special association with the life or works of a person, or group of persons, of importance in Victoria’s history.

WHY IS IT SIGNIFICANT?

Cave Hill Limestone Quarry is significant at the State level for the following reasons:

Cave Hill Limestone Quarry is of historical significance as one of the primary sources of limestone in Victoria from its establishment in 1878 to its closure in 2015. Established by prominent entrepreneur David Mitchell, the place is associated with the second wave of lime burning and extraction technologies in Victoria which flourished as a consequence of the expansion of Victoria’s rail network. The place demonstrates three generations of lime processing plant and equipment, broadly dating from the 1880s, 1920s and 1960s. The surviving farm buildings, including the 1890s dairy and bacon factories and the silage store, provide evidence of Mitchell’s innovative farming enterprises at Cave Hill, with their emphasis on efficiency and waste minimisation, particularly in relation to dairying. [Criterion A]

Cave Hill Limestone Quarry is rare, being one of a small number of places in Victoria that demonstrates the large-scale production of lime. The tunnel to the north of the quarry pit contains a large and intact battery of pot kilns which enabled the continuous production of lime. This sizable collection of pot kilns is rare. The 1920s phase of plant remodelling included the no. 1 kiln which is one of the earliest continuous mixed-feed vertical shaft kilns in Australia. [Criterion B]

Cave Hill is of significance as a notable and early example of an extant quarry complex in Victoria. It demonstrates the principal characteristics of a place associated with the extraction, processing and transportation of raw minerals. The limestone products from Cave Hill Limestone Quarry made a vital contribution to Victoria’s building and construction industry from 1878 to the 1960s. (Criterion D)

Cave Hill Limestone Quarry is of technical significance for use of innovative technologies in lime processing which radically departed from traditional methods. These include the battery of pot kilns (commenced in 1880s) and advances implemented during a major redevelopment in the 1920s to designs by Gilbert McAuliffe Pty Ltd, consulting engineers of Melbourne, with bespoke equipment by Chas Ruwolt Pty Ltd.

Name: Cave Hill Limestone Quarry, Lilydale
Hermes Number: 85447
These include the no. 1 kiln, picking station, incline hoist, road metal plant, riveted steel hopper and conveyor. Cave Hill Limestone Quarry received accolades for its innovations and became recognised as one of the leading industrial plants in Australia. The 1920s upgrade transformed the appearance of the site, introducing the tall structures and elevated conveyors which still distinguish it. Three structures at the site – the Dairy Factory, silage store and concrete retaining walls to the Tunnel – demonstrate the early use of mass concrete. (Criterion F)

Cave Hill Limestone Quarry’s association with David Mitchell, one of Victoria’s most outstanding nineteenth century entrepreneurs and public figures, is of historical significance. The site provides evidence of Mitchell’s diverse and successful business interests, including the development of products for the construction industry, lime extraction and modern farming. Cave Hill Limestone Quarry has a comparatively high level of public recognition as a Mitchell property, more so than many other places with which he was associated during his long and distinguished career. (Criterion H)

In addition to the above, the place may be of significance for the following reasons:

Cave Hill Limestone Quarry is of local historical significance as a place of residence for many quarry workers, particularly during the depression. Many local workers enlisting for World War II listed Cave Hill as their place of address.

The landscape values of Cave Hill Limestone Quarry (including views into and out of the site) are of local significance. The following aspects of the quarry landscape are highly evocative for the local population - the chimneys, rising smoke, machinery noise and movement within the site.
RECOMMENDATION REASONS

REASONS FOR RECOMMENDING INCLUSION IN THE VICTORIAN HERITAGE REGISTER [s.34A(2)]

Following is the Executive Director’s assessment of the place against the tests set out in The Victorian Heritage Register Criteria and Thresholds Guidelines (2014).

CRITERION A

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

STEP 1: A BASIC TEST FOR SATISFYING CRITERION A

<table>
<thead>
<tr>
<th>The place/object has a CLEAR ASSOCIATION with an event, phase, period, process, function, movement, custom or way of life in Victoria’s cultural history.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plus</td>
</tr>
<tr>
<td>The association of the place/object to the event, phase, etc. IS EVIDENT in the physical fabric of the place/object and/or in documentary resources or oral history.</td>
</tr>
<tr>
<td>Plus</td>
</tr>
<tr>
<td>The EVENT, PHASE, etc is of HISTORICAL IMPORTANCE, having made a strong or influential contribution to Victoria.</td>
</tr>
</tbody>
</table>

Executive Director’s Response

Cave Hill Limestone Quarry has a clear association with the extraction and processing of limestone to produce lime for a range of purposes. This association is evident in the physical fabric of the place and in documentary sources. Lime has played a continuous and vital role in the construction industry in Victoria from the nineteenth century. The well-known product ‘Lilydale toppings’ was also produced at Cave Hill Limestone Quarry.

Cave Hill Farm has clear associations with agricultural development in Victoria. This association is evident in the remaining physical fabric and in documentary sources.

Criterion A is likely to be satisfied.

STEP 2: A BASIC TEST FOR DETERMINING STATE LEVEL SIGNIFICANCE FOR CRITERION A

| The place/object allows the clear association with the event, phase etc. of historical importance to be UNDERSTOOD BETTER THAN MOST OTHER PLACES OR OBJECTS IN VICTORIA WITH SUBSTANTIALLY THE SAME ASSOCIATION. |

Executive Director’s Response

Cave Hill Limestone Quarry was one of the primary sources of limestone in Victoria from its commencement in 1878 to the 1960s. Its association with limestone extraction and lime production in Victoria is highly significant, and clearly evident in the retention of physical fabric from the initial phase of processing, as well as from upgrades in the 1920s and 1960s. Three generations of lime processing are evident at Cave Hill Limestone Quarry, demonstrating the evolution of lime burning technologies from the nineteenth century to the 1960s.
Cave Hill Farm demonstrates the diverse and innovative farming operations and outputs undertaken at the place. Buildings from the 1890s such as the dairy and bacon factories and silage store provide evidence of innovative farming techniques.

Criterion A is likely to be satisfied at the State level.

**CRITERION B**

Possession of uncommon, rare or endangered aspects of Victoria’s cultural history.

**STEP 1: A BASIC TEST FOR SATISFYING CRITERION B**

| The place/object has a clear ASSOCIATION with an event, phase, period, process, function, movement, custom or way of life of importance in Victoria’s cultural history. |

Plus

| The association of the place/object to the event, phase, etc IS EVIDENT in the physical fabric of the place/object and/or in documentary resources or oral history. |

Plus

| The place/object is RARE OR UNCOMMON, being one of a small number of places/objects remaining that demonstrates the important event, phase etc. |

OR

| The place/object is RARE OR UNCOMMON, containing unusual features of note that were not widely replicated |

OR

| The existence of the class of place/object that demonstrates the important event, phase etc is ENDANGERED to the point of rarity due to threats and pressures on such places/objects. |

**Executive Director’s Response**

Cave Hill Limestone Quarry has clear associations with the extraction and processing of limestone to produce lime for a range of purposes. This association is clearly evident in the physical fabric of the place and in documentary sources. Cave Hill Limestone Quarry is rare, being one of a small number of places remaining that demonstrating the large-scale production of lime. The tunnel within Cave Hill Limestone Quarry contains a particularly large and intact battery of pot kilns which enabled the continuous production of lime. This sizable collection of pot kilns is rare.

Criterion B is likely to be satisfied.

**STEP 2: A BASIC TEST FOR DETERMINING STATE LEVEL SIGNIFICANCE FOR CRITERION B**

| The place/object is RARE, UNCOMMON OR ENDANGERED within Victoria. |

**Executive Director’s Response**

The Tunnel within Cave Hill Limestone Quarry is believed to be the most extensive battery of pot kilns in Victoria. This group of kilns indicates David Mitchell’s response to the limitations of intermittent burning technologies, and enabled round-the-clock production. The 1920s phase of plant remodelling included the no. 1 kiln which is one of the earliest continuous mixed-feed vertical shaft kilns in Australia. The sizable collection of pot kilns is rare.

Criterion B is likely to be satisfied at the State level.
CRITERION D
Importance in demonstrating the principal characteristics of a class of cultural places and objects.

STEP 1: A BASIC TEST FOR SATISFYING CRITERION D

The place/object is one of a CLASS of places/objects that has a clear ASSOCIATION with an event, phase, period, process, function, movement, important person(s), custom or way of life in Victoria’s history.

Plus
The EVENT, PHASE, etc is of HISTORICAL IMPORTANCE, having made a strong or influential contribution to Victoria.

Plus
The principal characteristics of the class are EVIDENT in the physical fabric of the place/object.

Executive Director’s Response
Cave Hill is of significance as a notable and early example of an extant quarry complex in Victoria. It demonstrates the principal characteristics of a place associated with the extraction, processing and transportation of limestone products. The quarry’s lime products have made a vital contribution to Victoria’s building and construction industry from 1878 to the 1960s. The place retains a large quarry pit, which demonstrates massive topographical change over time, and is located close to a processing plant which has road and rail access.

Criterion D is likely to be satisfied.

STEP 2: A BASIC TEST FOR DETERMINING STATE LEVEL SIGNIFICANCE FOR CRITERION D

The place/object is a NOTABLE EXAMPLE of the class in Victoria (refer to Reference Tool D).

Executive Director’s Response
Cave Hill Limestone Quarry is a notable example of a quarry complex in Victoria for the extraction and processing raw materials. The place displays the principal characteristics of the class in a way that allows the class to be easily understood, and displays characteristics of the class that remain relatively unchanged from the historically important periods of development.

Criterion D is likely to be satisfied at the State level.

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

STEP 1: A BASIC TEST FOR SATISFYING CRITERION F

The place/object contains PHYSICAL EVIDENCE that clearly demonstrates creative or technical ACHIEVEMENT for the time in which it was created.

Plus
The physical evidence demonstrates a HIGH DEGREE OF INTEGRITY.
Executive Director’s Response

Cave Hill Limestone Quarry is of technical significance for use of innovative technologies in lime processing which radically departed from traditional methods. These include the battery of pot kilns (commenced in 1880s) and advances implemented during a major redevelopment in the 1920s to designs by Gilbert McAuliffe Pty Ltd, consulting engineers of Melbourne, with bespoke equipment by Chas Ruwolt Pty Ltd. These include the no. 1 kiln, picking station, incline hoist, road metal plant, riveted steel hopper and conveyor. Cave Hill Limestone Quarry received accolades for its innovations and became recognised as one of the leading industrial plants in Australia. The 1920s upgrade transformed the appearance of the site, introducing the tall structures and elevated conveyors which still distinguish it. The 1920s works also included what is believed to be one of the earliest mixed-feed vertical shaft continuous kilns in Australia, as well as a hydration plant and specialised crushing equipment. While some of the components of the upgrade have been modified or largely demolished, sufficient evidence survives to satisfy this criterion. Three structures at the site – the Dairy Factory, silage store and concrete retaining walls to the Tunnel – demonstrate the early use of mass concrete.

Criterion F is likely to be satisfied.

STEP 2: A BASIC TEST FOR DETERMINING STATE LEVEL SIGNIFICANCE FOR CRITERION F

<table>
<thead>
<tr>
<th>The nature &amp;/or scale of the achievement is OF A HIGH DEGREE or ‘beyond the ordinary’ for the period in which it was undertaken as evidenced by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• critical acclaim of the place/object within the relevant creative or technological discipline as an outstanding example in Victoria; or</td>
</tr>
<tr>
<td>• wide acknowledgement of exceptional merit in Victoria in medium such as publications and print media; or</td>
</tr>
<tr>
<td>• recognition of the place/object as a breakthrough in terms of design, fabrication or construction techniques; or</td>
</tr>
<tr>
<td>• recognition of the place/object as a successful solution to a technical problem that extended the limits of existing technology; or</td>
</tr>
<tr>
<td>• recognition of the place/object as an outstanding example of the creative adaptation of available materials and technology of the period.</td>
</tr>
</tbody>
</table>

Executive Director’s Response

Cave Hill Limestone Quarry was publicly recognised for its technical innovations and advances in lime processing which radically departed from traditional methods. In particular the remodelling of the plant in the 1920s, to designs by Gilbert McAuliffe Pty Ltd, consulting engineers of Melbourne, with bespoke equipment manufactured by Chas Ruwolt Pty Ltd, Richmond was recognised as innovative. There was wide acknowledgement of exceptional merit, for example see Building and Construction magazine, 18 August 1925, p. 16.

Criterion F is likely to be satisfied at the State level.
CRITERION H

Special association with the life or works of a person, or group of persons, of importance in Victoria’s history.

STEP 1: A BASIC TEST FOR SATISFYING CRITERION H

The place/object has a DIRECT ASSOCIATION with a person or group of persons who have made a strong or influential CONTRIBUTION to the course of Victoria’s history.

Plus

The ASSOCIATION of the place/object to the person(s) IS EVIDENT in the physical fabric of the place/object and/or in documentary resources and/or oral history.

Plus

The ASSOCIATION:

• directly relates to ACHIEVEMENTS of the person(s) at, or relating to, the place/object; or
• relates to an enduring and/or close INTERACTION between the person(s) and the place/object.

Executive Director’s Response

Cave Hill Limestone Quarry has a direct association with David Mitchell, one of Victoria’s most outstanding nineteenth century entrepreneurs and public figures. The site provides evidence of Mitchell’s diverse and successful business interests, including the development of products for the construction industry, lime extraction and modern farming.

Criterion H is likely to be satisfied.

STEP 2: A BASIC TEST FOR DETERMINING STATE LEVEL SIGNIFICANCE FOR CRITERION H

The place/object allows the clear association with the person or group of persons to be READILY APPRECIATED BETTER THAN MOST OTHER PLACES OR OBJECTS IN VICTORIA.

Executive Director’s Response

Cave Hill Limestone Quarry has a comparatively high level of public recognition as a Mitchell property, more so than many other places with which he was associated during his long and distinguished career.

Criterion H is likely to be satisfied at the State level.
PROPOSED PERMIT POLICY

Preamble
The purpose of the Permit Policy is to assist when considering or making decisions regarding works to a registered place. It is recommended that any proposed works be discussed with an officer of Heritage Victoria prior to making a permit application. Discussing proposed works will assist in answering questions the owner may have and aid any decisions regarding works to the place.

The extent of registration of Cave Hill Limestone Quarry in the Victorian Heritage Register affects the whole place shown on Diagram 2366 including the land, all buildings (exteriors and interiors), roads, trees, landscape elements and other features. Under the Heritage Act 1995 a person must not remove or demolish, damage or despoil, develop or alter or excavate, relocate or disturb the position of any part of a registered place or object without approval. It is acknowledged, however, that alterations and other works may be required to keep places and objects in good repair and adapt them for use into the future.

If a person wishes to undertake works or activities in relation to a registered place or registered object, they must apply to the Executive Director, Heritage Victoria for a permit. The purpose of a permit is to enable appropriate change to a place and to effectively manage adverse impacts on the cultural heritage significance of a place as a consequence of change. If an owner is uncertain whether a heritage permit is required, it is recommended that Heritage Victoria be contacted.

Permits are required for anything which alters the place or object, unless a permit exemption is granted. Permit exemptions usually cover routine maintenance and upkeep issues faced by owners as well as minor works or works to the elements of the place or object that are not significant. They may include appropriate works that are specified in a conservation management plan. Permit exemptions can be granted at the time of registration (under s.42 of the Heritage Act) or after registration (under s.66 of the Heritage Act). It should be noted that the addition of new buildings to the registered place, as well as alterations to the interior and exterior of existing buildings requires a permit, unless a specific permit exemption is granted.

Conservation management plans
In 2015 Lovell Chen prepared ‘Cave Hill Quarry, Melba Avenue, Lilydale Conservation Management Plan’. This should be used to guide the management of the place.

Aboriginal cultural heritage
If any Aboriginal cultural heritage is discovered or exposed at any time it is necessary to immediately contact Aboriginal Victoria to ascertain requirements under the Aboriginal Heritage Act 2006.

Other approvals
Please be aware that approval from other authorities (such as local government) may be required to undertake works.

Archaeology
Ground disturbance may affect archaeological deposits at the place and, subject to the exemptions stated in this document, requires a permit.
Cultural heritage significance – Overview

The cultural heritage significance of Cave Hill Limestone Quarry lies in its demonstration of the principle characteristics of a place associated with the extraction and processing of raw minerals, in this case limestone. Evidence of three generations of lime processing plant survives at the site, including the most extensive known battery of nineteenth century pot kilns in Victoria. During the early twentieth century Cave Hill Limestone Quarry was recognised as one of the leading and innovative industrial plants in Australia. Cave Hill Limestone Quarry is significant for its association with David Mitchell, one of Victoria’s most outstanding nineteenth century entrepreneurs. The place also demonstrates many agricultural innovations.

The following buildings, elements and areas are of primary significance in the context of the place. A permit is required for most works or alterations. See Permit Exemptions section for specific permit exempt activities:

- The quarry pit (1878-2015)
- Eastern driveway (c. 1870s) including the Desert Ash and Poplar species at the entry
- The tunnel and battery of pot kilns (c. 1878 – interwar period)
- Disused pot kiln to the south of the Tunnel (1880s)
- Rail siding (1882), rail line and section of rail platform (undated)
- Dairy and Bacon factories (1890s)
- Silage store (1890s)
- No. 1 Kiln (1920s)
- Picking Station (1925)
- Incline hoist (1925)
- Road Metal Plant (1925) including the enclosed conveyor and shaker table
- Riveted steel hopper (1925)
- Memorial gateposts (1947)

The following buildings, elements and areas that are of contributory significance in the context of the place. A permit is required for most works or alterations. See Permit Exemptions section for specific permit exempt activities:

- Timber buildings within the farm precinct, including the ‘milking shed’ (late 19th century)
- Pedestrian walkway linking the upper and lower sections of the lime processing precinct (undated)
- Sports oval (c. 1930s)
- Western driveway (1940s) including the mixed plantation on the west driveway, including a mature Monterey cypress at its northern end
- The hydration plant (1925 and 1960s)
- No. 2, 3 and 4 kilns (1960s)
- Caretaker’s residence (1950s)
- Pavilion (1970s)

The following buildings, elements and areas are not of cultural heritage significance in the context of the place. Specific permit exemptions are provided for these items:

- Buildings and elements introduced in the later decades of the twentieth century, including: the office complex, stores, silos and workshops in the lime processing precinct
- Elevated conveyors, with the exception of the conveyor connecting the Picking Station and the Road Metal Plant
- The primary crusher, relocated to the site from the Snowy River Scheme in the 1970s
- Vegetation (other than the Desert Ash and Poplar species at the entry of the Eastern Driveway and the mixed plantation on the west driveway, including a mature Monterey cypress at its northern end).
PROPOSED PERMIT EXEMPTIONS (UNDER SECTION 42 OF THE HERITAGE ACT)

It should be noted that Permit Exemptions can be granted at the time of registration (under s.42(4) of the Heritage Act). Permit Exemptions can also be applied for and granted after registration (under s.66).

**General Condition 1**
All exempted alterations are to be planned and carried out in a manner which prevents damage to the fabric of the registered place or object.

**General Condition 2**
Should it become apparent during further inspection or the carrying out of works that original or previously hidden or inaccessible details of the place or object are revealed which relate to the significance of the place or object, then the exemption covering such works shall cease and Heritage Victoria shall be notified as soon as possible.

**General Condition 3**
All works should be informed by Conservation Management Plans prepared for the place. The Executive Director is not bound by any Conservation Management Plan, and permits still must be obtained for works suggested in any Conservation Management Plan.

**General Condition 4**
Nothing in this determination prevents the Heritage Council from amending or rescinding all or any of the permit exemptions.

**General Condition 5**
Nothing in this determination exempts owners or their agents from the responsibility to seek relevant planning or building permits from the relevant responsible authority, where applicable.

**Specific Permit Exemptions**

**Public safety and security**
- All works (including the erection of temporary security fencing, scaffolding, hoardings or surveillance systems) to prevent unauthorised access and/or secure public safety which are not fixed to elements of primary and contributory significance.

**Removal of lime residue**
- Removal of lime residue from all buildings and elements by non-destructive means.

**Maintenance**
- All works required to maintain and repair buildings and elements, including rectifying damage by people and animals.

**Demolition of buildings and features of low/no significance**
- Removal of buildings and elements that are not identified as being of primary or contributory significance.

**Landscape**
- All works to vegetation, except to the Desert Ash and Poplar species on the east entry driveway, and the mixed plantation on the west driveway, including a mature Monterey cypress at its northern end.
LOCAL GOVERNMENT AUTHORITY

Yarra Ranges Shire

HERITAGE LISTING INFORMATION

- Heritage Overlay:
  Yes, in part.
  HO57 – Old Cave Hill Butter, Cheese & Bacon Curing Factory, David Mitchell Estate Melba Ave., Lilydale
  and HO201 – Cave Hill Limestone Works, Melba Avenue, Lilydale
  See current HO Diagram on next page.

- Heritage Overlay Controls:
  HO57
  External Paint: Yes
  Internal Alteration: No
  Tree: Yes

  HO201
  External Paint: Yes
  Internal Alteration: Yes
  Tree: Yes

- Victorian Aboriginal Heritage Register:
  No

- Other listing:
  No

Mine rehabilitation responsibilities

Until late 2015, mining activity at the Lilydale Quarry was carried out under the control of the Victoria Department of Economic Development, Jobs Transport and Resources (DEDJTR). The primary licence for mining activity was Work Authority 199 (WA 199) issued by DEDJTR. In addition to operating procedures and obligations, WA 199 sets out the works to be undertaken at cessation of mining (Rehabilitation Plan) and DEDJTR holds financial security to ensure these works are appropriately completed. Sibelco as vendor and HBI Lilydale Pty Ltd as purchaser have an obligation to proceed with the works required in the Rehabilitation Plan. The Rehabilitation Plan includes extensive regrading and protection works to the crest of the quarry pit and allowing the pit to fill with water. HBI intend to fill the quarry pit utilising the material in the overburden dumps on the site. This work will require amendment to, or surrender of WA 199.
Current Heritage Overlay Extent

HO57 – Old Cave Hill Butter, Cheese & Bacon Curing Factory

HO201 – Cave Hill Limestone Works
Limestone, lime mortar and lime products

Limestone is a sedimentary rock composed of calcium carbonate (CaCO₃). It is formed from the compressed remains of corals, shells and skeletons, and is found in marine and non-marine environments. The Cave Hill deposit is an example of a marine environment, the land having previously been submerged under the sea. Limestone is typically found in bedding planes between other types of sedimentary rock, including clay and sandstone. This is the case at Cave Hill. Joints between the bedding planes mean that limestone formations are permeable and prone to processes of erosion, both on the surface and below ground. The dissolution of limestone layers means that cave formations are a common characteristic of limestone deposits (karst landscapes).

At Cave Hill, lime was originally processed for use in the construction industry, primarily as an ingredient in lime mortar. This is one of the oldest known types of mortar, dating back to the 4th century BC and widely used in Ancient Rome and Greece. Historically, limestone was extracted, broken down and sorted by hand. Mechanisation introduced from the early years of the twentieth century transformed the process. At its simplest, lime mortar is produced as follows:

- Limestone (calcium carbonate CaCO₃) is heated to a minimum of 812 degrees celsius, a process known as calcination. Lime/quicklime calcium oxide (CaO) is created and takes the form of white lumps. All carbon dioxide and water is removed during this process.
- Lime/quicklime is then converted into hydrated/slaked lime, a dry powder called calcium hydroxide (Ca(OH)₂), by adding water.
- Hydrated/slaked lime can then be mixed with sand (and/or other fine grained aggregate) and sufficient water to make a lime mortar.
- When the lime mortar has been laid, the hydrated/slaked lime in it slowly begins to react with carbon dioxide in the air to harden and form limestone (calcium carbonate CaCO₃).

Thus, the creation of lime mortar is a circular process which involves converting limestone (calcium carbonate CaCO₃) back into limestone (calcium carbonate CaCO₃).

Lime is a cheap alkaline material which has had multiple applications in the construction industry and in agriculture. It has been used in metallurgy, chemicals manufacture, sanitation, pulp and paper processing, ceramics and the petroleum industries. Other uses have included:

- Lime/quicklime can be spread directly on the ground to reduce acidity and improve soil structure.
- Lime/quicklime was used for the disposal of hanged bodies in gaols.
- Lime wash is hydrated/slaked lime of paint-like consistency, used as a wall covering and can be coloured by the use of pigments.

The Origins of Cave Hill Limestone Quarry

Lime burning and production activities in Victoria closely followed the arrival of settlers, because of the need for lime for building construction. From 1836 lime burning activities were concentrated on the Mornington Peninsula and at Geelong, often in small local operations such as those at Point Nepean, Sorrento, Rye, Queenscliff and Point Lonsdale. These were located along the coast close to ports and represent the first wave of lime producers in Victoria. The building boom that followed the 1850s Gold Rush increased the demand for lime. Imported lime was expensive, so local entrepreneurs seized on the
opportunity to create larger local enterprises. The Melbourne Lime Company was formed in 1860 as a major supplier, and by 1874 this was subsumed under the Melbourne Builders Lime and Cement Company which included among its members David Mitchell. The later nineteenth century also saw the expansion of Victoria’s railways which made the inland production of lime viable and cheaper to transport. Cave Hill Limestone Quarry was part of this second wave of lime production in Victoria characterised by larger business enterprises, an increasing use of new technologies and rail access.

Cave Hill Limestone Quarry is situated on land which was originally Crown Allotments 20 and 21 of the Parish of Mooroolbark. These allotments, along with the adjacent allotment 26, were acquired from the Crown by William Nicholson on 13 December 1855. Nicholson was a prosperous merchant and land owner and a member of both the Legislative Council and Legislative Assembly in the Victorian parliament during the 1850s and 1860s. He held the position of Premier briefly in 1855 and again in 1859-1860, and died in March 1865. Nicholson’s three allotments comprised approximately 514 hectares (1,270 acres). Nicholson’s property was known as Cave Hill Farm as early as 1864, a reference to the prominent escarpment and the numerous caves within it. It was leased to Allan Fisher and James Cashin for a period of 20 years from 1861. Cave Hill Farm appears to have operated as a mixed use farm run by Fisher, with a notice published in the Argus in 1864 reporting the sale of ‘horses, cows, farming and dairy utensils, pigs, hay, potatoes’. In 1871 and 1875, notices were published in the Argus advertising lease of the farm.

Between 1853 and 1869 the Government geological surveyor, Alfred Selwyn undertook the Geological Survey of Victoria, concluding his survey of the district east and north of Melbourne in 1856. Selwyn identified Cave Hill as having the ‘only limestone beds in the entire area,’ although the limestone was not visible from the surface. An 1856 plan of the Parish of Yering, immediately to the north of the Parish of Mooroolbark, noted a ‘Cave – 130 feet deep’, in the approximate location of the quarry. It has been suggested that the cave was used for recreational purposes. Though there is little documentary evidence to corroborate this, it appears likely it was used for such purposes. Reminiscences of ‘old Lillydale’ published in local newspapers in the interwar period did refer to the cave as a local attraction in this early period, with groups being windlassed down the cave.

Cave Hill Limestone Quarry is located in Lilydale, which was originally part of the parishes of Yering and Mooroolbark. Crown land sales of allotments in Yering began in 1852 and in Mooroolbark in 1855. Early uses of the land included cattle grazing and timber felling. The population of the district remained sparse into the 1850s, with only 40 people recorded in Mooroolbark and 179 in Yering in 1854. The township of Lillydale (originally known as Lillydale) was surveyed in 1859, and the first land sale of town lots was held the following year. Lillydale was the largest of the early farming townships in the Yarra Ranges district. By 1862 the town had a small number of stores and a hotel. With the discovery of gold at Wood’s Point north-east of Melbourne in the early 1860s, Lillydale became an important stop for traffic on the way to the goldfields, and a number of new businesses were opened up catering for the increased population. By the 1870s, agriculture in the area had diversified to include dairying, fruit growing and viticulture. The opening of the railway line from Hawthorn to Lilydale in 1882 was the next catalyst for further development in the township. The rail link to Melbourne was a boon for local businesses, bringing tourists and day-trippers in ‘search of health and pleasure’, and enabling local products to be quickly and more cheaply transported to the city markets.

**David Mitchell’s Acquisition of Cave Hill**

David Mitchell officially acquired the ‘freehold estate known as Cave Hill Farm’ from the estate of William Nicholson on 1 May 1878 for £8000. The property comprised the 1,280 acres (518 hectares) of allotments 20, 21 and 26. At the same time, Mitchell leased an additional 320 acres (130 hectares) from a Mr Twentyman, which included the site of Cashin’s Mill on Olinda Creek. Mitchell had leased property in the district from as early as 1868, and in 1875, became a councillor of the Shire of Lilydale, serving until 1883.

Name: Cave Hill Limestone Quarry, Lilydale
Hermes Number: 85447
He was voted president of the Shire of Lilydale in March 1883, after having served as vice president the previous year. As part of this acquisition, an early termination of the leases on the land was agreed to. Interestingly, the net annual value of the property, as recorded in the rate books, did not increase substantially after the establishment of the quarry, being £310 in 1878 and £365 in 1881. After the construction of the railway, and the resultant increase in production and higher land values in Lilydale, the net annual value of the property increased to £600 in 1885 and to £1,016 in 1892.

David Mitchell was born on 16 February 1829 in Forfarshire, Scotland and after completing an apprenticeship to master mason, James Watson, Mitchell sailed to Melbourne in 1852. He established himself as a building contractor and built a shanty on land in Richmond. With business in Melbourne poor due to the gold rush, he travelled to Sandhurst (Bendigo), but returned to Richmond the following year. In 1856 he tendered successfully for the masonry work for St Patrick’s Cathedral, Eastern Hill, and in the same year he married Isabella, daughter of James Dow. They lived at Doonside, a self-built house at Mitchell’s premises on Burnley Street, Richmond. The couple had ten children, including Helen Porter Mitchell (Dame Nellie Melba), who was born at Richmond on 19 May 1861.

From the 1860s to the end of the nineteenth century, David Mitchell was one of Victoria’s leading building contractors. The Menzies Hotel on William Street (completed 1857); the Paterson, Laing & Bruce warehouse, Flinders Lane (1871); Scots Church, Collins Street (1874, VHR H0005); the Royal Exhibition Building (1880, VHR H1501); the Masonic Hall, Collins Street (1888); and the Equitable Insurance Building (1893) were among the more prestigious of the many Melbourne buildings completed by his company during this period. By the late 1870s, he was a prominent and well-known member of the Melbourne community. In the late-1860s, Mitchell had acquired property at Steel’s Flats, between Lilydale and Healesville. Mitchell later became a councillor of the Shire of Lilydale, serving from 1875 until 1883. During this period he also acquired the Colbinabbin Station near Rushworth (VHR H1730) and properties near Camperdown (Jancourt) and Mansfield (Dueran).

As well as his career as a contractor, Mitchell had a range of other business and property interests. In 1859, he established a factory for steam-made and pressed bricks at his Richmond works. He became a partner in the Darley Firebrick works at Bacchus Marsh in 1898, and the major shareholder in 1902. In 1890 Mitchell commenced production of plaster ('Adamant') and Portland cement at his Burnley works, using materials from Cave Hill, and in the late 1890s he went into business with engineer John Monash. Since 1894 Monash had been in the engineering and patent agents partnership Monash & Anderson, who went on to pioneering the use of reinforced concrete in Victoria. After the firm Monash & Anderson suffered financially as the result of a lengthy legal battle, David Mitchell offered financial support by providing capital to establish the Monier Pipe Co Ltd of Victoria (established 1901) and also offered land for the venture next to his Burnley cement works on condition that his products were used. This arrangement was beneficial for both parties: by 1913 Monash was worth over £30,000, and Mitchell benefitted from linking his Richmond cement factory and the neighbouring reinforced concrete pipe factory.

During the 1870s David Mitchell became a founding member and shareholder of the Melbourne Builders’ Lime and Cement Company (MBLCC), which aimed to break the monopoly of the Geelong and Peninsula lime producers. MBLCC was associated with the second wave of lime production in Victoria, characterised by industrial-scale production replacing small-scale owner-operators. In 1886, as the Commissioner for Australia to the Indian and Colonial Exhibition, Mitchell travelled to London. He retired from the building contracting business in 1899, from which point he concentrated on other interests. Although he spent much time in Lilydale, his primary residence was in Richmond. In later years, Mitchell’s individual achievements were somewhat eclipsed by the celebrity status of his daughter, opera singer Dame Nellie Melba; from the early twentieth century, newspaper reports would often refer to him as ‘the father of Madame Melba’.
David Mitchell died in March 1916, aged 87. He had been actively involved in the running of Cave Hill until only a few days before his death.


HISTORY OF THE PLACE

Development of Cave Hill Limestone Quarry

The quarries at Cave Hill opened on 2 April 1878. Challenges confronting David Mitchell included 1) how to burn lime at a site without natural cliff faces; 2) how to optimise the lime resource with the limitations of contemporary burning technologies (pot kilns); and 3) how to transport the products off-site in the absence of a rail line. From the 1880s, Mitchell cut directly into the north end of the limestone creating hillsides into which pot kilns could be constructed. The length of the cutting enabled multiple kilns to be constructed. By 1882 the quarry was producing 1,000 bags per week, and in 1887, there were 70 men working at the quarry, with kilns operating ‘night and day’ during the week and two steam cranes soon to be installed. Mitchell further expanded his operations, replacing the ‘slow and expensive’ horses and drays used to transport the limestone from the quarry to the kiln, with a system of water wheels and pulleys. By 1888 five kilns were recorded at Cave Hill and lime output increased dramatically. An 1880s site plan shows a two miles long horse-drawn tramway at the north end of the cutting, to transport timber into the site for the lime kilns. Tram lines were a major feature of the site until the later decades of the twentieth century. The extent of the Cave Hill lime workings can be seen below in a pre-1900s photograph showing the quarry, rail siding tunnel, kilns and associated structures.
At this time, lime was transported to Melbourne by a team of 60 horses. In November 1878 – the same year that Mitchell purchased Cave Hill – the government passed the *Railway Construction Bill* which confirmed a new rail route from Hawthorn to Lilydale. It appears likely that, due to his considerable influence and standing in the district at this time, Mitchell was able to influence both the route of the line and the subsequent construction of a railway siding to his quarry. A c.1880 plan of the alignment of the railway shows the line originally extending around the east side of Cave Hill. The line was subsequently redrawn around the west of the quarry, with a siding at the north, a route more suited to Mitchell’s requirements. This siding was under construction by April 1882, and the railway line itself was opened in December 1882.

By 1887 a homestead had been constructed for an onsite manager of the quarrying and farming operations (demolished in the 1960s). Such was Mitchell’s confidence in the commercial potential of Cave Hill, he is believed to have considered forming Cave Hill into a public company from as early as 1888 (but this did not occur until after his death). With improvements in the production of Portland cement throughout the nineteenth century, cement had begun to replace lime mortar as the most common construction material by the 1880s. In response, Mitchell began selling his Emu brand of cement from Cave Hill in 1891, described in one editorial as ‘equal to the best Portland [cement]’.

In the early twentieth century, Mitchell expanded his landholding, and constructed what became an extensive network of tramway or light rail lines, to transport the timber from land east of the site to the quarry. At its most extensive, approximately 16 kilometres of tram line had been constructed as part of the network. The tramway ran east from the quarry to Olinda Creek, and then south and east towards the present day Silvan Reservoir. In 1903, Mitchell purchased two redundant steam tram engines from the Bendigo Tramways. The tramway operated until 1934, when the transport of timber by much improved local roads had become viable. During the 1890s steam was used to power much of the site in the quarries, the ice-making, the milking, the butter and cheese making and in cleansing the works. Mitchell constructed
a water race from the Olinda Creek, two miles from the quarry. This water was returned to the creek through a brick and cement tunnel, and also supplied the managers’ residence and farming operations. In 1892, the Shire of Lillydale rated the Cave Hill Quarry at the significant net annual value of £1,016.

In the 1920s, the Estate undertook a significant program of works to upgrade the machinery and plant at the quarry. Lime hydration was facilitated by a new hydration plant in the mid-1920s (which was replaced in the 1960s). This era saw the production of one of the most enduring products from Cave Hill ‘Limil’, a hydrated lime with a breadth of building, garden and agricultural applications. Cave Hill also became well known for its toppings (‘Lilydale toppings’), which are a limestone by-product. Lime of insufficient purity was also use by Cave Hill to produce aggregates for road building. The David Mitchell Estate Ltd also worked with the Department of Agriculture to develop products that could assist primary producers in countering Victoria’s highly acidic soils.

Farming operations
As well as a profitable quarry, the Cave Hill estate supported a large scale farming operation, which commenced in the mid-1880s. Dairying operations commenced at Cave Hill in 1885, with particular emphasis being given to David Mitchell’s herd of pure bred Holstein (Fresian) cattle, well suited to high quality dairy products. In 1888 the dairy operated the colony’s first mechanical milking device. Mitchell diversified the farming operations to develop butter and bacon in the early 1890s. This may have been a response to the economic depression of the 1890s which had a significant impact on the construction industry. From 1891, Mitchell began to explore the prospect of establishing a butter factory at Cave Hill. Canvassing local dairy farmers at public meetings held in Lilydale and Yarra Glen, Mitchell sought to guarantee supply from local farmers, who appear to have been willing to change their associations away from the Melbourne buyers. The site for the new butter factory, to the east of the homestead, was decided in November 1891. During the 1890s factory supplied local butter markets and Cave Hill butter was also shipped to London for sale in England.

From early 1893, cheese production commenced at Cave Hill, and was quickly established as a profitable enterprise. The Cave Hill Mitchell dairy was the first farm utilised by the Pure Milk and Dairy Company Ltd for the production of pasteurised milk in Victoria. Mitchell, ‘placed his refrigerating plant and premises at [the company’s] disposal for experiments,’ and the treatment of the milk ‘by the best approved scientific method, free from chemicals’ was deemed a resounding success by witnesses of the medical profession, veterinary experts and scientists in December 1897. The production of pasteurised milk saw the suspension of cheese making, which was resumed in 1898 after the demand for the Pure Milk and Dairy company’s products became too great for the Cave Hill facilities. In 1893 Mitchell constructed a bacon factory building to the north of the butter factory. It comprised a ‘cutting down room’, which was provided with a ‘patent floor of cement and granite chips’, and a double-storey smoking room with a tower 40 feet tall, and a
cooling room and drying room. Each room of the factory could process hundreds of sides of bacon at a time. In adjacent buildings in the farm complex, sheep and cattle were killed to supply local butchers, and animal bones were steamed and ground to produce soil fertiliser. The products of the factory were sold in butcher shops across Melbourne, and interstate. Bacon continued to be produced into the early part of the twentieth century.

By the early 1900s, the farm complex had expanded eastwards. A 1907 panoramic photograph of the Cave Hill Estate indicates a densely developed collection of buildings around the butter and bacon factories. A soap and candle factory was also established at the property in c.1900. The Cave Hill farming operations were of a scale not common in the area, and the associated buildings were of a picturesque style atypical for agricultural buildings. The farming operations demonstrate Mitchell’s emphasis on efficient and economic industrial production, and avoidance of waste. The leftovers from the butchering were in turn boiled down and the fat used in soap. Following Mitchell’s death in 1916, the dairy and bacon operations had ceased operation by c.1921.

In the early twentieth century, employment at the estate peaked, at approximately 200, when the farming factories were fully operational, as well as the quarry. In the mid-1930s, Cave Hill management established the Cave Hill Social Club. A cricket oval was established by 1936 on land now situated between the two entrance drives, with the club hosting (and winning) matches in their debut season. Management also temporarily made available a ‘large room’, in which the workers ‘spent many happy hours at billiards, cards and harmony’. After World War Two at the entrance to the second roadway, memorial gates were erected with honour boards on each pillar acknowledging the Cave Hill workers who had fought in the war. The memorial gates were officially opened by Mrs C J Mitchell, on 16 November 1947.

**Dame Nellie Melba**

The most high-profile social event at the quarry was the triumphant return by David Mitchell’s daughter Dame Nellie Melba to Australia, and to her childhood home of Lilydale, in 1902. Melba had left Melbourne for Paris in 1886, and after years spent in Europe and North America, her singing career had made her an international celebrity. Melba had ‘kindly consented’ to a request by the estate’s employees to welcome her to Cave Hill. An arch was erected at the entrance of the estate, which was decorated with flags and the words ‘Dame’, ‘Melba’ and ‘Employees Greet You’. The ‘spacious enclosure’ surrounding the residence of her brother, Charlie, was turned into a foliaged private park, and a platform erected for the reception of Melba. After an address by quarry manager Fuller, expressing ‘deep feelings of pride and pleasurable satisfaction at being permitted the honour of welcoming the ‘gifted daughter’ of Lilydale, David Mitchell spoke on her behalf. He noted that she appreciated the affection and kindness of those attending, and explained that she had taken a ‘deep interest’ in the welfare of the employees of Cave Hill.
After David Mitchell’s Death

David Mitchell died in 1916, and ownership of Cave Hill and the Burnley cement works passed to his seven children Francis, Charles, Ernest, Helen (Nellie), Ann, Isabella and Dora as tenants in common, with Francis and Edward Albert Newbigin as trustees. Cave Hill formed a significant part of Mitchell’s estate, which also included landholdings in the parishes of Mooroolbark, Yering, Gruyere, Jika Jika with a capital value of £123,678. In 1919, the trustees sold 450 acres of the Cave Hill estate, which had been subdivided into 64 allotments. This significantly reduced the landholding. Further trustees’ realising auctions were held in the mid-1920s for land to the south and east of the quarry, again reducing the landholding.

In 1948, the new State highway between Camberwell and Mansfield, to be known as the Maroondah Highway, was declared. At this time, reliance on rail for the main transportation of quarry products began to give way to road transport, possibly due to improvements made to the highway. It was in this period that access to the site also changed, and the twin entranceways were established, providing more direct road access between the quarry and the highway. As can be seen on a c.1940s plan of Cave Hill, by this time many of the farm buildings had been removed, and an overburden dump was situated to the north of the quarry. By 1952, a caretaker’s residence had been constructed and by 1972 the homestead had been demolished.

In 1958, after the death of the last of David Mitchell’s children, the trustee company was no longer bound by David Mitchell’s will. In June 1958, a circular was distributed to the estate’s business contacts announcing that from 1 July the newly formed ‘David Mitchell Estate Limited’ company would be operational. In October 1958, the eastern two-thirds of the property were excised from the quarry site, giving the southern part of the property its curved boundary. Much of this land was subdivided into housing estates, and the Lillydale Lake was created on land which was formerly part of William Nicholson’s Crown allotment 26. In 1959, a survey was undertaken which concluded there was sufficient lime for another 140 years at the present rate of production. The report noted that another 70 years supply also existed on the western side of the railway line. It was decided to invest in new quarry crushing and conveying equipment and approximately £130,000 was spent on new machinery between 1959 and 1962. In 1976, all three kilns were converted from oil to natural gas, and in 1977, a larger crusher was installed at the top of the quarry replacing the earlier crusher on the west face.

In November 2002, Unimin Australia purchased David Mitchell Limited, ‘the nation’s leading independent producer of limestone products’, ending the Mitchell family association with the Cave Hill quarry site, after nearly 125 years. The Unimin group of companies was based in the United States, controlled by SCR Sibelco, a company started in Belgium in 1872. The company established operations in Australia in 2000, and in 2011, the company changed its name to Sibelco. In 2012, the company determined that the quarry would not be viable in the longer term. Sibelco and the Victorian Government urban renewal authority, Places Victoria, entered into an agreement to master plan the future development of the site.

Artistic representations of Cave Hill

The striking landscape of Cave Hill quarry has been the subject of paintings and artistic representations from as early as 1889, and continuing into the late twentieth century. The scenic qualities of the lime processing complex sited within a pastoral landscape, appears to have been a popular artistic subject. Artists including Arthur Streeton, John Perceval and Fred Williams painted from a vantage point to the north, setting the buildings against the quarry face and the hills behind.
Known examples of paintings of Cave Hill include:

- *A Victorian Dale*, James Alfred Turner, c. 1889;
- *The Lime Kiln* (also known as *Mitchell’s Lime Quarry*), Arthur Streeton, 1935
- *View of Cave Hill*, James Peter Quinn, c. late 1930s;
- *The Quarry, Lilydale*, Ernest Buckmaster, undated;
- *Lilydale Lime Quarry*, Ivy Burton Fox, c. late 1950s, Fox also depicted the site in two ink drawings;
- *Lime Quarry, Lilydale*, John Perceval, 1956;
- *Lilydale Landscape with Blue Train*, Fred Williams, 1974, Williams also depicted Cave Hill in *Lilydale Triptych I*, 1974 and *Lilydale Triptych II: Cave Hill*, 1974;
- *Cave Hill*, Jennifer Paull, 1985;
- *Butter and Bacon Factories and Cave Hill Quarry*, Dora Wilson, undated.

*The Lime Kiln* (also known as *Mitchell’s Lime Quarry*), Arthur Streeton, 1935

**CONSTRUCTION DETAILS**

Construction started: 1878

**VICTORIAN HISTORICAL THEMES**

04 Transforming and managing land and natural resources
   4.6 Exploiting other mineral, forest and water resources

05 Building Victoria’s industries and workforce
   5.1 Processing raw materials
   5.2 Developing a manufacturing capacity

**PHYSICAL DESCRIPTION**

The Cave Hill Limestone Quarry is located approximately 40 kilometres east of Melbourne and 1km south-west of Lilydale town centre. The site is bordered to the west by Mooroolbark Road, to the north-west by Maroondah Highway, to the east by modern industrial development and Swinburne University’s former
Lilydale campus, and to the south and south-east by modern residential development. Hull Road forms the site boundary to the south-west. Access to the site is from Melba Avenue to the north. The Lilydale-Melbourne rail line bisects the site north-south. The Cave Hill Quarry includes the quarry pit, the limestone processing area and a former mixed farm. The place retains a wide diversity of industrial and farm buildings, plant and elements dating from the late-1870s through to the early and latter twentieth century. The lime processing precinct includes multiple layers of infrastructure and plant dating from the late nineteenth century, and in some cases the operational relationships between significant elements is obscured. Significant topographical change occurred at the site between 1878 and 2015 relating to extraction and processing of lime.

There are three main precincts at the Cave Hill Limestone Quarry:
1. The Quarry precinct
2. Limestone processing precinct
3. Farm precinct
4. Arrivals precinct.

**Quarry precinct**

**Quarry pit**
The form of the quarry pit has been shaped by evolving methods of mining and extraction. The upper north face of the quarry demonstrates the irregular forms of early extraction while other faces demonstrate the more regular stepped forms of contemporary blasting techniques. A haul road situated around the eastern side of the quarry provides access to the quarry floor. The north face of the quarry is vegetated while the other faces are generally free of vegetation.

**Limestone processing precinct**
The lime processing precinct contains the northern face of the quarry and a variety of structures that have been added to the site since commencement of quarry operations in 1878. It is an industrial landscape that comprises multiple layers of development and reflects three periods:
1. 1878-interwar
   • tunnel
   • encircling battery of pot kilns
   • exposed pot kiln to south of tunnel

2. Interwar upgrade
   • picking station
   • road metal plant
   • hydration plant and conveyor network
   • automatic vertical shaft no 1 kiln
   • riveted steel hopper
   • incline hoist

3. Post-war upgrade
   • 3 vertical shaft continuous West’s kilns Nos 2, 3 & 4

Tunnel & pot kilns
Directly north of the quarry is a tunnel of approximately 60 metres in length which is part cutting and part brick-lined tunnel. The brick arched tunnel portion at the south end has walls of rough hewn coursed stonework and is approximately 20 metres in length. To the north of this is a cutting with massive concrete retaining walls and integrated piers and a modern concrete floor. Piers carry steel I-beam props that span the cutting space. Sawn-off ends of early timber props and early I-beams remain in the sides of the cutting. Within the cutting there are five chambers each containing a pot kiln – three to the west and two to the east. Each kiln retains its draw hole, and some remain sealed with metal bars and brickwork.

Picking Station & Road Metal Plant (1920s)
These are multi-level buildings constructed of slip-form reinforced concrete panels set in expressed reinforced concrete frames. Their simple, cubic, unadorned forms and the conveyors that connect them and the site in general, is expressive of their function. They are components of a broader industrial operation. Located on the highest part of the site overlooking the quarry, the picking station is four stories high and rectangular in plan. The upper two levels, which originally housed the crushers, extend approximately half the length of the lower two levels. Raw materials were transported from the quarry floor via the incline hoist to the picking station where different stone sizes were fed into the crushers and passed to a screening floor which sorted by size to ground level bins which collected waste, road metal and lime for burning. Lime for burning was transported to the kilns and road metal to the road metal plant. Most of the picking station equipment and plant has been replaced, a large opening has been made in the top level floors and a new structural frame has been introduced to the base of the building. The road metal plant (used 1925 to 2003) is situated on lower ground to the north of the picking station. It is a four level structure, rectangular in plan. The upper two levels extend approximately half the length of the lower two levels. It accommodates crushers, an original vibrating screen and ground level bins to receive the processed stone. Internal structural steel supports have been introduced in recent years. Functional openings are present in both structures and both buildings have undercrofts for ease of managing processed products. Steel stairs are fixed to the sides of the buildings and there are some metal ladders at the picking station. The buildings are connected by an enclosed conveyor (1925).

Hydration Plant and Conveyor Network
The present plant was constructed in the 1960s on the site of the original 1925 hydration plant building. It incorporates some sections of the original building, including part of the slip-form reinforced concrete panels and the basement, however it is substantially a new building, sheathed in corrugated sheet steel. The
plant contains various volumes which relate to the hydration process including a large steel chamber at the upper level.

**Automatic Vertical Shaft no 1 kiln**

Built in the 1920s, this kiln operated from 1936 until 1964 when it was superseded by two oil-fired ‘West’s’ kilns. It is located to the south of the tunnel and comprises a broad base built of slip-form concrete, and a narrower upper section built of brick and wrapped in steel bands. The upper section of the kiln was originally tapered and built of concrete and a conveyor has been removed. A walkway wraps around the shaft. A discharge hopper is extant at the base of the kiln.

**Riveted Steel Hopper**

The riveted steel hopper was part of the 1920s upgrade. The structure is raised on an open-sided steel frame. As built, a conveyor extended from the rail head at ground level to the top of the hopper. Coal was loaded onto the conveyor, and raised to the hopper. Another conveyor extended from the base of the hopper to the top of No. 1 Kiln, which was loaded with coal for lime burning. The conveyors have been removed, and the hopper is disused.

**Incline Hoist**

The incline hoist was part of the 1920s upgrade but was disused by the end of the 1950s by which time the depth of the quarry floor had increased appreciably. It comprises a steel truss frame with timber sleepers and twin tracks laid on top and the central section rests on concrete footings built into the quarry face.

**Vertical Shaft Continuous West’s Kilns Nos 2, 3 & 4**

Two oil-fired vertical shaft continuous ‘West’s’ kilns were commissioned in 1964 and a third in 1967 (referred to as kilns 2, 3 & 4). These were converted to natural gas firing in 1976. These top loaded kilns comprise a hopper at the top, a pre-heating zone, burning zone and a base hopper. They have enclosed, corrugated sheet metal portions at the top (loading zone) and near their bases (control rooms).

**Farm precinct**

The farm precinct is situated to the north-east of the site and only a small number of buildings remain. These include:
- Dairy factory, bacon factory and adjacent timber sheds
- Concrete silage store and adjacent timber shed

Footings and slabs of former buildings are evident and a dam is situated in the north-east corner of the precinct. Located to the west of the precinct is a two storey rendered building of massed concrete with walls approximately 500mm thick, a corrugated metal pitched roof, decorative bargeboards and a tower element with pyramidal roof and large arched openings. This former dairy building has more recently been used as offices. To the north of this building are two parallel unrendered brick buildings with pitched corrugated metal roofs. One building, a former two-chamber smoking room, retains two square roof vents. Formerly a bacon factory, this building has also been converted for office use. A collection of timber buildings are situated to the north of the bacon factory. A rectangular silage store is located to the east of the farm precinct, adjacent to the east driveway. It is built of formed concrete approximately 300mm thick. The lower part of the structure has been rendered both internally and externally. The structure is unroofed and the east wall of the two-chamber structure has been demolished. A timber shed is located north of the silage store.

**Arrivals precinct**

The arrivals precinct includes two driveways which extend from the same entrance point close to the intersection of Melba Avenue with the railway line. An open grassed area lies between these driveways and...
open pasture to the east of the east driveway. World War II memorial gates and gateposts are located at the north end of the west driveway. The two gate pillars are clad with stone and each has a plaque fixed to its north face. The letters ‘DME’ are set into the wrought iron gates. A caretaker’s residence is located to the south-east of the arrivals precinct.

OBJECTS AND INTERIORS

N/A

LANDSCAPES, TREES & GARDENS

There is little formal landscaping at the site. The historic uses of the lime processing and farm precincts is demonstrated in the respective landscape characters of the two areas, with the former a harsh, denuded, industrial setting, and the latter comparatively lush. The east entry driveway is lined with Desert Ash (west side) and Poplar species (east). These plantings are of relatively recent origin (c. 1960s). The west driveway has a mixed plantation, including a mature Monterey cypress at its northern end. Historically there was a treed wind row (pines) to the south of the farm.

ARCHAEOLOGY

This place is not of archaeological significance at the State Level. The place contains only very limited opportunities for the survival of archaeological materials associated with its nineteenth century and early twentieth development and occupation. The expansion of the quarry and associated works areas has led to incremental disturbance and removal of the locations of the majority of earlier structures. Most significantly the location of the main homestead of the David Mitchell Estate was destroyed through the construction of a haul road for the removal of spoil. It is also noted that the locations of the majority of the earliest structures associated with the quarry have been subsumed within the current processing areas of the study area. As a consequence the potential for archaeological remains associated with these features is essentially nil. Only one principal area of limited archaeological potential is present at the place comprising an area of open space located to the north and east of the location of the former main house. There is little likelihood that the place contains physical evidence that is not already well documented or readily available from other sources.

INTEGRITY/INTACTNESS

Recognising that the place has been in continuous operation since its establishment, successive upgrades and improvements have occurred at the site to maintain a functional operating environment. Despite this, the key phases of the sites historical development are clearly evident in the fabric of the place and key elements of significance have been retained and are broadly intact. [August 2016]

CONDITION

The place is generally in fair to good condition. Some specific elements are in poor condition (for example, the Incline Hoist and the Milking Shed). [August 2016]

COMPARISONS

Cave Hill Limestone Quarry has few direct comparisons. It is rare as a complex that is able to demonstrate a complete limestone quarrying history, as well as a large-scale farming industry.

Quarrying activity that demonstrate post-quarrying production activity in the VHR

- Former Standard Brickworks, Box Hill (VHR H0720)
- Bendigo Pottery, Epsom (VHR H0674)
- Former Hoffman Brickworks, Brunswick (VHR H0703)
**Former Standard Brick Works, Box Hill (VHR H0703)**

The Former Standard Brick Works, Box Hill comprises a rare and unusually intact brickmaking plant of the early twentieth century. The distinctive form and internal fittings of the clay mill building provide evidence of superseded brickmaking processes and ancillary trades, in particular the tramway system for hauling clay and the blacksmith's shop. The grinding pans and brick press machinery on site exhibit the same fundamental technology which was introduced with the industrialization of brickmaking in Victoria in the latter half of the nineteenth century. The place contains one of the last operative Hoffman patent brickmaking kilns in Victoria.

![Former Standard Brick Works, Box Hill (VHR H0703)](image)

**Bendigo Pottery, Epsom (VHR H0674)**

The Bendigo Pottery is of technical significance for its collection of traditional coal and wood fired kilns and for demonstrating the importance of horse drawn transport to the industrial processes and transportation associated with the pottery's works. It is of architectural significance for its collection of industrial buildings which provide context to the kilns and illustrate the ongoing and changing nature of the works and assist in describing the various pottery production processes. Of particular note are the north facing sawtooth roofs over circular kilns. These appear to have been constructed in this manner to exploit the northern sun to assist with the drying of pottery on drying platforms before being fired.

![A pottery kiln at the Bendigo Pottery, Epsom (VHR H0674)](image)
The Former Hoffman Brickworks, Brunswick (VHR H0703)
The Former Hoffman Brickworks is historically significant for its association with the development of Melbourne’s brickmaking industry in the nineteenth century and the development of the city and suburbs in the twentieth century. It is a rare surviving industrial site which retains a brick press building, with associated machinery, an engine house and two Hoffman kilns and three chimneys. The kilns were the last of their type to operate in metropolitan Melbourne. Two remaining Hoffman kilns and the three chimneys at the Former Hoffman Brickworks, Brunswick are architecturally significant as rare remaining examples of these innovative kilns, designed with elliptical plans, battered brick bases and associated chimneys of circular tapering form.

Gold mining and processing sites in the VHR
• Central Deborah Gold Mine, Bendigo (VHR H1841)
• Archbold Gold Treatment Works, Chewton (VHR H1351)

Central Deborah Gold Mine, Bendigo (VHR H1841)
The Central Deborah Gold Mine, Bendigo was established in 1939 and boasted a small timber poppet head, boiler steam winch, compressor, blacksmith shop, store, change rooms, and offices. Between 1945-46 the company upgraded the mine with extensions to sheds and the installation of new steam machinery, electric air compressor, steel poppet head, and ore bins. Much of the original equipment can be seen on the site today. The Central Deborah Company Gold Mine provides Bendigo and the State with one of its most tangible and important links to mid twentieth century quartz mining. It is of outstanding historical significance as the last intact and working example of the 5,500 quartz mines that won Bendigo widespread fame as a gold mining centre.
Archbold Gold Treatment Works, Chewton (VHR H1351)
The Archbold (Chewton) Gold Treatment Works is of crucial historical importance as the sole remaining early gold assay works associated with the significant metallurgical process of chlorination of gold bearing ore. It is a unique, late nineteenth century assay works which demonstrates an important local adaptation of the introduced metallurgical process of chlorination of gold bearing ore. The site is also important as possessing a range of features and artefacts which could provide key insights into the evolution of gold extraction processes in Victoria from the mid 1880s to the 1950s.

Archbold Gold Treatment Works, Chewton (VHR H1351)

Archaeological sites associated with lime and cement works in the VHR
These examples demonstrate early phases of lime production in Victoria:
- Walkerville Lime Kilns, Walkerville South (VHR H2043)
- Sullivan’s Lime Kiln, Rye (VHR H1930)
- Stasinowsky’s Lime Kiln, Rainbow (VHR H1959)
- Duffy’s Lime Kiln, Portsea (VHR H1931)
- Bell Point Lime Kiln, Tarwin Lower (VHR H2068)
- Lime Kiln Complex, South Geelong (VHR H1288)
- Ilyuka Lime Kiln / Bathing Box, Portsea (VHR H1191)
- Point Nepean Defence and Quarantine Precinct (VHR H2030) – part of a larger registration
- Fossil Beach Cement Works (VHR H1929)
- Lime Burning Kiln, Waurn Ponds (VHR H0866)

None of these sites have the same capacity to demonstrate the breadth of quarrying and post-quarrying production from the late nineteenth century as is apparent at Cave Hill Limestone Quarry.

Places in the HO associated with limestone and cement production
Limestone quarry and former railway and limestone belt conveyor (City of Greater Geelong HO1732, HO)1740
The Limestone quarry and former railway and Limestone Belt Conveyor are scientifically significant at a local level for its potential to yield evidence of particularly appropriate solutions, over a period of 100 years, to a technical problem of extracting and transporting quarry material to the manufacturing plant at Fyansford. It is historically significant for its association with the production of cement in Geelong for over 100 years. The quarry has essentially been part of one of Geelong’s most pioneering industrial families, the McCann family business, since they purchased it in 1888.
**Industrial farms**

In terms of the Cave Hill Farm component of the site, there are a large number of rural properties included in the VHR and in Heritage Overlays across the State. In terms of the experimental function of the farm, the place is broadly consistent with the State Research Farm, Werribee (VHR H1961) and the Former Horticultural Research Station, Merbein South (VHR H2316).

**Places associated with David Mitchell**

In relation to the association of the place with David Mitchell, there are a large number of places on the VHR that were built by Mitchell. These include iconic places such as the Royal Exhibition Building (VHR H1501) and Scots Church, Collins Street, Melbourne (VHR H0005). Very few places owned by Mitchell appear to be included on the VHR. Colbinabbin Homestead (VHR H1730) was owned by Mitchell for a period of time from 1887, but no places specifically associated with Mitchell’s business ventures appear to be included.

**KEY REFERENCES USED TO PREPARE ASSESSMENT**

Lovell Chen, ‘Cave Hill Quarry, Melba Avenue, Lilydale Conservation Management Plan’, 2015


**PROPOSED TEXT FOR THE BLUE HERITAGE PLAQUE**

The Cave Hill Limestone Quarry was established in 1878 by David Mitchell one of Victoria’s most prominent nineteenth century entrepreneurs. Demonstrating three generations of lime processing, it was known for its use of innovative technologies and was recognised as one of the leading industrial plants of its time in Australia.
IMAGES

View of dairy factory (1892) from south east

View of bacon factory (1893-95) from north east
Bacon factory & timber outbuildings

View of timber shed in farm precinct from north west (possibly milking shed)
View of concrete silage store from west

View of silage store from east
View of picking station and incline hoist from the quarry from east

No 1 kiln (modified)
Base of No 1 kiln

View of the tunnel from the north
One of the 8 extant pot kilns in the tunnel