HERITAGE ACTION PLAN

CASTLEMAINE DIGGINGS NATIONAL HERITAGE PARK

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SUMMARY

The Castlemaine Diggings National Heritage Park is a new category of national Park created following recommendations from the Environment Conservation Council (ECC)[1] endorsed by the Victorian Government in November 2001. The purpose of the National Heritage Park is '…principally to recognise and protect outstanding cultural landscapes…National heritage Park status would see these areas set aside primarily to conserve their outstanding cultural landscapes, and secondarily to conserve their natural values.' The predominant cultural landscapes and cultural sites within the Park relate to the mid-nineteenth century gold rushes and subsequent gold mining activities.

This Castlemaine Diggings National Heritage Park Heritage Action Plan guides the management of the cultural heritage places contained within the Park. Other aspects of the management of the area will be guided by a broader management plan for the National Heritage Park, yet to be developed.

The Castlemaine Diggings National Heritage Park is historically significant in the national and international context as the best preserved of the Australian gold rush fields of the 1850s, and arguably the best preserved mid-nineteenth century gold rush field in the world. Castlemaine Diggings National Heritage Park also contains mining sites and landscapes from later periods that document, with an uncommon diversity and richness, the evolution of the gold mining through to the current day. The Castlemaine Diggings are also associated with the massive global migrations stimulated by the gold rushes, and contain many sites such as huts, cemeteries and work sites associated with European and Chinese immigrants. Predating and contemporaneous with the gold rush era is the Aboriginal occupation of the land, and the heritage values associated with that association have to be identified and conserved.

The future cultural heritage management of the Park should be guided by the following policies:

Policy 1 Parks Victoria recognises that the primary objective of management in the Castlemaine Diggings National Heritage Park is the protection, conservation, and presentation of the Park's cultural heritage values, as set out in the Statement of Significance in this plan.

Policy 2 Parks Victoria will implement an ongoing program of identification, protection and conservation of places of cultural significance within the Park. In the case of groups of sites and landscapes, it will identify the elements of significance that link the various components making up the place.

[1] Environment Conservation Council, 2001. *Box-Ironbark Forests & Woodlands Investigation—Final Report*, Environment Conservation Council, Melbourne: 145.

Policy 3 Parks Victoria will conserve the cultural significance of the Park and its individual sites in accordance with the *Burra Charter* of Australia ICOMOS.

Policy 4 Parks Victoria will avoid or minimise risks to places of cultural significance from proposed works by applying a risk assessment process before approving works in the Park.

Policy 5 Parks Victoria will develop a better understanding of the Aboriginal occupation of and traditional interests in the Park area, and base planning and management related to traditional interests and uses on recognition and respect for the traditional and contemporary relationship of Aboriginal peoples with the land.

Policy 6 Parks Victoria will retain the significance of places and landscapes of cultural significance by avoiding or minimising damage and deterioration through natural processes and human disturbance. It will avoid actions, remove threats and remediate environmental damage that diminish cultural significance.

Policy 7 Parks Victoria recognises that vegetation forms a critical element of the culturally significant landscape of the Park. Non-indigenous plants may be a feature of a site or landscape that contributes to the cultural significance of the place. Regenerating box-ironbark forest vegetation is recognised as being significant as an artefact of disturbance of the environment by mining and is to be managed as a powerful interpretative tool.

Policy 8 Parks Victoria will commit itself to innovative management of the Castlemaine Diggings as the first of the new category of Cultural Heritage Parks, to promote the new park concept, and to link park management to local and regional economic and community development.

Policy 9 Parks Victoria will stimulate public interest in, and understanding of, the cultural significance of the Park by providing visitor and interpretative facilities at selected sites based on an interpretative works program, and allowing informal access to other sites. The standard of visitor facilities will be defined in accordance with Parks Victoria's *Visitor Service Levels Framework*.

Policy 10 Parks Victoria will ensure public safety by means compatible with the significance of the Park and places of cultural significance within it.

Policy 11 Parks Victoria will comply with both the spirit and letter of all relevant statutory obligations in respect to cultural heritage and develop, with State and Commonwealth agencies where necessary, agreed management practices that minimise the need for referral of works for approval. This will apply to agencies such as Heritage Victoria, Aboriginal Affairs Victoria and Environment Australia.

Policy 12 All uses within the Park will be compatible with the cultural significance of the Park and of individual sites within it, and involve no, or minimal impact on significance. Where possible, compatible uses should be ones that actively contribute to the understanding, conservation and presentation of the significance of the Park.

Policy 13 Parks Victoria will ensure that appropriate expertise (in fields such as history, archaeology, cultural heritage management and cultural tourism) is utilised in the management of the park, and that in-house expertise in these fields is recruited as needs dictate.

Policy 14 Parks Victoria will facilitate adequate and appropriate training in cultural heritage management for those individuals involved in management of the Park.

Policy 15 Parks Victoria will encourage and seek to develop community interest and involvement in the conservation and management of the Park, where appropriate in conjunction with the Mount Alexander Shire Council.

Policy 16 Parks Victoria will develop and foster a partnership with the Shire of Mount Alexander to maximise the conservation, promotion, marketing and appropriate management of the Park and related heritage places outside the Park, through the local planning scheme and by joint ventures.

These policies are supported by management strategies which translate the policies into implementation actions.

VISION STATEMENT

The Castlemaine Diggings National Heritage Park is a cultural landscape of exceptional heritage value, redolent with relics and stories of the Australian Gold Rush backed up by a rich and powerful collection of contemporary writings, drawings and paintings. The extent of the surviving nineteenth century mining remains, landscapes and documentation so closely associated with one of the great gold rushes of the world distinguishes the Castlemaine Diggings as being of extreme significance in the Australian and global contexts.

The challenge for Parks Victoria is to utilise the new National Heritage Park designation to most effectively conserve this heritage significance and communicate the values and stories of the place and of the people who lived and worked there to visitors and the wider community.

1. INTRODUCTION

1.1 BACKGROUND, PURPOSE AND LOCATION

This Castlemaine Diggings National Heritage Park Heritage Action Plan guides the conservation and related management of the major cultural resources contained within the Park. Heritage Action Plans (HAP) are Parks Victoria's equivalent of the conservation management plan (CMP), the standard management planning document for places of cultural heritage significance. The HAP deals specifically with cultural heritage management. Other aspects of the management of the area, including Aboriginal and natural heritage, will be guided by a broader management plan for the National Heritage Park, yet to be developed. The Park management plan, in dealing with cultural values, should be supportive of and consistent with this HAP.

The subject area, formerly the Castlemaine-Chewton Historic Reserve and adjacent crown land areas, is to become the Castlemaine Diggings National Heritage Park following recommendations from the Environment Conservation Council (ECC)[2] endorsed by the Victorian Government in November 2001. The recommended Castlemaine Diggings National Heritage Park covers a total area of 7442 ha and comprises the existing Castlemaine-Chewton Historic Area (3511 ha), 2744 ha of state forest and uncommitted land near Castlemaine, Guildford and Upper Loddon, Upper Loddon Flora Reserve (820 ha), Vaughan Mineral Springs Reserve (83 ha), Expedition Pass, Crocodile and Golden Point Reservoirs and Water Production Areas (46 ha total), Faraday Education Area (42 ha), and 196 ha of various other public land units, all reserved to a depth of 100m below the surface.

While the formal proclaiming of the new Park has not occurred at the time of writing this HAP, government has decided to proceed with the proclamation after additional consultation, and the plan is written in the assumption that this will occur in the near

[2] Environment Conservation Council, 2001. *Box-Ironbark Forests & Woodlands Investigation—Final Report*, Environment Conservation Council, Melbourne: 145.

future. Castlemaine Diggings will be the first area of land designated as a National Heritage Park in Australia. This is a new type of Park for Australia. While the full suit of management guidelines appropriate to a National Heritage Park has not yet been agreed, the ECC recommended the classification '…principally to recognise and protect outstanding cultural landscapes…National heritage Park status would see these areas set aside primarily to conserve their outstanding cultural landscapes, and secondarily to conserve their natural values.'[3]

The ECC recognised that 'the significance of the Castlemaine Diggings is predominantly historical, but is of a considerably higher order than most other historic Parks in Victoria. … What is required essentially is a category, similar to national Park, for cultural values, and with the scope for appropriate recognition and protection of natural and other values of moderate to high significance.'

The Castlemaine Diggings National Heritage Park extends in a band of land approximately 42 km north-south and up roughly 10 km east-west, and runs from Specimen Gully (Barkers Creek) in the north, through Chewton, to Porcupine Branch Creek, about 10 km north of Daylesford, in the south. The Park is roughly centred on the township of Fryerstown. Map 1 shows the boundaries of the National Heritage Park.

In general terms, the Park is managed by Parks Victoria as a service provided to the Department of Natural Resources and Environment, the designated State government agency which owns the land.

The preparation of the HAP was undertaken by a consultant team comprised of Dr Michael Pearson (Heritage Management Consultants Pty Ltd), Jane Lennon (Jane Lennon & Associates), and Duncan Marshall. The assistance of David Bannear in sharing his knowledge of local mining sites and Victorian mining in general is gratefully acknowledged.

1.2 DETAILED AIMS OF THE PLAN

The HAP:

- provides a brief history of the Park
- identifies archaeological sites and landscapes and values
- provides a statement of significance
- documents present attitudes, policies and programs related to presentation and protection of heritage values
- identifies and assesses risks to heritage values
- defines user requirements
- specifies conservation objectives
- provides practical guidelines for conservation, development and environmental issues and risks, including a monitoring system, and
- provides a costed recommended program of actions.

[3] ECC 2001: 145

1.3 METHODOLOGY FOR THE PREPARATION OF THE HERITAGE ACTION PLAN

The approach taken to the preparation of the HAP was as follows.

1. Determine the heritage resource and management environment

    - Prepare a brief history of the development of the Park, and a thematic analysis using the Australian Historic Themes Framework.
    - Become familiar with the cultural sites in the Parks area, and gather site description and assessment material.
    - Assess and document the relevant existing management policies and programs, and assess attitudes to the protection and presentation of heritage values in the Park, including detailing all existing and scheduled visitor facilities.

2. Assess significance and identify risks

   - Prepare a Statement of Significance for the Park
   - Define and describe areas and landscapes of the Park that have shared distinctive historical, archaeological or environmental characteristics (archaeological zones and landscapes).
   - Define and describe human and environmental pressures on, and risks to, the heritage values in the different archaeological zones and landscapes of the Park.

3. Establish user requirements and conservation objectives

   - Determine the user requirements of the Park and its cultural resources, in consultation with Parks Victoria and local stakeholders.
   - Develop conservation and presentation objectives for sites, zones and landscapes.

4. Prepare Draft Heritage Action Plan

   In consultation with relevant stakeholders:
   - Prepare a draft HAP with a set of work practices addressing issues identified in earlier phases, and propose a monitoring system for the 'health' of natural and cultural values.
   - Develop and cost a program of actions for the conservation and presentation of the heritage values of the Park.

   The work practices and action plan will be consistent with Parks Victoria's Cultural Heritage Strategy

   The draft plan text will be limited to 40 pages long, with other supporting material provided as appendices.

5. Prepare Final Heritage Action Plan

   Revise draft HAP in light of Parks Victoria comments.

2. ANALYSIS OF THE PARK, ITS COMPONENT PARTS AND SETTING

2.1 INTRODUCTION AND GEOLOGICAL CONTEXT

The brief history at 2.2 is primarily summarised from David Bannear's historical and archaeological research of the Castlemaine and Fryers Creek Mining Divisions[4]. To assist readers unfamiliar with mining terms, a short glossary is provided at Appendix A.

[4] Bannear 1993.

The Castlemaine goldfield (historically known as the Mount Alexander Diggings) is geologically typical of the goldfields within the Bendigo-Ballarat Zone. The bedrock of the area is a Lower Ordovician turbidite sequence (sandstone, mudstone, black shale and chert—the Castlemaine Supergroup) which is subdivided into biostratigraphic units based on an excellent graptolite fossil fauna preserved mainly in interbedded black shales. Folding, which trends north-south across the area, has resulted in two major structural domains, the westernmost of which contains gold-quartz mineralisation. Gold mineralisation, which occurs in narrow veins, is strongest on the eastern side of this Goldfield Structural Domain, the richest deposits being roughly in a line running through Chewton and Fryerstown, and diminishes in gold content towards the west. It is this mineralised zone that was exploited via the many shafts that are found in the Park.

At least three major cycles of erosion and deposition have reworked gold from the quartz veins and concentrated it in alluvial gravels. Of these, the White Hills Gravels and Calivil Formation are Tertiary in age and occur as isolated hill top gravel deposits (see Map 3), while the Quaternary Shepparton Formation gravels fills the present drainage system [5].

Throughout the nineteenth century the Castlemaine goldfield was recognised as one of the richest alluvial fields in the world. While reef mining had been undertaken from the late 1850s, it was only with the re-opening of the Wattle Gully Mine quartz reefs in 1933 that rich reef gold was produced. The field has produced at least 173 tonnes (5.56 million ounces) of gold from quartz veins and alluvial deposits since its discovery in 1851[6]. The bulk of the gold came from the alluvial deposits, the vast majority being obtained during the gold rush period 1851-55.

2.2 BRIEF HISTORY

The Australian gold rushes were amongst the most significant of the series of rushes which occurred around the periphery of the Pacific from the mid-nineteenth century. Beginning in California in the late 1840s, the rushes swept through eastern Australia in the 1850s, New Zealand in the 1860s, the Klondike (Yukon) in the 1880s and Alaska in the 1890s. The Indian Ocean periphery also witnessed the gold rushes, with the South African finds in 1885, and the Western Australian rushes commencing in 1892.

Within Australia the gold finds followed a counter-clockwise pattern—the first discoveries, near Ophir and Turon in New South Wales, were quickly followed by rich finds in central Victoria, then there were a number of fields found northward through Queensland in the 1860s, into the Northern Territory in the 1880s and on to

5 for more detailed descriptions, see Willman, C.E. 1995. *Castlemaine Goldfield: Castlemaine-Chewton-Fryers Creek*. 1:10,000 Maps Geological Report, Geological Survey Report 106, Energy & Minerals Victoria, Melbourne

6 Willman, 1995: 4-5.

Western Australia in the 1890s. In 1903, Australia was the largest single producer of gold in the world.

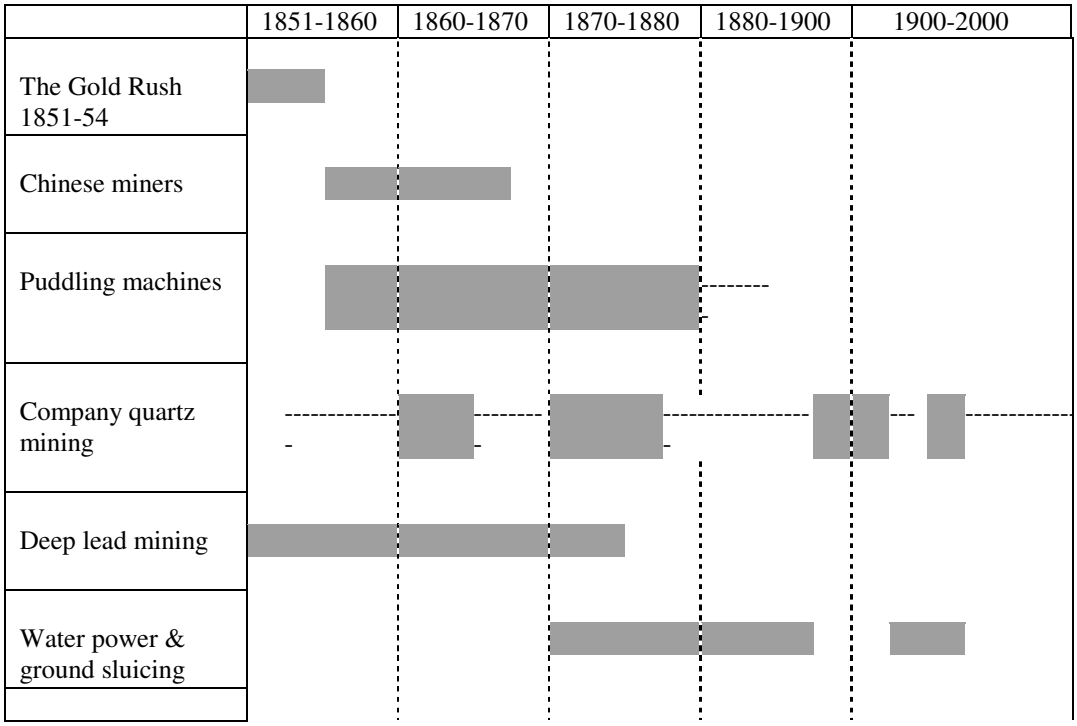
Gold had a dramatic impact on the population of Australia, with the non-Indigenous population increasing from 438,000 at the time of the first gold rush in 1851 to 3,774,000 at the time of Federation in 1901.

Following the first discovery of payable gold in NSW in May 1851, and the subsequent rushes to Ophir and the Turon, the desperate civic leaders of Melbourne, the capital of the newly created colony of Victoria, offered a reward for discovery of gold in the colony. By 16 July gold had been found on Andersons Creek (now Warrandyte) and at Clunes north-west of what became Ballarat, but at neither was gold easily won by simple mining practices. A third find was made at Bunninyong, and a rush began there in August, but the first really successful rush was in early September, just to the north-west at Yuilles Creek, at a location which became Ballarat[7].

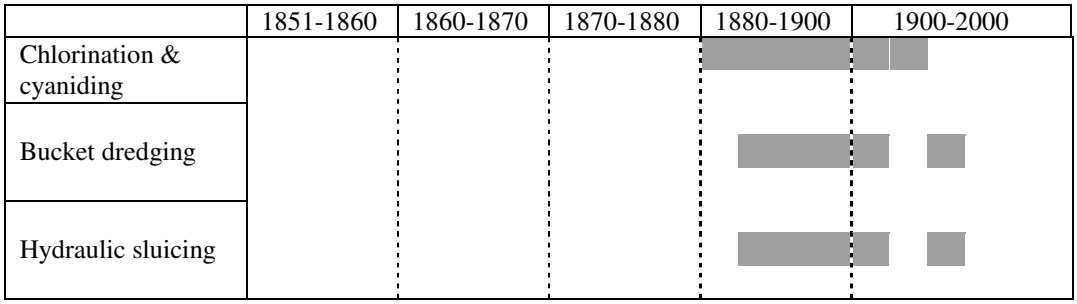
The first officially recognized discovery of gold in the Castlemaine region occurred in July 1851. Public announcement of the discovery, some six weeks later, sParked a stampede to Forest Creek below Mt Alexander in September. The main broad phases of mining on the Castlemaine Diggings are describes below, and are summarised in Table 2.1.

Table 2.1 Periods of major mining activities

(shading indicates main phases, line indicates lower level activity)



[7] Annear, R. 1999. *Nothing but gold: The diggers of 1852*. Text Publishing, Melbourne: 7-12.



Gold Rush—1851-54

John Worley, together with Christopher Peters and two others, is credited with the discovery of gold at Specimen Gully, Barker's Creek, to the north of present-day Castlemaine, in July 1851 . Following the announcement of the discovery, a trickle of diggers made their way to the spot near Mt Alexander in early September, but the place was not rushed until early November, when hundreds of diggers arrived daily from Ballarat and Melbourne [8]. The gold was found as nuggets in the alluvial soil fringing Forest Creek, and then in other creeks to the north and south as the diggers prospected more widely.

The Mt Alexander diggings centred, at that time, on Red Hill, Chewton, in the vicinity of which canvas stores, a post office and an *Argus* newspaper office, and thousands of diggers' tents, swiftly formed a 'village'. Known generally as 'Forest Creek', the settlement was given the name Chewton in 1856. Fryer's Creek, in the vicinity of Golden Gully (now Fryerstown), was also rushed in late 1851.

In December 1851, Victoria's Colonial Government doubled the monthly gold miner's licence fee, from 30 shillings to £3. This action was inflammatory and led, three years later, to the violence of the Eureka Stockade at Ballarat. Indignation at the government's action ran high at Mt Alexander in December 1851. Two meetings of diggers in opposition to the increased licence fee were well-attended but the discontent did not lead to open rebellion.

The availability of water was an early problem on the field. By November 1851, the field was dry, and by January dysentery appeared. By March, diggers were carting gold bearing soil five miles and more for washing. Even drinking water was not procurable within that distance of the diggings. The rush population dropped as a result, recovering again with the rains in April, setting the pattern of seasonal activity that predominated until the extensive water race systems were cut from better watered areas in the 1870s and '80s. In mid-1852, diggers swarmed the flats, hills and gullies in the vicinities of Forest Creek, Barker's Creek, Campbell's Creek, Fryer's Creek and the Loddon River. By October 1852, the population of the Mt Alexander goldfield reached about 30,000, and its output of gold was such that it ranked as the world's richest goldfield at the time. As the eminent Australian historian Geoffrey Blainey wrote:

[8] Argus, 8/11/1851, p2

> it is doubtful if any goldfield could have equalled Mount Alexander within six feet of the surface. [9]

In 1852 the first efforts were made to recover gold from exposed quartz reefs . Specimen Gully at Barkers Creek and the aptly named Quartz Hill were some of the first reefs to be tried. Quartz Hill proved to be incredibly rich when:

> 6 to 8 inches of its eastern face was broken off, roasted, and crushed with hand-hammers, yielding, with these primitive appliances, from 60 to 72 oz. to the foot super [10]

The *Mining Journal, Railway and Commercial Gazette*, London reported that the yield from Mount Alexander in July 1852 was 282,546 ounces of gold and that this yield continued every month, peaking in October of that year, where the yield for the month was estimated 350,000 ounces.[11] It began to decline in 1853, but still was over 150,000 ounces per month.

At Mt Alexander in mid-1853, a good deal of the rich surface soil had been worked over, and many diggers had moved on. The *London Mining Journal*, echoing the interests of British mining investors, promoted the view that large tracts of shallow auriferous (gold-bearing) ground in the Victorian goldfields had been 'worked out', and should be made available under lease to public companies, which could afford to 'properly' work them. This reflected the antagonism between the individual miners or diggers who had or were working the fields, and larger scale capitalists who were keen to displace the diggers with mining companies representing their interests.

The Port Phillip and Colonial Gold Mining Co. which had been floated in London at the end of 1851, applied in June 1853 to the Colonial Government for a lease of several acres of auriferous land at Windlass Hill and Golden Point, Fryer's Creek. The strong objections of the local diggers who worked the ground led to the request being denied, and they continued to successfully oppose the leasing of ground to reef mining companies through 1854. As a result of agitation by diggers, the proposed laws were altered in favour of individuals and small companies of miners, so that those who opened up and prospected ground themselves were granted extended claims.

The Chinese—1854-1867

Rural Chinese labourers, eager to find opportunities to find work that would help support their families in China, were drawn by the news of the alluvial goldfields of Australia, so accessible to individual and group labour. Chinese diggers started arriving at the Mount Alexander goldfield during 1854, and proved to be another focus for the fears of loss of independence among the European diggers. This was the first mass movement of Chinese miners into the Victorian goldfields. Large numbers of Chinese miners worked Forest Creek through 1854, and by 1855, 2,300 Chinese were living and working on Barker's Creek, and they were subject to general suspicion

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9 Blainey, G. 1969 *The Rush that Never Ended: A history of Australian mining*, p33

10 Mining Surveyors' monthly reports, Dec 1886

11 *The Mining Journal, Railway and Commercial Gazette*, London, 5/11/1853, P. 699

and anti-Chinese agitation among the miners and in the press. The Chinese worked individually and in small parties, and were probably seen as a threat to the European diggers' domination of the field, and were accused generally, and probably with little justification, of wasteful practices, dirty habits and pollution of the creeks. Guildford became the largest Chinese settlement camp in Victoria during the gold rushes.

By 1859 the major trend was towards sinking shafts into the quartz reefs (see below), and alluvial ground was increasingly left to the Chinese diggers. Mining Registrar Brown reported that, of the 438 puddling-machines operating in the Castlemaine Division, 123 were operated by Chinese - 95 of them purchased from European miners. The image of the Chinese miner had evolved from one of wasteful and damaging polluter of the rich ground in the mid-1850s, to hardworking and dogged alluvial diggers. This shift probably had more to do with the lessening of the importance to European miners of the alluvial ground, than with changes in Chinese behavior.

During the first half of the 1860s, large, stable Chinese camps existed around Strathloddon and Guildford. In 1866 their inhabitants dispersed, taking up old ground at Campbell's Creek, Pennyweight Flat, and Golden Point, reworking the ground and processing quartz tailings from crushing machines.

By 1867, there was a considerable exodus of Chinese back home and to pursue gold in New Zealand. At the same time, rushes elsewhere in Victoria were luring numbers of European alluvial diggers away from the Castlemaine District. Individual Chinese miners stayed in the district into the twentieth century.

Puddling—1854-1880s

Puddling machines appear to have been first introduced to the area in mid-1854. The new technology allowed previously unworked areas to be worked, and being more efficient at retrieving gold, old areas were worked over again. By February 1855 an estimated 200 puddling machines were working in the district. Puddling activities led to considerable changes in the goldfields landscape. 'Sludge' - the residue of the puddled washdirt - clogged up watercourses and caused them to be redirected. From the early 1860s onwards, the washing away of topsoil by puddling and ground sluicing (mainly along the Loddon River) began to reduce whole gullies to bedrock.

In the mid-1870s puddling operations became almost unpayable because of the quantity of turned-over stone and gravel which had to be moved before wash dirt could be obtained. However, in the Fryer's Creek Division, at least, puddling machines appear to have still been in use during the 1880s.

Settlement on the diggings

During 1851 and most of 1852, the population of the Mt Alexander goldfield had on the whole been very fluid, moving their tents and bark huts as the availability of shallow auriferous ground and the seasonal availability of water demanded. This pattern continued for a proportion of the field's diggers for many years, but a settled population also began to appear, leading to the establishment of villages and towns.

Castlemaine was laid out and settled in late 1852, and was followed in 1853-6 by the formalisation of the towns and villages of Campbell's Creek, Fryerstown, Vaughan, Glenluce, Guildford, and Chewton. Other small hamlets - with pubs, stores, churches and schools, as well as houses - existed at places like Golden Point, Moonlight Flat, Barker's Creek, Spring Gully, Tarilta, Mopoke Gully, Kangaroo, and elsewhere throughout the district.

In 1854/55 the government acknowledged the changing nature of the settlement patterns by passing legislation which allowed holders of annual miner's licences to occupy a half-acre garden allotment on Crown land. [12] A few months later: 'everywhere tents may be seen enclosed within bush fences, and a 'wee bit garden' under process of cultivation' [13]. This resulted in the many hut chimneys and occasional enclosed garden plots seen in the Park today.

Quartz reef mining—1854-59

Late in 1854, the partnership of Jacob Braché and Denis Eisenstaedler introduced the first steam-powered quartz crushing machinery to the area. It was erected on Specimen Hill, where a steam engine crushed quartz in a Chilean mill, as well as operating a saw-mill. Other steam-powered crushing machines were soon established at Wesley Hill, Moonlight Flat and elsewhere on the goldfield. Quartz roasting was used in the early phase of reef mining, to make the ore more friable for crushing, but advances in crushing technology made roasting generally redundant by the end of the decade.

By February 1856, when the population of the Castlemaine district was estimated at 34,347, there were 23 steam-engines, 140 puddling machines, and 36 quartz-crushing machines at work. The increase in steam engines, and the advent of reef mining, put greatly increased pressure on the forest vegetation for fuel and mining props, and the massive clearing that had already cleared the creek flats, crept up the hill slopes. Before the end of the century, the operators of large quartz mines were having to obtain wood from as far away as Daylesford, about thirty kilometres south of Castlemaine.

Company mining 1859-1918

The steady accumulation of quartz-mining expertise and the resultant increase in systematic, larger-scale mining, together with the availability of improved mining and crushing technology, led in 1859 to a 'mining revolution'. The 'revolution' manifested itself in the large-scale formation of public companies and the granting of large leaseholds of auriferous ground. This time there was no organized resistance by the diggers, many of whom continued to work the alluvium for another twenty years or more, while others formed small parties to work the quartz reefs in their own right or as tributers (people who paid a fee or 'tribute') to the big companies. Some - the Rowe brothers of Fryerstown, for instance - were to join the ranks of the public companies, with tremendous success.

12 Mount Alexander Mail, 13/5/1854, p.3
13 Mount Alexander Mail, 26/8/1854, p4

The increased scale of mining necessitated greater Government administration, and a Mining Registrar/Surveyor was appointed to each of the four newly-created Mining Divisions: Castlemaine, Fryer's Creek, Hepburn, and Tarrengower. The Mining Registrars lived in the Divisions they administered, and were at the hub of their area's mining activity. They reported monthly at first, and later quarterly, and today their reports are a valuable source of historic mining information.

Many of the big players in the 'mining revolution' saw their investments crash in 1860-61. Mining companies' plans came unstuck, in most cases, because they had over-capitalised, spending thousands of pounds on mining and crushing technology, yet being unable to recover sufficient gold to recoup their expenses, let alone realize a profit.

The Specimen Gully Mining Association was one such casualty. When it commenced operations in 1859, it was the first private company formed in the Division. In December 1860, the company had expended over £11, 600 (their initial capital had been £10,000), and had realized only a little over £3,800 in gold. By February 1861, the company had temporarily suspended operations, pending the clearance of a loan. No loan was forthcoming and, by July, the company's plant was up for sale.

The bursting of the public quartz mining company's initial bubble of confidence led to increased activity by small parties and companies of working miners. Many of the unsuccessful large lease-holders let portions of ground to small companies of tribute workers. These small-scale operators dominated the quartz mining industry during the later 1860s and into the 1870s.

The Castlemaine Mining Registrar reported the summer months of 1869-70 as the most unproductive yet experienced in his division. Most of the machinery lay idle, or only partially employed for want of water, and gold yielded from quartz had declined.[14].

A year later, though, a boom in mining investment resulted in the activity in the District of an unprecedented number of public mining companies, and transformed the goldfield's flagging fortunes. This time around the investment was better directed to matching mine development with actual output of gold. Old shafts were de-watered and new shaft sinking commenced at mines such as the Ajax, Sebastopol, Eureka, and Old Wattle Gully in the Castlemaine Division, and the Golden Gully reefs of Heron's, Ferron's, Clarke's and Cattle's.

The Rowe brothers, the sustained success of whose Mosquito mine on Cattle's Reef was legendary in the district, were involved in the formation of a number of public companies on those reefs. Most notable were the Australian United Gold Mining Co. and the Anglo Australian Gold Mining Co., formed in London with British capital in 1868 and 1869 respectively.

[14] Argus, 8/11/1851, p2

The Anglo Australian mine, on Heron's Reef, went from strength to strength and survived for ten years. The Australian United Co. worked the Duke of Cornwall mine, on Cattle's Reef, adjacent to the Mosquito mine. Buildings and machinery of a calibre never before seen in the Castlemaine District were constructed and installed at great expense - in anticipation of yields in the order of those realized by the Mosquito mine. However, yet again anticipation outstripped production and the company's outlay far exceeded its income. Within two years, the mine was closed, and a year later it was sold - to the Rowe brothers in their own right.

By mid-1875 the quartz mining boom was over—gold reserves were not proven, and the capital ran out before prospecting could be carried out at depth. Many of the public companies had suspended operations and were negotiating with tributing companies to work parts of their leases.

The quartz mining depression continued into the 1880s. By September 1886 the Castlemaine Mining Division was reported as almost abandoned. The reliability of the Golden Gully reefs in the Fryer's Creek Division, buoyed up in some cases by British capital, kept that Division's quartz mining industry afloat. The belief was that gold would be found at depth, and many companies across the District went broke in the search. In 1886, the Government's diamond drilling plant tested the District's richest reefs at depth, and found little to confirm the hope (almost superstition) of abundant gold deep underground.

Nonetheless, in 1887, the New Era Gold Mining Co. mine on Ferron's Reef reached a depth of 1,010 feet. But that company's fortunes, and those of its neighbours, petered out in the early 1890s. In the Castlemaine Division, during the June quarter of 1891, the amount of gold obtained from alluvial sources was 700 oz, whilst quartz mining produced only 73 oz.

Quartz mining surged again in the late 1890s, with mines re-opening on many reefs - Quartz Hill, Wattle Gully, Eureka, Spring Gully, among others - and modern equipment was installed. Again, the search was for gold at depth. The success of the Spring Gully Company fed this revival, paying out a substantial dividend to its shareholders in 1898. Many companies were formed to prospect and mine on the reef which was now yielding great quantities of gold. However, the Spring Gully mining boom was shortlived. By 1903, all companies on the reef were mining unprofitabily and soon, one by one closed down. The Spring Gully Co. was the last to go, in 1917.

During the first decade of the twentieth century the district’s quartz mining industry was in a dire state, with only two large mines at Chewton - Francis Ormond Co. and Forest Creek (Victoria) Gold Reefs Co. - providing any backbone to the industry. Both, however, were on shaky ground - large ore bodies, but declining gold grades, and by 1913 both had closed down and their extensive plant sold off and removed from the district. A handful of smaller companies followed, but one by one these closed down during the period 1913 to 1918.

Deep lead mining—1852-1870s

The deep leads were the beds of ancient creeks and rivers, which lay sometimes hundreds of feet beneath the basaltic plains and hills, particularly around Vaughan, Guildford and Muckleford. Some of the deep leads, particularly around the Loddon, were worked as early as 1852. The Muckleford-Guildford deep leads were continuations of those worked successfully in the Daylesford district. During the 1860s and '70s, many companies, a few of them successful, worked the deep leads in the Castlemaine and Fryer's Creek Divisions.

The water systems, ground sluicing and hydraulic sluicing

The local alluvial mining scene did not revive until the extensive artificial channelling of water in the 1870s made surface working more viable. The first water system completed was that constructed by the Loddon and Tributaries Water Company, which supplied mining areas around Fryerstown and Vaughan. Water arrived in the Castlemaine District, via races (open water channels), from the Government's Coliban reservoir in 1874. As had been the case when the Loddon River water races were introduced, ground sluicing took off in a big way, with demand for water outstripping the available number of sluice-heads. Shortly afterwards, channelled water was also supplied to different parts of the Fryer's Creek Division by races operated by smaller water companies. Again, the demand for sluice-heads by puddlers and ground-sluicers far exceeded the number available from the race system.

Quartz mining was also aided by the availability of channelled water. From the mid-1870s onwards, a number of quartz mining companies in both Mining Divisions erected water-wheels, as substitutes for steam engines, to drive their crushing plants. These ranged from the modest 20-foot diameter water-wheel constructed by Messrs Broad and Co. on Red Hill, near Vaughan, in 1874, to the monstrous Garfield water-wheel, 70 feet in diameter, erected in 1887. The latter fed off the Coliban water system and its waste waters were carried in a raised timber channel (a ‘flume’) to a smaller wheel on an adjacent reef. It is remembered as an engineering marvel and because of its huge stone abutments which still stand on the site, but, from all accounts, it was not a great success - it was unstable, wobbling in high winds.

The last steam-engine and machinery used in alluvial mining were removed from the District in 1876 and, at the same time, the Muckleford-Guildford deep leads were abandoned. The Mining Registrars' reports of the late 1870s are heavy with news of the depressed nature of the quartz mining industry. Ground sluicers appear to have been the only ones meeting with success.

At the turn of the twentieth century new developments in hydraulic sluicing began to revive the fortunes of alluvial mining. Leading the way was the appearance of bucket dredges in 1898. These were large floating plants with continuous bucket ‘ladders’, operating something like an escalator, digging up gravel from the creek beds and banks.

A.J. Cox, arriving from Beechworth around the turn of the century, also introduced to the district the Jet Elevator system of hydraulic sluicing, with outstanding success. In this method, the face of a gully was hosed away, the resulting washdirt puddled up and elevated by pressurized water into raised sluice boxes, from whence it passed over

a series of ripples, and the gold was captured in quicksilver (mercury). It became a very popular method of sluicing, and was subsequently used in most auriferous parts of the district where water was available.

By 1903 there were eleven sluicing plants in the district, operated either by registered public companies or co-operative parties of working miners, and by 1905 this reached eighteen plants in the Castlemaine-Chewton-Campbells Creek area alone. Around Fryerstown and Vaughan there were eleven hydraulic sluicing plants employing some 178 men by 1907.

Sluicing had peaked by 1908, and the following years until the commencement of the First World War saw a steady decline in the numbers of plants in operation. During the war years a few plants, such as the Campbells Creek Dredging Co. and Vaughan Dredging Co. managed to struggle on but all had ceased to operate by 1920.

Mining during the 1930s depression and later

Gold fetched a good price during the depression of the 1930s, and about twenty mines in the Castlemaine and Fryer's Creek Divisions re-opened. Public mining companies employed a good number of local men, installed new plants, and continued to sink their shafts deeper. Small groups of working men prospected and re-worked old shafts and cut new ones, working reefs alongside the big company mines, often under tribute. Men also commenced the cyaniding of tailings. Others arrived as unemployed men from other districts, who had been issued with a gold pan, a rail ticket, and a prospecting guide by the Government's Sustenance Department, and set to work cradling, panning in the creeks, and working at ground sluicing on the slopes.

The 1930s quartz mining revival was dominated by one company, the Wattle Gully Gold Mines N.L. According to local historian, Felix Cappy, it was a government geologist, William Baragwanath, who convinced a group of mining investors to take up the Wattle Gully lease[15].

What followed was an investors dream. By 1937, the Wattle Gully Co. had produced such an extraordinary amount of gold that it had entered the record books as Victoria's leading gold producer. The success of the company had a profound effect on the district - ground was pegged for new leases for miles in all directions. In the end only the Wattle Gully Co. lived up to expectations, all the rest of the mines closing down prior to the commencement of the Second World War.

The 1930s and early '40s also saw a revival in hydraulic sluicing and dredging. To facilitate the sluicer's work, old water races were rejuvenated and set to work again. Ray Bradfield, the author of many books on the history of the Castlemaine area, was involved in extensive sluicing operations, particularly in the Vaughan area. In 1937 (and again in the early 1940s), he and his father re-opened the Loddon-Fryers Creek water race, which had first been used in 1870. Much of the wooden fluming, which had carried the water across deep gullies, had been destroyed by bushfires but at Salter's Creek (in the Fryer's Ranges, between Fryerstown and Drummond), one lone

[15] Historic Outline of the Mines on the Wattle Gully leases, Felix Cappy, May 1980

leg of the original timbers still stood. The Bradfields re-utilized the leg, so that it still forms part of the now-rickety Salter's Creek flume.

The most spectacular sluicing operation to take place during this time was at Strangways, on the very edge of the Castlemaine mining division. Dredging operating from July 1938 to March 1948 handled 19,546,713 cubic yards of soil from which 117,221 ounces of gold were obtained. The company paid out £643,750 in dividends, and expended £129,000 on equipment and development of its property.[16] In 1942 the company held the distinction of being the most outstanding gold-producing company in Victoria.

After the demise of the Strangways dredge, and another dredge operated by the New Campbell's Creek Dredging Company, alluvial mining became the preserve of co-operative sluicing parties worked bravely on (though in smaller numbers) throughout the 1950s. In quartz mining only the Wattle Gully Company continued to mine successfully after 1950. In fact the mine, continued to operate until 1965, when rising employment costs and low gold yields forced the mine to close. Since this time the mine has re-opened on several occasions though each time it has closed again and remains closed today. A small quartz mine also operated on the Eureka Reef, closing in 1999.

2.3 PHYSICAL EVIDENCE—HISTORIC MINING SITES AND LANDSCAPES

The Castlemaine Diggings National Heritage Park contains many thousands of individual mining and other archaeological sites. These include individual shallow alluvial pits (with which whole landscapes are filled), reef shafts, battery sites, water races, sluiced ground, hydraulic sluicing holes, ore roasting pits, dwelling hut sites and chimneys, stone fences, tracks, roads and tramways, and surviving mine infrastructure, as at the Wattle Gully and Forest Creek Gold Mines. Bannear identifies about 60 different site types.[17]. Distinct landscapes have been created in which the mining remains of a particular era or group of eras, or type predominate.

Bannear[18] identified nine zones of mining sites, the zones being defined as areas linked by gully, reef, watercourse or settlement. Within the nine zones 297 sites or geographical locations (such as gullies, flats, hills or reefs) were identified that contained archaeological sites, and 41 archaeological sites were described in more detail.[19] Cultural sites that were not associated with mining were not included in the Bannear study. In a subsequent survey (which only covered a proportion of the Park area), George identified 300 habitation sites, of which a third consisted of stone and mud mortar chimney bases.[20] This study concluded that insufficient evidence exists

16 Williams, A. J, Maldon and Tarrangower Diggings,p.55
17 Bannear 1993
18 Bannear 1993; 56
19 Bannear 1993; Table 3
20 George 2001

above ground to be able to confidently ascribe ethnic origin or dates of construction to particular dwellings on the gold field.[21]

Map 1 indicates the extent of individual sites located in the Park area up to 2001.

The distribution of mining sites is clearly dependent on the underlying geology and distribution of deep lead and shallow alluvial deposits. Willman's study of the mining field[22] illustrates this point, and the distribution of shafts and auriferous gullies is shown on Maps 1 and 2. The pattern of folding and faulting in the Castlemaine Supergroup rocks is aligned north-south, and the distribution of quartz mines occurs in four main zones reflecting this pattern. These are the Ajax-Nuggety Zone to the west, then progressively to the east are the Devonshire-Chapel Hill Zone, the Eureka-Spring Gully Zone and the Chewton-Fryerstown Zone. The main auriferous creeks also align to this north-south pattern, or cross it east-west. High level auriferous alluvial gravels of the Calivil Formation are found on hill tops along Forest Creek, Fryers Creek and Barkers Creek, showing the alignment of the Tertiary drainage pattern to have been the same as that of today (see Map 3).

There are a number of cultural landscapes of mining in the Park. Sections of Forest Creek, Spring Gully Creek and Fryers Creek reflect alluvial mining landscapes modified by later landuses, rehabilitation and erosion. They are characterised by modified drainage patterns, remnant tailings/sludge, dredged and sluiced ground and smaller-scale alluvial diggings.

Along the alluvial gullies running north-south and east-west through the Park is preserved more intact evidence of a sequence of mining events. These include ground sluiced areas (particularly around Red Hill and Old Red Hill areas at Chokem Flat near Vaughan), hydraulic sluiced gullies, shallow shafts, reef shafts and open cuts, water races, battery sites, puddler sites and habitation sites, within a regenerating forest environment.

In the section of the Park south of Vaughan, and especially along the Loddon, Sailors Gully, Middletons Creek and Sebastopol Gully are found the oldest mining landscape, characterised by 1850s shallow alluvial pits and shafts, habitation sites, with scattered later reef mines, within a regenerating box-ironbark forest.

Large hydraulic sluiced holes or open cuts are found in the Vaughan/Lodden section of the Park, forming their own cultural landscapes, most of only limited extent.

Those sites already recorded are shown on Map 1.

Cultural landscapes within the Park?

The Park landscape is gently rising forested upland to 200m in three large blocks dissected by Forest Creek and the Loddon River. The river valleys were occupied for

[21] george 2001: 14
[22] Willman, 1995.

mining and then horticulture so that a patchwork effect has evolved. Obviously within this area there are many distinctive landscapes from the granitic outcrops along ridge lines, dissected rocky uplands, narrow gullies with intermittent water courses, wider valleys with permanent streams such as those of Forest and Campbell Creeks and the Loddon River. Within the uplands, the landscapes change depending on aspect which along with topography controls the forest species distribution so that one side of a ridge, the wetter side, can be dominated by one forest type and on the other drier side another species will predominate. These major species and their associated understorey cause different landscape effects in terms of colour, density of cover etc. The categorisation of cultural landscapes in the following descriptions is outlined at APPENDIX B.

Many gullies contain mining relic sites and could be classified as continuing cultural landscapes –either organically evolving due to continuing use or relict ("fossilised"). The main ones within the Park are:

- Specimen Gully –where one of earliest gold finds recorded in July 1851;
- Garfield –Sailors Gully –with Garfield waterwheel abutments and Golden Point water race;
- The gravely course of Forest Creek between Pennyweight Flat and Wattle Gully;
- Red Hill, Forest Creek gold mine;
- Eureka –Poverty Gully network, around The Monk;
- Wattle Gully group, Chewton;
- Spring Gully group;
- Red Hill/Old Red Hill-Loddon water race group, Vaughan
- Golden Gully group, Fryerstown;
- Vaughan Springs –gold mining gave way to Chinese market gardens and then Edwardian picnic grounds with 'taking the mineral waters' and formalized swimming as attractions;
- Butchers Gully and Sailors Gully – Tubal Caine groups, south of Vaughan
- Middletons Creek.

Various settlement sites which are largely archaeological in character, could also be described as relict cultural landscapes now; for example:

- Settlement site at Welsh Village, Lady's Gully, Eureka reef, Cornish Town, Irish Town and along the Loddon River.
- Trapps or Sailors Gully, northeast of Chewton off the Faraday Road;
- Duke of Cornwall mine engine house and associated workings;
- Spring Gully –with its substantial mining machinery foundations, building foundations and orchards.

Designed landscapes could include the cemeteries, for example:

- Deadmans Gully, Golden Point;
- Cemetery Reef Gully, Chewton;
- Pennyweight Flat, Castlemaine;
- Deadmans Gully, Fryerstown;
- Vaughan Chinese Cemetery

and man-made reservoirs, such as at:

- Expedition Pass;
- Blacksmith Gully Reservoir;
- Golden Point;
- Crocodile Reservoir; and
- Vaughan Springs swimming enclosure.

The Castlemaine Diggings are located in a regenerating Box-Ironbark forest, largely cut down during the gold mining era, and now regenerating in a coppiced, multi-stem form. However, even allowing for coppicing, the forest understorey is relatively open in most areas, with little dense undergrowth. The current form of the forest is not the one historically associated with the gold rush period. During the first rushes, the trees in the close vicinity of the rush gullies were cut down for fuel and construction. As the use of machinery increased and reef mining demanded pit props, wider areas of forest were cut, and before the turn of the century timber was a locally scarce commodity. The landscape would have been much more open than it currently is. However, though the forest probably started to regenerate in some areas soon after the first rushes, and in other areas as mining ceased, there is as yet no clear history of the pattern of forest regrowth.

The regenerated forest is important historical evidence in its own right in demonstrating the evolution of the natural environment impacted by mining.

2.4 CONDITION AND INTEGRITY OF FABRIC

The bulk of the archaeological sites in the Park date from the mid to late nineteenth century and are mostly built out of stone and local rock. They are associated with the mining of both alluvial and quartz gold and cover a range of industrial and domestic site types. The condition of the fabric of the many archaeological sites in the Park varies considerably. Much of the mining evidence (especially of early alluvial mining) is in relatively good condition compared with many other mining fields, though individual sites might demonstrate varying condition. Common threats to condition include erosion and weathering, and at a few sites root disturbance and damage from metal detecting/bottle hunting is noted, though these are as yet relatively isolated problems.

The preservation of the archaeological sites, particularly from the gold rush era, is due to absence of subsequent alluvial mining in the Park. Many of the gully systems have remained relatively undisturbed for at least 130 years. Unlike other central Victorian fields (such as Maryborough, Dunolly and Tarnagulla) the Mount Alexander Goldfield has not be subject to any strip mining (doze and detect) which has been responsible for removing evidence of gold rush mining elsewhere. Other major goldfields, such as Bendigo and Ballarat have been built over by large cities. As a result, the Mount Alexander Diggings has a much higher diversity of mining remains and landscapes, with greater integrity, than any other contemporary Victorian, or indeed Australian, goldfield.

A number of mining places of later nineteenth and twentieth century date in Victoria and elsewhere have substantial surviving remains, but they seldom display the early

gold rush characteristics over large areas as is displayed at Castlemaine Diggings, and none show the same degree of continuity of mining activity since the 1850s .

The regrowth forest is a threat to the mining remains in those few places where it is physically disturbing them. In other cases the survival of root stock after initial timber harvesting, and the regeneration from it, has limited erosion which might otherwise have destroyed many of the mining sites.

3 CULTURAL SIGNIFICANCE

3.1 COMPARATIVE ANALYSIS

There are two contexts for comparative analysis, internationally and within Australia. The survival of examples of the earliest phase of the gold rushes (1850s and 60s) is rare worldwide. Mining sites from the later nineteenth century are more common, but reflect technological advances not available in mid-century and not typical of the gold rushes. As the gold rush era is the defining period in the significance of the Castlemaine Diggings, the comparative analysis concentrates on this earlier phase of mining.

International comparison

Gold has been a valued commodity since ancient times. It was a high status metal for many civilisations, and became a major incentive in the conquest of the New World. By the nineteenth century gold had become an economic underpinning basis for the investment involved in the growing industrial economies, and Britain pinned its pound to the gold standard in 1816.

The great gold rushes of the mid- to late-nineteenth century were an unprecedented event in world history. They combined the discovery of large deposits of gold with advances in transportation and communications, relatively recent ideals of individual rights and democracy, and an increasing globalisation of manufacturing, capital investment and trade, to produce extensive migration of individual miners with a realistic expectation that they each had a chance of making a living, if not their fortunes, on the gold fields. In turn the great amounts of gold produced during the third quarter of the nineteenth century (estimated as being 25 times the entire amount mined in the preceding 358 years since the discovery of the New World) underpinned a boom in the capital markets of the world, and an associated boom in industrial development, manufacturing and trade. Following the flood of miners was an even larger migration of free-settlers taking advantage of gold-stimulated economies in the USA, Canada, Australia, New Zealand and southern Africa. These factors gave rise to changes in society, economies and nations that moulded the modern world of the twentieth century.

The world's two first gold rushes – California, USA (1848-53) and Victoria, Australia (1851-1855) – were pivotal to the increased power of gold during the nineteenth century. Quickly these two goldfields raised the world's annual gold output by a factor

of six or seven. The hoarding of vast quantities of Californian and Victorian gold by the central banks of America, England and France, provided the basis for sound currencies and financial systems around the globe and supported a gigantic credit expansion that bankrolled world trade, shipping and manufacturing[23].

The lure of the gold rushes for the populations of Britain, Europe, the Americas and China was that it was able to be won from the alluvial soil by personal effort, and was not controlled by organised capital or inherited ownership. The wealth was there for the taking, and every person, given the bounds of luck, experience, timing and perseverance had an equal chance at it. On the Mount Alexander Goldfield (of which the Castlemaine Diggings Park forms a large part) it was felt, especially in the period 1851-53, that if you persevered then you would end up with enough capital from gold to buy land, build a house and start a farm.

Once the presence of gold was confirmed by letters and the press, migration to both California and Victoria boomed. The Californian and Victorian rushes were on roughly on par in respect to both gold production and duration. The extent of migration to Victoria was slightly greater than that to California, as shown in the following table[24];

	Population at start of gold rush	Population at 1860
California	(1848) 14,000	308,000
Victoria	(1851) 77,000	521,072

The Californian and Victorian rushes had, however, one fundamental difference, the impact of the rush on population. While the miners taking part in the Californian rush were predominantly Americans, the miners engaged in the Victorian rushes were predominantly from overseas (indeed the Victorian population by 1860 was greater than had been the entire European population of Australia in 1851 (437,665)).

Moreover, while most of the Californian miners went home or dispersed to other regions after the rush, leaving California a backwater except for the major towns such as San Francisco which boomed as the major sea-port for the later mining boom in the Rockies. Victoria as a whole not only maintained its population, but doubled it between 1860 and 1900. In 1851 the population of NSW was nearly two and a half times that of Victoria, while by 1861 Victoria's was one and a half times that of NSW, and remained greater than NSW until 1891. Over the same decade (1851-61) Victoria's population grew from 17.6% of Australia's population to 46.7%.

This sustained growth of Victoria based on gold is clearly illustrated by comparing the present-day landscape of the Victorian and Californian goldfields – central Victoria with its great gold cities, administrative centres and public and commercial

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23 This comparison drawn in part from Lennon, J. 'Victorian Gold—World heritage Status?', paper presented to the *Bendigo—nothing but gold Conference*, Bendigo, 27 October 2001.

24 May, R. 1970. 'California gold—the evolution of the placer mining industry', in *Origins of hydraulic mining in California*, Holmes Book Co, Oakland, California.

infrastructure and the Californian mountains with a myriad of small towns, some inhabited, many ghost towns. California's larger towns of San Francisco and Sacremento, after the initial rushes, relied increasingly on their locations as entrepot for mining activity further east in the Rockies, and as a focus for increasingly for non-mining business, especially after the building of the trans-continental railway in the 1860s.

The survival of evidence of the early gold rushes also makes for a stark comparison. Very much of the early evidence of the Californian gold fields has been destroyed by subsequent hydraulic sluicing, which has carved away the slopes that once held the sorts of sites still found at Castlemaine Diggings.[25] At the Castlemaine Diggings the focus of the early rushes was in part on relatively shallow alluvial deposits in the southern end of the Park, and much of the field therefore avoided the later large-scale sluicing because it was not economically viable. While early evidence has been removed or disturbed to varying degrees in the northern part of the Park, the southern end retains the 1850s and 60s alluvial landscapes in a relatively undisturbed state.[26]

Comparison within Australia

Within Australia the obvious comparative gold fields from the initial gold rush period are those at Ophir and the Turon River (NSW), where the first Australian gold rush occurred, and in the other Central Victorian Goldfields at places such as Warrandyte, Clunes, Ballarat, Bendigo, and Beechworth. In this context the mining remains and landscapes in the Castlemaine Diggings National Heritage Park stand out as rare survivors of the first period of the gold rushes. It is the evidence of this early period that distinguishes Castlemaine Diggings from other fields, and while the evidence of later mining at in the Park is very good and in some cases rare in its own right (such as the collection of various types of ore roasting kilns and other Cornish mining technology, and the collection of puddling sites), the later material stands out mainly because it demonstrates, with particular richness, a continuity of mining extending from the original rushes to the present day.

The Ophir and Turon fields, while retaining many early and later sites, do not retain whole landscapes of 1850s alluvial mining, and the dating of many sites is not always clear[27]. These fields did not have the intensity of mining or the substantial influence on migration that the Victorian fields did. While the Ophir field, in particular, experienced ongoing mining through to the current day, the intensity, scale and diversity of this mining was much less than at Castlemaine, and the examples of the progressive phases of mining are far fewer and less exemplary of their types.

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25 Pers comm Dr Ray Sumner, Dean of Arts, Long Beach Community College, California, and Ms Donna Pozzi, Chief of Interpretation, California State Parks Service. see also Dilsaver, L.M., Wycoff, W. and Preston, W.L. 2000. 'Fifteen events that have shaped california's human landscape', *The Californian Geographer*, vol 40: 1-76; Blodgett, P. 1999. *Land of Golden Dreams: California in the gold rush decade, 1848-58*, Huntington Library, San Marino, California.

26 See David Bannear's survey reports.

27 Pearson, M. & McLachlan, R. 1997. 'Ophir Reserve Heritage Study and Management Recommendations', report for Cabonne Council Orange.

Late nineteenth century and early twentieth century gold mining sites in NSW, Queensland, Northern Territory and Western Australia exhibit many good examples of specific mining periods and technologies.[28] However, there are few goldfields with the extensive surviving evidence of mining and miner's housing that is found at Castlemaine (though for a limited late nineteenth century period the Palmer River in Queensland might be comparable), and none other than the Ophir/Turon area in NSW has evidence extending over such a long period of mining. None exhibits the extent of alluvial mining landscape from the 1850s/60s found at Castlemaine Diggings.

The Central Victorian Goldfields are the best documented in Australia due to the 1990s survey program managed by the then Department of Conservation and Natural Resources and undertaken by David Bannear[29]. There are many exceptional mining sites recorded in those reports, some of them early and many of later nineteenth century date, and there are some notable mining landscapes, but on the basis of Bannear's work none compare with the richness and diversity of the Castlemaine field, nor do they have the extent of 1850s gold rush alluvial landscape exhibited in the southern part of the Park.

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28 Pearson, M. & McGowan, B. 2002. 'Thematic study of mining in NSW', report for NSW Department of Mineral Resources, Sydney; Jane Lennon and Associates, 1996. 'Mining heritage places study: northern and western Queensland: identification, assessment and documentation of cultural heritage significance', report for the Queensland Department of Environment. 5 vols; Pearson, M. 1994. 'Mining heritage places study: Southern and Central Queensland', Report for the Queensland Department of Environment and Heritage. 2 vols. Jones, T.G. 1987. *Pegging the Northern Territory: a history of mining in the Northern Territory, 1870-1946*, Department of Mines and Energy, Darwin; Quartermain, M. K. and McGowan, E. 1979. 'A historical account of the development of mining in Western Australia', in Prider, R. T. (ed), *Mining in Western Australia*, UWA Press, Nedlands; MacGill, G. 1999. 'Mining heritage manual (Western Australia)', (see type profile—Gold), report for Heritage Council of WA.

29 Bannear, D. 1993a. 'Historic mining sites in the Dunolly Mining Division', report for North Central Goldfields Project, Victorian Department of Conservation and Natural Resources, North West Area, Bendigo.
Bannear, D. 1993b. 'Historic mining sites in the Heathcote (Waranga South) Mining Division', report for Department of Conservation and Natural Resources, North West Area, Bendigo.
Bannear, D. 1993c. 'Historic mining sites in the Maldon Mining Division', report for Department of Conservation and Natural Resources, North West Area, Bendigo.
Bannear, D. 1993d. 'Historic mining sites in the Rushworth (Waranga North) Mining Division', report for Department of Conservation and Natural Resources, North West Area, Bendigo.
Bannear, D. 1993e. 'Historic mining sites in the Sandhurst, Eaglehawk and Raywood Mining Divisions', report for Department of Conservation and Natural Resources, North West Area, Bendigo.
Bannear, D. 1993f. 'Historic mining sites in the Taradale Mining Divisions', report for Department of Conservation and Natural Resources, Melbourne.
Bannear, D. 1994a. 'Historic mining sites in the Maryborough and Avoca mining divisions', report for Department of Conservation and Natural Resources, Melbourne.
Bannear, D. 1994b. 'Historic mining sites in the Inglewood, Wedderburn and St Arnaud mining divisions', report for Department of Conservation and Natural Resources, Melbourne.
Bannear, D. 1995. 'Historic mining sites in the Stawell and Ararat Mining Divisions', report for the North Central Goldfields Project, North-west area, Department of Conservation and Natural Resources, Melbourne.

Comparison of the Castlemaine goldfield with 1850s/60s goldrush fields overseas and in Australia indicates that the Castlemaine Digging National Heritage Park has few if any peers in terms of the time-depth, richness and diversity of its mining evidence, and none have the extent of largely intact 1850s alluvial mining landscape found south of Vaughan.

3.2 ASSESSMENT OF SIGNIFICANCE AGAINST HERITAGE VICTORIA CRITERIA

The appropriate criteria to use in the assessment of significance of the significance of the Castlemaine Diggings National Heritage Park are those adopted by the Heritage Council on 6 March 1997 pursuant to Sections 8(c) and 8(2) of the *Heritage Act 1995*. As indicated in Chapter 4 and 6 below, a number of individual sites within the Park have already been assessed by Heritage Victoria using these criteria. The following discusses briefly the significance of the overall cultural sites and landscapes of the Park in relation to the criteria.

Criterion A. The historical importance, association with or relationship to Victoria's history of the place or object.

The Castlemaine Diggings National Heritage Park, as indicated in the history outlined at chapter 2, was a key location in what was perhaps the defining event in Victoria's history—the gold rushes. The field is significant at international and national levels, being the most influential alluvial mining area which set the pattern of international migration to what became a series of Australian gold rushes. The gold rushes, as represented at the Castlemaine Diggings, were responsible for the dramatic increase in the Victorian population in the second half of the nineteenth century, and for the accelerated capital investment and wealth generation that had a formative role in the development of Victoria and its cities that is still evident today.

Criterion B. The importance of a place or object in documenting rarity or uniqueness.

The range of mining remains, reflecting the whole period of gold mining in Australia, combined with the survival of early site types and landscapes of great rarity and interest, makes the Castlemaine Diggings National Heritage Park of outstanding importance at the national level. The extent of a surviving 1850s gold rush alluvial landscape in the south of the Park appears to be unique both nationally and internationally.

Criterion C. The place or object's potential to educate, illustrate or provide further scientific investigation in relation to Victoria's cultural heritage.

The range of mining sites, including robust sites which contain easily interpreted remains of potentially great interest to visitors, provides substantial educational potential. The range of well preserved sites reflecting as-yet little researched aspects of Victorian mining and the life of miners provides substantial scope for scientific investigation.

Criterion 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.

A range of sites in the Park are outstanding examples of different types of mining technology over a wide period of time. Of particular note is the importance of the 1850s gold rush alluvial mining landscape, puddling sites, early batteries, and combinations of mining and habitation sites which are extremely good and representative examples of their types. tThe rarity of equivalent examples of many mining features elsewhere enhances the value of the Castlemaine examples in representing their type.

Criterion 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.

The Castlemaine Diggings reflect a very great richness and diversity of cultural sites, mainly associated with various forms of mining, spread over a period of 150 years. Few if any other Australian, or international examples of nineteenth century goldfields can match this richness and diversity.

Criterion F. The importance of the place or object in demonstrating or being associated with scientific or technical innovations or achievements.

The Castlemaine Diggings appears on the available evidence to have been the site for ongoing technical innovations in mining, but the comparative importance of technical innovations in relation to other fields has not been researched to any great extent. The relative importance of this criterion therefore cannot be fully assessed at this point in time.

Criterion G. The importance of the place or object in demonstrating social or cultural associations.

This aspect of significance has not been thoroughly studied. There is a *prima facie* case which can be argued that the prominence of the field in the history of Victorian gold mining has given it a lasting prominence in the collective community mind that is still present today. The strength of this value is likely to be strongest for local communities, and to a lesser extent for other people in Victoria. The substantial tourism interest in the Castlemaine Diggings is one indicator of such associations. A case might also be argued that the Park has important cultural associations for the Djadja Wurung people, and for Chinese Australians.

Criterion H. Any other matter which the Council considers relevant to the determination of cultural heritage significance.

No other matters are as yet identified.

3.3 STATEMENT OF CULTURAL SIGNIFICANCE

The Castlemaine Diggings National Heritage Park is historically significant in the national and international context of the mid-nineteenth century gold rushes, and is the best preserved of the Australian gold rush fields of the 1850s and arguably the best preserved in the world. The 1850s gold rushes, and the subsequent gold discoveries to which they gave rise, injected vast amounts of gold into the nineteenth century international economy, and underpinned a boom in the capital markets of the world and an associated boom in industrial development, manufacturing and trade. These factors gave rise to changes in society, economies and nations that moulded the modern world of the twentieth century. The gold rushes, as represented at the Castlemaine Diggings National Heritage Park, were primarily responsible for the dramatic increase in the Victorian population in the second half of the nineteenth century, and for the accelerated capital investment and wealth generation that had a formative role in the development of Victoria and its cities that is still evident today.

Castlemaine Diggings National Heritage Park also contains mining sites from post gold rush periods that document, with an uncommon diversity and richness, the evolution of gold mining through to the current day. Of Victoria's three great gold fields of the early 1850s Castlemaine Diggings is the only one to have retained substantial elements of its 1850s gold rush character today.

Historically, the Castlemaine Diggings are associated with the global migrations stimulated by the gold rushes, and contain many sites such as huts, cemeteries and work sites associated with European and Chinese immigrants. While gold had been found at other Australian locations earlier, it was the Mount Alexander gold rush that captured the world's imagination and in part led to one of history's greatest mass movements of free population in time of peace, with Victoria's population growing from 77,000 in 1851 to nearly 600,000 by 1901, having at that date more than three times the population the whole of Australia had in 1851.

The Castlemaine Diggings contains extremely rare landscapes relating to the 1850s rush era, as well as rare examples of 1850s and later mining features such as shallow alluvial shafts, quartz roasting pits, early battery sites, Cornish flue systems, puddling sites, water wheel-driven battery sites, and hydraulic sluicing technology. The survival of a range of mining technologies and site types mean that the suite of sites also have great representative and interpretative value.

3.4 SIGNIFICANCE OF COMPONENTS

Many of the individual sites within the Park have been identified and assessed as significant in Bannear's work[30], and a number have been assessed as part of a statutory process and entered in the Victorian Heritage Register (VHR). The following highlights a small number of sites within particular contexts, with an indication of the nature of their significance.

[30] Bannear 1993: Table 1, Table 3.

1850s gold rush locations and landscapes

Individual sites related to the early 1850s rushes are scattered throughout the Park. However, the major clustering of these early sites, and whole landscapes relating to the early 1850s, are to be found south of Vaughan, and particularly in Sailors Gully, Sebastopol Gully and along Middletons Creek and the Loddon River.

Sailors Gully (Vaughan) Gold Mining Precinct (VHR) is an outstanding example of shallow sinking for alluvial and quartz gold. The precinct, rushed in 1855, displays particularly fine and essentially intact evidence which is typical of the prevailing early gold mining technology of the original Victorian gold rush of the early1850s. These remains, which run along tributary gullies for several kilometres and are relatively little disturbed by later mining, form a significant and rare gold rush landscape of historical and scientific (archaeological) importance.

The Sebastopol Gully is another important mid-1850s rush area, with extensive undisturbed shallow diggings and hut sites. Like Sailors gully, these remains are extensive enough to form a distinctive 'rush' landscape.

The Specimen Gully Gold Memorial (VHR) is a slate obelisk erected in 1931 to commemorate the discovery of gold nearby that precipitated the Mount Alexander gold rush. It is historically significant because of its symbolic associations with the discovery of gold in the Castlemaine area. The gully itself is within the Park, and contains surviving features relating to the first rush.

Vaughan Chinese Cemetery (VHR) was used for Chinese burials from sometime about 1854 until at least 1859. It is one of the few major sites clearly associated with the Chinese migration to the gold fields, and is of historical, scientific and social significance. Evidence of past community attachment includes the restoration of the cemetery in 1929 by the Chinese communities of Castlemaine and Bendigo.

Later nineteenth century alluvial workings (puddling machines and ground sluicing)

Alluvial workings from the mid-1850s through to the end of the century and beyond are found throughout the Park area. Willman's geological maps[31] illustrate the distribution of the alluvial gullies where these sites are located (see Maps 2 and 3). Ground sluicing of elevated gravels on hill tops has left an extensive system of water races and sluice heads associated with sluice holes (open pits and surfaced hill slopes) with incised ground sluices, deeply cut tail races, pebble dumps and slum ponds. The puddling process used between 1854 and the 1880s has left circular puddling sites, while later ground sluicing can be seen along the gullies. Both processes largely obliterated the evidence of earlier mining wherever they occurred, and have left distinctive landscapes of heavily worked alluvial gravels and eroded gullies. Puddling

[31] Willman, C.E. 1994. Castlemaine goldfield—Fryers Creek 1:10,000 geological map. Geological Survey of Victoria.
Willman, C.E. 1994. Castlemaine goldfield—Castlemaine-Chewton 1:10,000 geological map. Geological Survey of Victoria.

remains in such numbers forms an uncommon collection of historical and scientific significance.

Spring Gully has much evidence of the puddling period. The Spring Gully Gold Puddling Site (VHR), and Cobblers Gully Gold Puddling Site (VHR), located on a tributary of Spring Gully, are good and well preserved examples of the puddler technology, with puddlers, dam sites and associated huts sites, and are of historical and scientific significance. The Red Hill area at Chokem Flat (listed on the VHR) has extensive and very intact evidence of 1870s ground sluicing.

Hydraulic mining and dredging sites

Hydraulic sluicing, elevator sluicing and extensive ground sluicing were made possible by the extension of water races into the field from the 1870s onwards. The Red Hill Hydraulic Gold Sluicing Site (VHR), Sullivans Hill, Strathlodden G-M, Co site, and Grogshop Gully are good examples of hydraulic sluicing open cut mining. Elevator and ground sluicing was used extensively along many of the gullies in the Park, and the landscape left by this process is seen at sites such as Sailors Gully, Cobblers Gully, Red Hill, German Gully, Nuggetty Gully and Butchers Gully. A functional 20th century hydraulic sluicing plant (with suction gas technology and gravel pumps) survives at Forest Creek Gold Mine (VHR). Bucket dredging is reflected in the worked ground along a number of major creeks, such as Forest Creek, where in some areas the tailings pattern left by bucket dredging can be seen.

The evidence of hydraulic sluicing in the Park is diverse and rich, and is a resource of historical and scientific significance, providing an unusually well preserved set of sites reflecting mining technology from the 1870s through to the 1950s.

Early reef mining sites

The Park has some of the earliest remaining gold reef mining sites in Australia. The Specimen Gully Quartz Mining Association Mine (VHR), the first public quartz mining company on the Mount Alexander field, commenced operations in 1859. The Spring Gully Quartz Gold Mines (VHR) and the Eureka Reef Gold Mining Precinct (VHR) also span the period from the 1850s to the 1950s. The early period of gold mining (c.1854-1860s) is also represented in the quartz roasting kilns. Examples of these relatively rare pieces of technology are found at Cobblers Gully (VHR), Specimen Hill and Crocodile Gully. A possible Chilean Mill site, very rare in Australia, is also located at Cobblers Gully. The later period of reef mining is represented at the Garfield Waterwheel battery site (VHR), demonstrating the application of water power to mining in the 1880s. The Wattle Gully Mine (VHR) was historically important as the last major profitable mine on the field, the present buildings and machinery dating in part to 1937.

The long sequence of reef gold mining represented in the Park (1854-1990s) is unusual, and the associated range of remains is historically and scientifically significant.

Occupation sites

There are hundreds of hut and cottage sites scattered through the Park. Many of the alluvial and reef mining sites have stone chimneys associated with them marking the sites of miner's housing, and some hut sites have walled garden plots and associated out building remains. Good examples are found at Lady's Gully, Dirty Dicks Gully (Quartz Hill), Eureka Reef (VHR), Little Sailors Gully, Old Coach Road stone paddocks and hotel site, Red Hill area, Butchers Gully (including one known Chinese hut site), Sailors Gully, Golden Gully and Spring Gully (VHR).

The hut sites are significant both as evidence of historical occupation of the goldfield and miner housing, and as archaeological resources likely to contain evidence casting greater light on the history of the field. The habitation sites contain not only evidence of building techniques and domestic life, but also evidence of gardens and orchards (eg. The Welsh Village, Cornish Town, and Chinese house/market garden sites along the Loddon River).

Cultural landscapes and Box-Ironbark forest setting

Many of the features described above form part of particular cultural landscapes. These are either relict or evolving mining landscapes, reflecting the characteristics of particular periods on mining or suites of mining methods, or designed landscapes (as around the various cemeteries and reservoirs).

The regenerating Box-Ironbark forest setting for the Castlemaine Diggings mining remains is historically significant in its own right as an artefact of mining and a powerful interpretative tool. The regenerating forest also has historical links to the non-mining history of the Park, being associated with forestry activities and other non-mining uses of the area such as bee keeping, water supply and fire detection..

4 DEVELOPMENT OF POLICY— OPPORTUNITIES AND CONSTRAINTS

4.1 IMPLICATIONS ARISING FROM SIGNIFICANCE

The primary obligation arising from the significance of the Park is the conservation of the cultural significance of individual places, groups of places, and cultural landscapes within the Park. The Castlemaine Diggings National Heritage Park is significant at least at the national scale, and is most likely significant at the international scale as well. It includes important cultural landscapes where large numbers of sites and relics persist in their original settings, demonstrating a range of cultural themes over several phases of human occupation. The Park also included individual relics and historic sites of considerable significance. The Victorian Government is seeking to have the Park listed on the Victorian Heritage Register in recognition of its outstanding historic value over a broad area. The high level of significance of many aspects of the Park make it likely that sites or whole landscapes will be considered for the proposed National List and possibly for World Heritage listing (see Appendix C).

The Park contains many individual mining sites of considerable cultural significance in their own right, as well as significant landscapes such as the 1850s gold rush landscape in the southern section of the Park. The protection of the layering of this evidence within a cultural landscape context is a primary obligation arising from significance.

The very large number of archaeological and landscape features making up the Castlemaine Diggings makes it important to clearly articulate the philosophy of management with regards the levels of appropriate conservation action pertaining to different levels of significance, and with regards ways of dealing with the impacts of natural vegetation regeneration. The significance of the collection of cultural evidence within the Park as a whole implies that the overarching objective of management is to maximise the conservation of that evidence. However, some sites and features are more important in contributing to the significance and heritage character of the landscape than others, and the financial constraints preclude the equal management of the total cultural resource over such a large area, requiring some prioritising of conservation efforts. This is addressed in the policy section of the plan.

Stemming from the primary obligation of maximising conservation of cultural significance are consequent obligations to ensure appropriate levels of access to the public, and to present interpretative information so that the places are better understood and hence valued.

The contribution of the Castlemaine Diggings National Heritage Park to the cultural and natural heritage values of the Box-Ironbark region as a whole also needs to be recognised and protected.

The association of Aboriginal peoples with the Box-Ironbark forests and woodlands is strong and continues to evolve. The ongoing identification and protection of sites and areas of archaeological, cultural and spiritual significance is an obligation inherent in the management of the land.

4.2 STATUTORY HERITAGE OBLIGATIONS

National Parks Act 1975 and *Parks Victoria Act* 1998

Historic places in national Parks are protected under the *National Parks Act* 1975, their management being directed by the 'Guidelines and Procedures' documents and management plans produced by Parks Victoria. It is anticipated that this management responsibility for historic heritage resources will be emphasised even more in the legislation establishing the new National Heritage Park reserve category.

Management of the Park is also subject to various provisions in a range of other legislation, including the Commonwealth *Environment Protection and Biodiversity Conservation Act* 1999 and the Victoran *Planning and Environment Act* 1987.

Victorian *Heritage Act* 1995

The *Heritage Act* contains two main mechanisms for the protection of historic places and objects:

- entry in the Victorian Heritage Register;
- blanket protection of archaeological sites, and the addition of known sites to the Heritage Inventory.

The Park is affected by this legislation because there are several registered sites in the Park, and a number of other requirements of the Act are relevant to the general

management of the Park's historic resources. Sites entered in the Victorian Heritage Register are:

- Sailors Gully Gold Mining Precinct
- Specimen Gully Gold Memorial
- Specimen Gully Quartz Mining Association Gold Mine
- Vaughan Chinese Cemetery
- Spring Gully Gold Puddling Site
- Spring Gully Quartz Gold Mines
- Cobblers Gully Gold Puddling Site
- Cobblers Gully Quartz Roasting Site
- Red Hill Hydraulic Gold Sluicing Site
- Forest Creek Tourist Gold Mine
- Eureka Reef Gold Mining Precinct
- Garfield Waterwheel Quartz Gold Mining Site
- Wattle Gully Mine
- Specimen Gully Flagstone Quarry

If a place is registered, a permit from the Executive Director of Heritage Victoria is required for any alteration (including partial or complete destruction). The Executive Director may also identify works and activities that do not require a permit (such as maintenance tasks).

Actions by the owner or any other person prohibited at a registered places without a permit include:

- removal or demolition;
- damage or despoiling;
- development or alteration; and
- excavation.

Actions by the owner or lessee that would require notification of the Executive Director include:

- any works proposed to be carried out in relation to the place;
- any application for a planning permit or building permit or amendments of such permits;
- any proposal to dispose of the whole or part of the place.

Any historic archaeological sites and the artefacts associated with them that are older than 50 years are regarded as archaeological relics and are protected under the *Act*. A Heritage Inventory is maintained which lists all known archaeological places, but protection of archaeological sites is automatic, regardless of whether it has been recognised on the Inventory. A person must not knowingly or negligently deface or damage an archaeological relic without a 'consent'. A person may apply to the Executive Director of Heritage Victoria for a consent to damage a site or artefacts. In granting the consent the Executive Director must consider any relevant archaeological or historical research and the potential of the relic or site to contribute archaeological or historical information. Terms and condition may be applied to a consent to ensure that proposed work is supervised by an appropriately qualified person, that any relics

found are properly curated and conserved and to cover any other issue the Executive Director thinks fit.

Any person carrying out an investigation or survey to identify archaeological sites or relics is required to notify the Executive Director of that intent, and to provide all site documentation collected in the investigation or survey to the Executive Director.

It is possible that the whole of the Park will eventually be added to the Victorian Heritage Register, and this plan or its successors may be a basis for agreed delegations or exemptions for conservation management purposes.

Australian Heritage Commission Act 1975

The Register of the National Estate is established by the Commonwealth *Australian Heritage Commission Act 1975.* This act applies because the Garfield Water Wheel Base, and Pennyweight Flat and the 'Pennyweight Flat Children's Cemetery' are entered in the Register of the National Estate, and many sites within the Park are entered in the register database and may be registered in the future.

The legal implications of entry in the Register of the National Estate relate solely to the actions of Commonwealth authorities in approving activities, granting licences or taking physical actions themselves. Commonwealth entities (Ministers, departments, agencies) are bound by s.30 of the *Australian Heritage Commission Act*, to:

- take no action that has an adverse effect on any part of the National Estate unless there is no feasible and prudent alternative.
- if there is no feasible and prudent alternative to the action, then take all reasonable measures to minimise the adverse effect.
- advise the AHC of any proposed action, and give the Commission a reasonable opportunity to consider and comment on it.

The Commonwealth is currently considering new heritage legislation that might replace or augment the Register of the National Estate, and change the nature of Commonwealth heritage protection. It is likely to be interlinked with the *Environment Protection and Biodiversity Conservation Act* 1999.

4.3 PARKS VICTORIA REQUIREMENTS, ASPIRATIONS, OPPORTUNITIES AND CONSTRAINTS

Creation of the area as the first National Heritage Park places an obligation on Parks Victoria's to pursue management in accord with that status, with an emphasis on conservation and presentation of cultural sites as the first priority. The nomination for inclusion on the Victoria Heritage Register will enhances the recognition of the Park's cultural heritage values. There is likely to be a community expectation that improved access and more active interpretation will occur as a result of the new designation, and this could also be interpreted as the EEC's expectation in recommending the National Heritage Park status..

Parks Victoria has a role in implementing the Victorian Government's overall commitment to the box-ironbark forest region. The Castlemaine Diggings National Heritage Park combines the environmental values of the forest and the cultural values of the diggings, and both aspects of the place have attached to them very strong community ties and traditions, reflected among other things in the broad community support for the Parks Victoria/Mount Alexander Shire Council 'Mount Alexander Diggings Project' initiative. The maintenance and encouragement of community attachment and caring for the place among both the Aboriginal and non-Aboriginal community is a requirement if the full range of cultural values is to be conserved into the future.

Requirements (some with implied constraints) placed on Parks Victoria include:

- compliance with its statutory obligations, outlined above;
- honouring and maintaining current commitments to particular programs and interdepartmental or organisational relationships, including:
  - the formal relationship with the Department of Natural Resources and Environment as designated 'owner' of the Park;
  - the further development and formalisation of a relationship with Heritage Victoria in respect to the nomination of the Park to the Victorian Heritage Register.
  - the ongoing support of the community-based Mount Alexander Diggings Project, as a valuable management tool harnessing community support and resources, and encouraging appropriate utilisation of the Park resources. The Diggings Project is noted in the Victorian Heritage Strategy[32] as a successful strategic approach to the management of heritage places;
  - promotion of State government policies, by linking the protection and interpretation of cultural heritage resources to local tourism and regional development programs;
  - the need to implement a program of monitoring of condition and of change in levels of risk. The monitoring program should have several components, including:
  - monitoring the condition or cultural places and landscapes;
  - monitoring the adequacy and success of conservation, and protection programs and actions;
  - monitoring the adequacy and success of visitor facility works (car Parks, tracks, picnic facilities, camp facilities), both as means of public presentation and as conservation tools;
  - monitoring the success of interpretation programs and materials;
  - monitoring the condition and health of the natural environment, including forest health, pest species loads, and fire hazard levels; and
  - the development of relationships and agreements with the Mount Alexander Shire Council to monitor and constrain as necessary urban creep and related pressures on the boundaries of the Park.

[32] *Victorian Heritage Strategy*, 2000-2005. Heritage Victoria and Department f Infrastructure: 17.

Aspirations and opportunities for Parks Victoria cultural heritage management include:

- the opportunity to utilise the novelty of the new National Heritage Park status to promote an innovative and high quality conservation and interpretation program for the Park that will attract visitors;
- the opportunity to develop a community plan to clearly define the meaning of the new National Heritage Park public land category, and communicate to the local and regional community the great opportunities implied for community use and involvement, while also explaining the necessary constraints that may need to be imposed to conserve heritage significance into the future;
- the opportunity to develop an appropriate management approach to the coppiced regenerated box/ironbark forest in the context of the cultural landscape, which recognises the various different coppicing styles applied by different forest users over time. The options of leaving the coppiced regrowth to natural processes, or culling multiple trunks to encourage accelerated maturity of a single trunk, needs careful consideration, not least because of the costs involved. Neither option is likely to adversely affect the cultural values of the Park—it will just be part of the post-mining recovery of the forest. However, any approach used should have the conservation of the cultural heritage sites as a paramount aim, and should not damage or obscure heritage places. The main concern, after the needs of cultural place and landscape conservation are addressed, should be the future health and biodiversity of the forest;
- the development of an action Plan to recognise garden remnants such as fruit trees, bulbs, herbs and vegetables surviving in association with some of the huts or mining village site (eg. Welsh Village, Cornish Town and Chinese market gardens along the Loddon River);
- the opportunity to develop integrated interpretation and tourism plans for the Park that are coordinated with related programs and activities of Mount Alexander Shire Council and other tourism initiatives in the region. The interpretative issues and specific opportunities are discussed in more detail below;
- the aspiration to develop an action plan for the control / eradication of weed species (but not planted exotics or important elements of cultural landscapes), designed in the first instance to avoid damage to cultural values;
- the aspiration to develop a carefully designed fire protection plan to protect the timber artefacts found throughout the site, such as timber grave markers, timber sluice gates in water races, timber elements in standing building remains, timber beams in abandoned mine shafts and head works, and timber and pipe flumes associated with the Loddon Water Supply Company's water race. The plan should involve manual reduction of fire hazards, rather than machine clearing or prescribed burning; and
- the opportunity (in conjunction with Mount Alexander Shire Council) to reach agreed management guidelines with the owners of adjoining or enclosed blocks of freehold land containing mining locations and archaeological relics integral to the history of the Park, with the additional opportunity of acquisition of such blocks should management needs dictate such action. Agreed management or acquisition might involve, among other things, the machinery and artefacts at Wattle Gully Mine and the freehold land containing the Welsh Village, Herons Reef Gold

Diggings and the Duke of Cornwall mine. There are also small freehold blocks within the Park that contain building remains and archaeological sites relating to residences, hotels, accommodation paddocks and mining areas. Examples are found in, among other places, the Quartz Hill, Eureka Reef and Spring Gully areas.

Interpretation

The development of an Interpretation Plan is a major recommendation in this plan, and the actions outlined below should be regarded as preliminary suggestions informing that plan, rather than being seen as the only compatible approach to interpretation. The interpretation plan should be closely linked with a tourism plan, the two documents needing to be totally consistent in their compatibility with conservation requirements and in presenting priority stories to visitors. This linkage would be best achieved if the documents were prepared simultaneously.

The interpretation plan should include elements dealing with:

- the interaction between natural and cultural heritage and the interface between human activity and the environment;
- the history and technology of the gold mining process;
- the stories of individuals, families and groups (such as the Chinese) who worked and lived on the diggings;
- other historic uses of the Park area (such as public recreation at Vaughan Springs);
- the promotion of community activities in locations where such activities do not endanger the significance of the Park or the enjoyment of it by other visitors.

The traditional and simple interpretations approaches commonly used in National Parks are robust and appropriate for most sites in the Park. Provision of sign or leaflet-based interpretative information, good quality walking tracks from adequate capacity car Parks with basic facilities, and protective/safety fencing where required, would be an effective and affordable approach to much of the interpretation of the diggings. This, however, does not prohibit the use of other approaches. The use of accredited local guides and organised tours, as already operating for the Park in conjunction with the Mount Alexander Shire Council and FOMAD, is appropriate.

Other creative approaches to interpretation should be considered to take advantage of developing technology and techniques, with the caveat that any interpretative approach must be robust and easily serviceable given existing Park (or commercial) resources. Speaking posts, broadcast posts for hired carry-in radios, and sign posts keyed for hired carry-in CD players are all potential presentation approaches at some places, but all would have to be considered in the light of the caveat. A more readily secured site such as Wattle Gully Mine might support more vulnerable screen-based or other media presentation.

The cultural heritage values of the Park are very subtle and require innovative ways to let people look into the landscape and see for themselves what took place. One way could be through drawings of how current sites look today set beside drawings showing the miners at work or the miners/families in their homes in the same landscape, doing the sort of things which created the landmarks now seen in the bush. Such an approach would also put ‘people’ into the ‘places’.

The interpretation of sites is a compatible use (see 4.4 below) where the methods employed and the level of visitation promoted does not hinder or conflict with the ongoing conservation and appreciation of significance.

The utilisation of the Great Dividing Trail as a tool to promote and interpret the Park and link it to other destinations and food/accommodation places is a valuable interpretative opportunity.

While the coppiced forest of today is not an historically accurate setting for the mining remains, it is an artefact of mining in itself, and has an important interpretative role. The forest reserve status of much of the current Park in the past has, in fact, been one of the reasons the evidence of mining has survived. The current forest setting is not an interpretative problem, but rather an interpretative bonus for the Park. It highlights the transience of mining, demonstrates the severe environmental impact that can result from inadequate environmental constraint, and illustrates some of the resilience of Australia's native vegetation. All of these aspects warrant interpretation.

The existing interpretative centre maintained by Mount Alexander Shire Council at the Castlemaine Market Building, and the *Discovering Mount Alexander Diggings* guidebook are valuable interpretation resources that should be recognised and promoted, and updated as the interpretation of the Park is developed.

Landscape protection

The significance of cultural landscapes in the Park, and the obligations to give emphasis to cultural heritage protection implicit in the National Heritage Park classification, require protection of cultural landscapes from adverse developments in and around them.

The major internal threats come from poor management allowing dumped rubbish and car bodies to remain on-Park, uncontrolled access to fragile sites such as earthworks, vandalism and theft of components, fires, and unconsidered visitor facility upgrades such as overly large walkways, poorly sited paths and facilities, or new mining operations requiring access to older or deeper workings.

The major external threats come from developments on adjoining freehold land. These include overly large housing impacting on the aesthetic qualities of the landscape as viewed by visitors arriving at the sites; ugly and inappropriate ancillary developments such as sheds, stables and hobby farm junk lying around impacting again on the scene; wandering animals knocking against fragile structural ruins; clearing and large scale new agricultural or mining/quarrying activities; subdivision and new developments obliterating the pattern of ancillary or contributory features in the wider landscape; development and /or replacement of utilities such as power lines, transmission towers and pipelines; inappropriate planting of non-indigenous native trees and replacement of senescent exotics with native species; and loss of general vegetation amenity arising from the evolved landscape pattern of both native and exotic trees by clearing, replacement and large scale pruning.

Viewsheds should be determined for all the smaller landscape units as well as for the major ridge lines in the Park.

These aspects of management should be addressed in liaison between Parks Victoria's and Mount Alexander Shire Council in relation to implementation of the local planning scheme (as discussed further below), and should be key factors in risk assessment required before works within the Park (also described below).

4.4 COMPATIBLE USES

Compatible uses are those which respect the cultural significance of a place, and involve no, or minimal impact on significance (*Burra Charter* 1.11). All uses in the Park should be compatible uses. Because of the high level of significance of the Castlemaine Diggings National Heritage Park, major compatible uses (as opposed to support or ancillary uses which simply provide a service) should also be those that actively foster the understanding of the Park and its sites, rather than simply being uses that are 'benign' but do not relate to the promotion of such an understanding and enjoyment of the cultural significance of the Park. Compatible uses which could actively enhance the presentation of the significance of the Park include:

- research
- passive recreation (including short and long distance walking, and potentially cycling and horse riding)
- interpretation
- controlled commercial tourist activities

Legal Gold Fossicking—Gold fossicking, if responsibly carried out, is potentially a compatible use. However, some types of fossicking and fossicking in some locations can be damaging, and the scale, location and type of fossicking activity needs to be monitored and controlled as necessary to prevent damage to sites or the diminution of other visitor experiences of the Park. Discussions should be held with the Prospectors and Miners Association of Victoria (PMAV) to develop an agreed Code of Practice which protects heritage values but allows the continuation of fossicking.

Given the nature of the Park, it is recommended that fossicking be generally allowed in most areas with the recognised proviso that certain sensitive areas shall be monitored and if demonstrated damage occurs to archaeological sites and landscape values then zoning should be introduced which would exclude fossicking from some or all areas of the Park. Sometimes puddling machine sites and old battery foundations (such as the bed logs of the Castlemaine State Battery) are disturbed and undermined by these activities. Poor standard fossicking is also demonstrated by the leaving of open holes, sometimes fringed by rooted up native plants.

Educational material should be provided to promote good practices, such as avoiding fossicking on or near ruins and backfilling fossick holes. Sections of a number of auriferous creeks with few heritage places along them should be identified as key panning and fossicking areas.

A structured approach to monitoring and decision making with regards fossicking is included in the policy section below.

4.5 USER REQUIREMENTS & ASPIRATIONS

4.5.1 Community Requirements & Aspirations

The ongoing partnership with the Mount Alexander Shire has resulted in:

- the successful Mount Alexander Diggings Project, which progresses a number of the Shire's broader interests in promotion, marketing and tourism;
- the establishment of the Mount Alexander Diggings Management Board as a Council Committee, to manage the Diggings Project, and the associated Castlemaine Market Building, Tutes Cottage, Wattle Gully Tourist Mine, Forest Creek Gold Workings, and Archbolds Gold Treatment Works.

The maintenance and extension of this co-operative relationship between the Shire and Parks Victoria provides a powerful tool for Park management, and reflects community aspirations to have a direct role in the management of the Park and related interpretative activities.

Community based stakeholders who have aspirations for involvement in management of the Park include:

- The Friends of the Mount Alexander Diggings (FOMAD), a Parks Victoria friends group which works closely with Mount Alexander Shire. It has provided trained guides, and has developed a number of related educational/visitor products. FOMAD has great potential for further cooperative work with Parks Victoria.
- The Jaara Jaara Loddon Aboriginal Cooperative which represents the interests of the Djadja Wurung people. One of the objectives of the Cooperative is to develop indigenous eco-tourism opportunities in the region, including in the Park.
- The Friends of the Box-Ironbark Forest, a key community stakeholder focusing on the natural environment;
- The Bush Users Group (BUG) representing forest resources users, has aspirations not all of which may be compatible with the appropriate management of the National Heritage Park. Some user activities, such as bee keeping and dog walking, would have no impact on cultural heritage values, though impacts on natural values must be considered in the Park management plan. Other activities, such as fossicking, informal timber gathering, and recreational vehicle use, need to be controlled, and if found to be damaging activities, prohibited, to protect cultural heritage values.
- Other groups with varying degrees of expectation of involvement in Park management including; Great Dividing Trail Association, Mount Alexander Shire Weeds and Streamside Board, North Central Catchment Management Authority, Castlemaine Pioneers and Old Residents Association, Chewton Domain Society, Friends of Vaughan Springs, Friends of Kalimna Park, Golden Point Landcare Group, Expedition Pass Reservoir Committee of Management, Specimen Gully Landcare Group, Castlemaine Field Naturalists, Castlemaine Land Care Group, and Mount Alexander Shire Walks Committee.

4.5.2 Visitor and other User Requirements & Aspirations

There is an expectation on the part of government that Parks Victoria's management of the Castlemaine Diggings National Heritage Park would be consistent with

Tourism Victoria's Strategic Business Plan, 1997 to 2001 (Goldfields Region Development Plan) by supporting its mission statement to make Central Victoria Australia's *'leading colonial heritage experience'* in 2001 and beyond.

The creation of the Park also supports the following two planks of current Victorian Government Policy on *Promoting Victoria's Tourism*:

a) Developing a broader tourism strategy that unlocks the potential of the whole state not just Melbourne
b) Victoria as a home for new settlers – Facilitating new tourism opportunities reflecting our history as a home for new settlers by highlighting our multicultural past, goldfields migration and strengthening goldfields tourism.

The provision of visitor and other user facilities should be linked to the Interpretation Plan and Tourism Plan when these are developed, as well as having primary regard for the conservation of the heritage significance of the locality where facilities are proposed.

Table 4.1 indicates the current infrastructure within or associated with the Park to service visitor needs, and lists current planning and further opportunities for development of these facilities.

TABLE 4.1 Current and potential visitor infrastructure

Visitor facility	Existing infrastructure	Potential development
Vaughan Mineral Springs	Day use picnic area (52,000 visitor p.a.), camping area (2,000 campers p.a.), exotic trees, roads and tracks, car Parking, mineral springs, swimming areas, Chinese cemetery and caretakers cottage.	Masterplan at final concept design stage 2001. To redevelop the area to improve visitor facilities and increase access and interpretation of the Chinese cemetery. Linked to Great Dividing Trail.
Eureka Reef Visitor Area	Car Park (6 cars, 1 bus), walking trail with 7 viewing areas, protective and safety fences, self-guide interps.	Develop as a key visitor node. Road access improved from Pyrenees Highway to site and improved turning area into site. Interpret Aboriginal sites.
Spring Gully Visitor Area	Car Park (6 cars, 1 bus), walking trail with 2 viewing areas, protective and safety fences, interps signs. trail onwards to Company mine with 2 viewing platforms.	Develop as a key visitor node. Part of the Great Dividing Trail.
Garfield Waterwheel Visitor Area	Car Park (6 cars, 1 bus), walking trail with 2 viewing areas, protective and safety fences and steps, interps shelter.	Develop as a key visitor node. Part of the Great Dividing Trail. Control vehicle traffic.
Forest Creek Diggings Area	Car Park (15 cars, 2 bus), walking track to viewing points with safety fences, power and water to ticket office, power to engine shed, simple on-site interpretation boards, dam for panning.	To be added to Park as prominent key public access point and interpretative facility. Develop as a visitor node to national Park standards.
Sebastopol Gully Visitor Area	Wewak Track	Develop as a key visitor node. Link to Great Dividing Trail.
Specimen Gully Visitor	Car Park 6 cars. Gold discovery cairn.	Develop as a key visitor node.

Visitor facility	Existing infrastructure	Potential development
Area		Link to Great Dividing Trail.
Pennyweight Flat Cemetery	Car Park (20 cars, 2 buses), display boards, fenced cemetery and revegetated area. Managed by Old Pioneers and Resident Association.	Develop as a key visitor node.
Wattle Gully Mine	Car Park, track to mine processing area, battery house, headframe and winder. Machinery owned by leaseholder Duketon Mining NL but leased to Mount Alexander Shire, who hold a Tourist Mine Authority to enable public access. Machinery and structures listed on Victorian Heritage Register.	Longer-term potential for visitor presentation with variety of interps approaches. Future ownership of machinery should be resolved.
Forest Creek Diggings Area	Jointly managed by Parks Victoria and Mount Alexander Shire. Car Park (15 cars, 2 buses) safety fences, walking track, interps signs, substantial standing structures and machinery, panning area, located on highway.	Develop as key entry point to Park. Toilet facilities to service site and adjacent walking trail Castlemaine-Chewton. Possible alternate Chinese Interpretative centre to Vaughan.
Warbtons Bridge (Red Hill) campsite	does not yet exist	Potential site for a car-camping site, focussing on fossickers
ASSOCIATED AREAS (not in Park but related to Park presentation)		
Archbolds Gold Treatment Works	Conservation works in progress, owned by Heritage Council, to be managed by Mount Alexander Shire	Develop as a primary interpreted site, with links to Park.
Herons Reef Historic Gold Diggings	Freehold land, with Cornish engine house and mine remains	Potential for cooperative management planning or eventual adding to Park
Welsh Village, Golden Point	Small mining settlement, an both Park and freehold land	Potential for cooperative management planning or eventual adding to Park
Duke of Cornwall Mine	Prominent stone mine structure, little current infrastructure.	Potential for cooperative management planning or eventual adding to Park

Visitor day use and overnight facilities for visitors need to be planned to maximise the quality of visitor experiences, while at the same time ensuring that effective management control and maintenance can be provided for all such facilities. As indicated above, all such developments should be linked directly to the Interpretation and Tourism Plans. Differing levels of visitor facilities ('Visitor Service Levels') are appropriate at different sites, as defined by the Parks Victoria *Visitor Service Levels Framework*. The facilities outlined in Table 4.1, and proposed facilities, can be classified as follows;

Basic to mid level facilities (might include car Parking, walking tracks, viewing areas with protective fences, interpretative signs) are appropriate at:

- Spring Gully Visitor Area
- Garfield Waterwheel Visitor Area

- Sebastopol Gully Visitor Area
- Specimen Gully Visitor Area
- Pennyweight Flat Cemetery
- Red Hill Visitor Area

Mid to high level facilities (might include car Parking, walking tracks, toilets, picnic areas and shelters, potable water, camping facilities (at selected sites only), interpretation structures and signs) are appropriate at:

- Eureka Reef Visitor Area
- Vaughan Mineral Springs
- Warbton's Bridge —fossicker's camp (proposed)
- Wattle Gully Mine
- Forest Creek Diggings Area

Very high level facilities— The development of a Chinese Centre is a potential facility yet to be fully investigated. This would be a very high service level facility. A site for such a facility has not yet been selected, though Vaughan Mineral Spring Area and Forest Creek Diggings Area would be among the possible sites.

The high to very high level facilities might be managed by Parks Victoria or in whole or part by commercial lessees.

Visitor activities

Walking and touring—walking and car-based touring are at present the major visitor activities in the Park, and are likely to remain so in the future. The maintenance of walking tracks and high quality road-side track-heads and related direction signage should be a major objective of Park management, and should be a focus of the interpretation program.

Legal Gold Fossicking—Gold fossicking is an existing visitor activity that needs to be better monitored, and if necessary regulated or banned. The issue is discussed above as a compatible use, and below in the policy section.

Relic hunting and bottle collecting—Metal detecting for artefacts and digging for bottle and other relics are real threats to archaeological sites in the Park. They remove archaeological evidence, which is both damaging to the significance of the place and illegal under the *Heritage Act*. Sometimes building remains are disturbed or undermined by these activities. Relic hunting and bottle collecting should be prohibited activities within the Park.

Off-road vehicle use—Off-road vehicle use is a threat to heritage places, especially archaeological remains. All vehicle traffic should be restricted to authorised formed roads.

Horse riding—Horse riding on established tracks does not currently appear to be a threat to heritage values, but should be considered in the Park management plan in relation to natural vegetation management issues. Horse riding may require control if off-track riding becomes a problem. A map of routes on which horse riding is an approved activity should be developed and made available to horse riders.

Dog Walking—The walking of dogs in the Park poses no threat to cultural heritage values, but may impact on native wildlife, and should be considered further in the development of the Plan of Management.

Cycle riding—Mountain bike riding does not currently appear to be a threat to heritage values. However, unrestricted cycling over hut sites, mine areas and archaeological sites can do damage, and should be prohibited. Cycling should be restricted to authorised tracks as designated by Parks Victoria. A map of routes on which cycle riding is an approved activity should be developed and made available to cyclists.

4.5.3 Current and Potential Commercial User Requirements

Mining
Currently the Park area is classified as 'Restricted Crown Land' under Section 44 of the *Mineral Resources Development Act 1990*. The recommendation of the EEC Box-Ironbark Forest Report that this classification continue to apply to the new Park has been supported by the Government.[33] This classification allows exploration, and mining on existing leases, with other mining restricted to below 100m depth and accessed from outside the Park boundary, with only low-impact ventilation shafts allowed inside the Park. A 100m buffer zone extends around places on Heritage Victoria's Heritage Register and Heritage Inventory, mining or exploration within this zone being allowed only with the approval of the Heritage Victoria.

Tour bus and group access
Existing tour operator access is informal, using public roads to access car Parks and sites. Future development of visitor management programs might entail contractual/ licence arrangement with operators, as a cost-effective way for Park Victoria to achieve its wide-ranging visitor management/presentation commitments. Any such arrangements should incorporate mechanisms to ensure the protection of heritage places and provide appropriate interpretation.

Wattle Gully Mine
The potential exists for the future operation of Wattle Gully as a tourist mine/battery. Currently the historic mining machinery at Wattle Gully is held under a lease by the Mount Alexander Shire from Duketon Mining NL. There is also a Tourist Mining Authority over the land containing the historic machinery, structures and sheds. This allows the Mount Alexander Shire Council to conduct guided tours within an existing

[33] *Box-Ironbark Forests and Woodlands: A Community Landscape*, 2002. The Government response to Environment Conservation Council 'Box-Ironbark Forests and Woodlands Investigation Final Report', Department of Natural Resources and Environment, Melbourne.

Mining Lease. The historic machinery, structures and sheds is also listed on the Victorian Heritage Register. Ownership of the historic machinery, structures and sheds by the Crown is a desired outcome. Operation of the mine/battery should be made compatible with an interpretation plan for the Park, as well as with this Heritage Action Plan.

Forest Creek Gold Diggings
Forest Creek Gold Diggings until recently was a site owned by the holder of a mining lease. The mine owner also held Tourist Mine Authority 11 (TMA 11) which enabled him to operate a tourist mine within an existing mining lease. In 2000 NRE and Mount Alexander Shire Council paid the mine owner to relinquish all rights to the land and machinery through the cancellation of the mining and crown land leases. At that time NRE informed Mount Alexander Shire Council that TMA 11 could be transferred. This was found not to be the case. As all the mining leases have now been cancelled a TMA is probably not required and a Tourist Fossicking Authority would be more appropriate to enable FOMAD to conduct gold panning on the site as part of an educational experience. As part of the Park, any new mining lease application should be refused to protect the cultural heritage values of the place, including the last remnants of the elevated river terrace.

4.6 MANAGEMENT OF ADJOINING PARCELS OF LAND

The management of relationships with owners of adjoining land is a heritage issue in relation to fire risk, incompatible adjacent development, human activities and pest species spread in the Park. The development and promulgation of a good neighbour policy, and cooperative planning arrangement for adjacent land with the owners and Shire of Mount Alexander would be most appropriate responses to this issue.

The 1999 *Mount Alexander Planning Scheme* prepared by the Mount Alexander Shire Council includes a 'Significant Landscape Overlay' that specifically relates to the Vaughan Mineral Springs and Glenluce Mineral Springs landscapes and requires landscape qualities to be taken into account in development applications. A 'Heritage Overlay' requires permission from Council for certain types of development irrespective of the zoning, in relation to places identified in the Victorian Heritage Register, existing planning schemes or in heritage studies. This potentially includes the whole of the Park. Other relevant overlays in the *Planning Scheme* include an Environmental Significance Overlay, and a Wildfire Management Overlay.

The Natural and Cultural Heritage Local Provisions of the *Planning Scheme* includes, among other relevant policies, the policy that: "Development of land adjoining or nearby a heritage building or place shall have regard to any likely impact on the heritage building or place". Council will have regard to comments made on such development applications by Council appointed committees, such as the Mount Alexander Diggings Management Board.

In the first instance, Park Victoria should seek the opportunity (in conjunction with Mount Alexander Shire Council) to develop agreed management guidelines with the owners of adjoining or enclosed blocks of freehold land. The opportunity of

acquisition of such blocks (especially those totally within the Park, or those adjoining the park and having significance mining or occupation remains) should be taken if they come on the market or management needs dictate such action.

4.7 THE HAP AND POSSIBLE FUTURE WORLD HERITAGE REQUIREMENTS

The Castlemaine Diggings area has been suggested as a possible candidate for World Heritage nomination, within the theme of global migration and the gold rushes.

The World Heritage issue is discussed at APPENDIX C. The HAP together with a future Plan of Management for which the HAP is a major supporting document, would satisfy the requirements for a management plan specified in sections 6(v) and 24(b)(ii) of the *Operational Guidelines for the Implementation of the World Heritage Convention*.[34]

5 RISK ASSESSMENT

'Risk assessment' in this plan refers to the risks to the conservation and proper management of the historic places and cultural values. Risks in the sense of public health and safety are a site-by site issue, and should be covered in the Park's management plan.

However, it should be acknowledged that risk minimisation in the latter case may in itself pose risks to heritage places. Over time different mining methods have left their own distinctive imprints on the landscape, some of which today present a risk to human life. Decisions about public safety at such sites should give equal consideration to the cultural significance and interpretative opportunities of such sites, which are often given added importance because of the dramatic features that also make them a hazard. The risk assessment process must consider both the risk to human safety and the risk to cultural significance in finding compatible solutions that make the site safe while minimising the extent of intervention in the significant fabric of the site.

As indicated at Table 5.1, risk assessment should take into account both management action and inaction—normal aging of materials, weathering, vegetation growth and erosion pose risks for many places, and if timely action is not taken significant fabric can be lost.

5.1 FUTURE USES – OPPORTUNITIES AND RISKS

Potential uses bring with them potential risks that need to be recognised and dealt with in planning. For example:

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[34] Intergovernmental Committee for the Protection of the World Cultural and Natural Heritage 1999.

- Increasing visitor facilities and the encouragement of tourism brings with it the risk of direct impact through associated works, and consequential risks through increasing visitor numbers and activities.
- Some forms of ongoing mining can substantially damage cultural heritage values. However, some mining operations, if designed and managed well are capable of providing continuity of historical use of the Park, while ensuring the protection of evidence of previous mining periods..
- Interpretation and track work brings the risk of opening up previously unknown (and thereby protected) areas to public attention.
- Commercial operations facilitating visitor access and presentation brings the risk of loss of control over interpretation standards and the messages being provided to visitors.
- Encouragement of fossicking can bring with it the risk of disturbance of archaeological sites and landscapes by unsympathetic fossickers (those not willing to abide by a Code of Conduct). The greatest risks are from coincident (and illegal) relic hunting, and damage of cultural deposits, sites and structures.

Aspects of such risks are discussed below.

5.2 VISITOR NUMBERS AND MANAGEMENT

Visitor numbers have not been maintained on a Park-wide basis. Estimates of visitor use at nodes of activity, such as Vaughan Springs, are available, but these areas are relatively robust and more intensely managed than most of the rest of the Park. Monitoring of visitor use, and changes made by opening or promoting other visitor nodes as recommended in this plan, will be an important element of risk assessment and management response. There is no evidence that current visitor numbers have reached some carrying capacity limit, but it may be that monitoring will indicate such visitor limits may eventually be needed at heavily visited sites.

The visitor nodes recommended in this plan spread the development of visitor attractions widely across the Park, which may have the effect of minimising visitor impact on any one site. The concentration of visitor activity in visitor node areas also has the effect of limiting impact on other significant places in the Park. The monitoring of site condition over time may indicate that the intensive management and promotion of a number of robust sites may be necessary to reduce visitation and impact on more fragile sites, but at this stage the need for such structured site management is not indicated.

5.3 ASSESSMENT OF RISKS TO HERITAGE VALUES

Risks potentially relevant to the archaeological sites and cultural landscapes in the Park include;

- Environmental factors—weathering, erosion, invasive vegetation (native and exotic) and animal pests (mainly rabbits).
- Fire—wild fire, accidental fire, arson
- Vandalism

- Visitor use—wear and tear, appropriate and inappropriate visitor activity
- Unsympathetic land uses, rubbish dumping and urban creep on the Park boundaries.
- Structural instability
- Management action—inappropriate actions aimed at conservation or presentation, and development unrelated to the conservation or presentation program.
- lack of appropriate management structure, procedures or resources
- lack of compatible use (especially of structures)
- lack of interpretation, leading to ignorance of values, or giving messages of lack of care.
- The actions of other agencies, such as the Catchment Management Authority.

The purpose of the Table 5.1 is to draw the attention of Park managers to the range of risk factors, so that increase in impact from specific risks can be identified, and conservation actions developed to reduce the risk factor and protect the heritage places concerned. The analysis and the monitoring of changes in risk factors should be a factor in establishing or revising priorities in management actions and programs.

Table 5.1 outlines a risk assessment which includes these risk factors.

Table 5.1 Castlemaine Diggings Heritage Value Risk Assessment

In the this table the levels of potential risk, and the actual present and potential impact of the risk on heritage vlaues (columns 3-5), are measured as very high (VH), high (H), moderate (M), low (L) and none (N). The current trend in actual impacts observed or implied (column 6) is indicated with arrows indicating static (⇨), moderately upward (⇗), strongly upward (⇧), moderately downward (⇘) and strongly downward (⇩) trends.

Historic site type	Risk	Level of potential risk VH, H, M, L, N	Present impact VH, H, M, L, N	Potential impact VH, H, M, L, N	Observed Trend ⇨,⇗,⇧,⇘,⇩	Analysis of Risk
mine pit, shaft or adit	Visitor use	L	L	L	⇨	Pits and shafts are not easily damaged by visitor activity.
	Vandalism and rubbish dumping	L	L	L	⇨	Little vandalism occurs to pits and shafts. However, rubbish dumping down accessible shafts near the edges of the Park is an issue.
	Lack of use	N	N	N	⇨	Not an issue
	Lack of interpretation	N	N	N	⇨	Not an issue that would lead directly to damaging activity.
	Fire	M	M	H	⇨	Fire is a risk to some sites, as some shafts/adits have timber elements that are at risk.
	Structural inadequacy	H	H	VH	⇗	Some shafts and adits and pits are structurally unstable because of rotted structural supports, or collapse of collars/portals.
	Environmental factors • weathering • invasive vegetation • erosion	 H H H	 H H H	 VH VH VH	 ⇗ ⇗ ⇗	Susceptible to weathering of structural elements, erosion of earth works, and disturbance by roots of shrubs and trees. Potential damage coincidental to weed eradication works.
	Management action	M	L	H	⇨	Potential risk from management actions including visitor safety works, erosion remediation, and incompatible development, such as for interpretation.
hut site, chimney, masonry wall	Visitor use	H	M	H	⇗	Walking over sites and disturbance of walls and artefacts an impact avoidable by information and planned tracks and barriers. Metal detecting a potential risk.
	Vandalism and rubbish dumping	H	L	H	⇨	Little vandalism as yet, but may increase with greater publicity of sites.
	Lack of use	L	N	N	⇨	Not an issue. use is as an artefact in the landscape.
	Lack of interpretation	M	M	H	⇗	Leads to ignorance of values and inadvertent/intentional damage
	Fire	M	L	M	⇨	Fire is a risk to some sites which have timber elements.

Historic site type	Risk	Extent of risk VH, H, M, L, N	Present impact VH, H, M, L, N	Potential impact VH, H, M, L, N	Trend ⇨,⇗,⇧,⇘,⇩	Analysis of Risk
	Structural inadequacy	VH	H	VH	⇗	Most standing stone walls/chimneys are unstable or potentially so.
	Environmental factors • weathering • invasive vegetation • erosion	 VH M VH	 VH M VH	 VH M VH	 ⇗ ⇗ ⇗	Susceptible to weathering of structural elements, erosion of archaeological deposits and embankments, and disturbance by roots of shrubs and trees. Potential damage also coincidental to weed eradication works (management risk).
	Management action	M	L	H	⇨	Potential risk from management actions including visitor safety works, track construction, erosion remediation, weed eradication, and incompatible development, such as for interpretation.
creek bank workings, sluicing sites	Visitor use	L	L	M	⇨	Potentially damaged by fossicking activity.
	Vandalism and rubbish dumping	L	L	L	⇨	Little vandalism occurs to such sites. However, rubbish dumping could be considered vandalism, and is a real problem in diminishing aesthetic perceptions of the landscape.
	Lack of use	N	N	N	⇨	Not an issue
	Lack of interpretation	N	N	N	⇨	Not an issue that would lead directly to damaging activity.
	Fire	L	L	L	⇨	Fire generally not a risk, as few constructed components remain.
	Structural inadequacy	L	L	L	⇨	Few structural remains.
	Environmental factors • weathering • invasive vegetation • erosion	 H L VH	 H L H	 H L VH	 ⇗ ⇨ ⇗	Susceptible to erosion of creek banks and sluice faces. Vegetation generally stabilises sites. Potential damage coincidental to weed eradication works.
	Management action	L	L	H	⇨	Potential risk from management actions including visitor safety works, erosion remediation, weed eradication, and incompatible development, such as for interpretation.
battery, mine structures	Visitor use	H	M	H	⇨	Walking over sites and disturbance of walls and artefacts an impact avoidable by information and planned tracks and barriers. Metal detecting a potential risk.
	Vandalism and rubbish dumping	H	L	H	⇨	Little vandalism as yet, but may increase with greater publicity of sites.
	Lack of use	L	N	N	⇨	Not an issue. use is as an artefact in the landscape.
	Lack of interpretation	M	M	H	⇨	Leads to ignorance of values and inadvertent/intentional damage

Historic site type	Risk	Extent of risk VH, H, M, L, N	Present impact VH, H, M, L, N	Potential impact VH, H, M, L, N	Trend ⇨,⇗,⇧,⇘,⇩	Analysis of Risk
	Fire	M	L	M	⇨	Fire is a risk to some sites which have timber elements, such as building remains and battery beds. Falling timber a risk.
	Structural inadequacy	VH	H	H	⇗	Most standing stone walls/chimneys are unstable or potentially so.
	Environmental factors • weathering • invasive vegetation • erosion	 VH M VH	 VH M VH	 VH M VH	 ⇗ ⇗ ⇗	Susceptible to weathering of structural elements, erosion of archaeological deposits, tailings, races and embankments, and disturbance or structural remains by roots of shrubs and trees.
	Management action	M	L	H	⇨	Potential risk from management actions including visitor safety works, track construction, erosion remediation, weed eradication, and incompatible development, such as for interpretation.
Standing buildings	Visitor use	L	L	H	⇨	Few (if any) standing buildings are currently accessible, but high visitor use could be a risk factor.
	Vandalism and rubbish dumping	M	L	H	⇨	Strong potential as access improves.
	Lack of use	VH	M	VH	⇗	Very high risk factor, as increases decay, vandalism, fire risk and management risk (removal of problem building).
	Lack of interpretation	M	L	H	⇨	Can lead to ignorance of values and inappropriate changes.
	Fire	VH	L	VH	⇨	High risk of destruction of place.
	Structural inadequacy	H	M	H	⇗	Ongoing risk, requiring cyclical maintenance program.
	Environmental factors • weathering • invasive vegetation • erosion	 H L L	 M L L	 H L L	 ⇗ ⇨ ⇨	Weathering is a risk factor, in the absence of a maintenance program and appropriate use. Generally vegetation and erosion are not risk issues.
	Management action	H	L	H	⇨	Incompatible use decisions, deferment of maintenance, and inappropriate changes are all risk factors.
Cultural landscapes	Visitor use	M	L	H	⇨	High visitor use could be a major risk factor in the conservation of some cultural landscape values, as high use might lead to increased facilities, barriers, vehicles and people which could become damaging visual elements in the landscape as well as conservatio risks to physical features. .
	Vandalism and rubbish dumping	M	L	H	⇨	Strong potential as access improves.

Historic site type	Risk	Extent of risk VH, H, M, L, N	Present impact VH, H, M, L, N	Potential impact VH, H, M, L, N	Trend ⇨,⇗,⇧,⇘,⇩	Analysis of Risk
	Lack of use	N	N	N	⇨	Not an issue. Change in use (a management action) is a far more important risk.
	Lack of interpretation	M	L	H	⇗	Can lead to ignorance of values and inappropriate changes.
	Fire	M	L	H	⇨	Risk of destruction of cultural features. Impact o vegetation is not necessarily a cultural heritage impact, unless historic plantings are destroyed..
	Environmental factors • weathering • invasive vegetation • erosion	 L M M	 L L L	 L H H	 ⇨ ⇗ ⇨	Vegetation growth is a risk to the phyiscal and aesthetic values of landscapes. Erosion is a risk to archaeological sites, buildings and landscape features.
	Management action	VH	L	VH	⇨	Incompatible use decisions, deferment of maintenance, and inappropriate changes are all high risk factors.

6 CONSERVATION POLICIES AND STRATEGIES

6.1 GENERAL POLICIES FOR THE PARK

Parks Victoria is committed to compliance with the best standards of conservation practice in its management of the Castlemaine Diggings National Heritage Park. The policies below recognise the the *Burra Charter—The Australia ICOMOS Charter for Places of Cultural Significance* as the primary document establishing those standards.

The primary obligation arising from the significance of the place is the conservation of the cultural significance of individual places, groups of places, and cultural landscapes within the Park. This obligation is reflected in the general and specific policies below.

The second obligation is to present and interpret these places to the public, as part of the community's shared history and heritage. Some places have a high potential for visitor use and interpretation, based on their significance and the interest of their remains, their robustness to withstand visitation, and the relative ease of their access and management. Other places would not be highlighted for visitation, but would still require active management and conservation to varying degrees.

In this context, two categories of management are defined which are reflected in the policies:

1. **Promotional management**: where places are easily accessible and a high interest to visitors. The management objective is to facilitate safe and controlled visitor access, with quality interpretation. Facilities developed to pursue promotional management would normally comply with the Parks Victoria Visitor Services Levels categories 'mid' to 'very high'.

   The works and strategies suggested in this plan for promotional management should be seen as provisional, so as not to pre-empt the development of an Interpretation Plan and Tourism Plan.

   Works associated with promotional management might include;
   - creation of discrete car Parks and access tracks;
   - track location, boardwalk and barrier construction to minimise foot traffic near foundations;
   - track development leading to interpretation/viewing points;
   - design and installation of interpretative facilities and materials;
   - fencing around fragile sites, sufficient to discourage access but not to prevent interpretation;
   - site protection and conservation works;
   - pest species control;
   - maintenance of abandoned machinery;
   - advertised links to other agencies involved in heritage tourism promotion;

- specify type of quality interpretation.

2. **Routine management**: where places are more remote from roads or visitor facilities, and visitation is a low-impact 'discovery' experience. The management objective is to minimise damage and deterioration from natural processes and human disturbance. Interpretation would be by controlled group-access programs (such as ranger guided walks), or by carry-in information. While signage might be appropriate at some sites, such interpretation would be low-key, inexpensive and discrete, to indicate significance rather than in the expectation of regular visitation. Routine management would not normally require visitor facilities, but where they are called they would normally comply with the Parks Victoria Visitor Services Levels categories 'very basic' to 'mid-level'.

   Works associated with routine management might include;
   - restricting vehicular access, with road-head Parking where appropriate, to ensure only foot access to heritage places, though in general walking tracks would not be constructed;
   - in limited cases, provision and maintenance of self-guide signs (as at Parking areas) and leaflets, which stress the absence of tracks and direction signs;
   - site protection, stabilisation and other conservation works;
   - pest species control;
   - maintenance of abandoned machinery.

In both categories of management, ongoing monitoring of the effectiveness of management practices, the condition of places, and the success of interpretative works and materials, should be carried out as part of an established monitoring program.

The definitions for terms used in this report are those adopted by Australia ICOMOS in the *Burra Charter* as revised November 1999). [i]

Place means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.

Fabric means all the physical material of the place including fixtures, contents and objects.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Maintenance means the continuous protective care of the fabric, and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction.

Preservation means maintaining the fabric of a place in its existing state and retarding deterioration.

Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

Reconstruction means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric.

Adaptation means modifying a place to suit the existing use or a proposed use.

Use means the functions of a place, as well as the activities and practices that may occur at the place.

Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Interpretation means all the ways of presenting the cultural significance of a place.

POLICIES

Policy 1 Parks Victoria recognises that the primary objective of management in the Castlemaine Diggings National Heritage Park is the protection, conservation, and presentation of the Park's cultural heritage values, as set out in the Statement of Significance in this plan.

Policy 2 Parks Victoria will implement an ongoing program of identification, protection and conservation of places of cultural significance within the Park. In the case of groups of sites and landscapes, it will identify the elements of significance that link the various components making up the place.

Policy 3 Parks Victoria will conserve the cultural significance of the Park and its individual sites in accordance with the *Burra Charter* of Australia ICOMOS.

Policy 4 Parks Victoria will avoid or minimise risks to places of cultural significance from proposed works by applying a risk assessment process before approving works in the Park.

MANAGEMENT STRATEGIES

1. Publicise and promote the objectives of management of the Castlemaine Diggings National Heritage Park, including both Aboriginal and mining heritage aspects.

2. Implement programs of heritage site identification in areas where knowledge is inadequate. The identification of Aboriginal sites and predictive modelling of potential Aboriginal site survival is one such area.

3. Apply Parks Victoria's risk assessment processes to all works proposals in the Park.

4. Consider and make any adjustments to management in the light of any outcomes of Native Title Claim over the region, including the land of the Mount Alexander Diggings.

5. Consistent with cultural significance , develop works and actions to achieve *promotional management* of the following places, using the appropriate level of facilities outlined in the *Visitor Service Levels Framework*;

    - Vaughan Mineral Springs
    - Eureka Reef Visitor Area
    - Spring Gully Visitor Area
    - Garfield Waterwheel Visitor Area
    - Forest Creek Diggings Area
    - Sebastopol Gully Visitor Area
    - Specimen Gully Visitor Area
    - Pennyweight Flat Cemetery
    - Wattle Gully Mine
    - Warbton's Bridge —fossicker's camp (proposed)

6. Consistent with cultural significance , develop works and actions to achieve *routine management* of all other sites on an as-needs basis, and develop an annual program for such work.

6.2 MANAGEMENT, CONSERVATION AND INTERPRETATION OF SITES, GROUPS OF SITES AND CULTURAL LANDSCAPES

The overarching objective of management is to maximise the conservation of sites and features that combine to give the Park its heritage significance. However, some sites and features are more important in maintaining the significance and heritage character of the landscape than others, and the financial constraints preclude the equal management of the total cultural resource over such a large area. Therefore some prioritising of conservation efforts is required.

It appears inevitable that many sites and features, especially those with very subtle visible above-ground evidence, will be disturbed or masked by vegetation growth or erosion over time. Conservation at these sites might be limited to the remediation or

prevention of catastrophic damage (such as by deep gully erosion), and the general protection from human actions (such as relic hunting). Sites with standing remains contribute more substantially to the understanding of the cultural landscape, and require somewhat more proactive conservation action, such as stabilisation and protection from environmental and human threats. Sites, groups of sites, and landscapes of high individual significance might require conservation which includes stabilisation, preservation and restoration, while sites with high interpretative value might include reconstruction as an appropriate conservation action.

POLICIES

Policy 5 Parks Victoria will develop a better understanding of the Aboriginal occupation of and traditional interests in the Park area, and base planning and management related to traditional interests and uses on recognition and respect for the traditional and contemporary relationship of Aboriginal peoples with the land.

Policy 6 Parks Victoria will retain the significance of places and landscapes of cultural significance by avoiding or minimising damage and deterioration through natural processes and human disturbance. It will avoid actions, remove threats and remediate environmental damage that diminish cultural significance.

Policy 7 Parks Victoria recognises that vegetation forms a critical element of the culturally significant landscape of the Park. Non-indigenous plants may be a feature of a site or landscape that contributes to the cultural significance of the place. Regenerating box-ironbark forest vegetation is recognised as being significant as an artefact of disturbance of the environment by mining and is to be managed as a powerful interpretative tool.

Policy 8 Parks Victoria will commit itself to innovative management of the Castlemaine Diggings as the first of the new category of Cultural Heritage Parks, to promote the new park concept, and to link park management to local and regional economic and community development.

Policy 9 Parks Victoria will stimulate public interest in, and understanding of, the cultural significance of the Park by providing visitor and interpretative facilities at selected sites based on an interpretative works program, and allowing informal access to other sites. The standard of visitor facilities will be defined in accordance with Parks Victoria's *Visitor Service Levels Framework*.

Policy 10 Parks Victoria will ensure public safety by means compatible with the significance of the Park and places of cultural significance within it.

MANAGEMENT STRATEGIES

7. In compliance with the Government's response to the EEC Box-Ironbark Forests Report[35], base planning and management related to traditional Aboriginal interests and uses on recognition and respect for the traditional and contemporary relationship of Aboriginal peoples with the land. Aboriginal community interests in the management processes might relate, among other issues, to planning for tourism, interpretation, scientific investigations and commercial interests.

8. Develop and implement an annual program of site protection, stabilisation and conservation works for promotional management sites. This should include the removal of encroaching or damaging vegetation, and remediation of threatening or damaging erosion features.

9. Develop and implement a monitoring and protective works program for routine management sites. The emphasis of such a program would be the slowing of natural decay processes and the stabilisation/preservation of significant fabric, rather than more active restoration or reconstruction work—it would remove threatening or damaging vegetation and stop or divert erosion features rather than reconstruct walls or excavate already deposited silt accumulations. Priorities should be based on a consideration of site types and location, condition and identified risks, especially from fire and erosion. Implementation actions might include;
    - categorisation of archaeological sites and landscape features to guide the prioritisation of conservation action. For example, categories might include;

Category of site	**Appropriate conservation action**
Sites with little or no standing above ground evidence	remediation or prevention of catastrophic damage (such as by deep gully erosion), and the general protection from human actions (such as relic hunting).
Sites with standing remains	conservation actions might include stabilisation, preservation and protection from environmental and human threats (erosion, vegetation damage, observed visitor damage)
Sites, groups of sites, and landscapes of high individual significance	might require stabilisation, preservation and restoration.
Sites, groups of sites, and landscapes of high individual significance and with high interpretative potential	might include stabilisation, preservation, restoration and reconstruction as an appropriate conservation actions.

35 *Box-Ironbark Forests and Woodlands: A Community Landscape*, 2002.

- periodic inspection of habitation sites, especially those with standing remains, and the removal of encroaching or damaging vegetation, and remediation of threatening or damaging erosion features;
- more frequent inspection and remediation, stabilisation and protection works at sites accessed by management tracks and roads;
- targeted inspection and remediation programs following specific events, such as bush fires, that might threaten the collapse of standing features, or accelerate erosion, tree-falls or weed regeneration;
- periodic inspection and remediation work in areas with groups of archaeological sites or cultural landscapes of particularly high individual significance;
- involvement of local action groups (such as landcare/bushcare groups) in erosion and weed control and remediation, supervised by Parks Victoria staff or carried out to approved remediation plans.

10. Develop a vegetation management program that identifies non-indigenous plants that contribute to the significance of the place (as opposed to self-seeding wildings and invasive weeds) and protects them, while allowing the removal of weeds and the reduction of spread of exotic species. The program (and the Plan of Management when written) should address the management of the regenerating box-ironbark forest, allow for the selected removal of plants threatening or damaging cultural sites, and address the issue of possible selective culling of coppice boughs to encourage more rapid development of a mature and viable forest. The use of otherwise undesirable plant species for specific management purposes (such as blackberries providing protection of shafts or sensitive sites) should not be precluded by this policy and management program.

11. Develop supplementary Heritage Action Plans for specific sites, groups of sites, or cultural landscapes that are complex places warranting individual assessment of significance and specific policy development. An HAP already exists for Garfield Wheel, and others may be necessary for Specimen Gully, Eureka Reef, Spring Gully, Vaughan Mineral Springs, Forest Creek Gold Diggings, Wattle Gully Mine, Sebastopol Gully, Sailors Gully, Middleton's Creek, and Red Hill. Priority for the development of supplementary HAPs should be given to those places:
    - being developed for visitor use;
    - subject to works for public safety or presentation;
    - subject to active conservation works (beyond routine maintenance and threat remediation).; or
    - are otherwise subject to substantial proposed change.

12. Consistent with the *Visitor Service Levels Framework*, develop a distinct style for site facilities based on Parks Victoria Facilities Design Manual. Also develop a standardised lettering and colour scheme.

13. Restrict all vehicle traffic to formed roads. Given the ease of leaving the roads in some areas, traffic barriers should be provided at key points.

14. Bicycle riding and off road vehicles should be permitted on formed roads and specifically identified vehicle tracks.

15. Permit horse riding on formed roads and specifically identified vehicle tracks.

16. Permit controlled dog walking.

17. Work with Prospectors and Miners Association of Victoria, Mineral Petroleum Victoria and Heritage Victoria to develop a Code of Practice to be applied to the whole Park and agreed approaches to monitoring the occurrence and level of any disturbance of cultural sites or landscapes through fossicking.

    Monitoring should have a given timeframe, say one or two years, after which the disturbance of cultural sites and the success of the voluntary Code of Practice would be reviewed.

    Options for responding to the findings of the monitoring process, depending on the level of disturbance of cultural remains observed, would include:
    - allowing fossicking to continue with the use of the Code of Practice;
    - zoning to restrict fossicking to non-sensitive areas;
    - by-laws to prohibit the disturbance of cultural material;
    - by-laws to prohibit the use of metal detectors in the Park:
    - the banning of all fossicking in the Park.

    Ongoing monitoring following the review would be necessary to evaluate the success of the chosen management approach and any additional management action that might be required.

18. Within significant cultural landscapes, plan for road and track development and maintenance, vegetation management, erosion control, and pest species control all to be compatible with the retention of significance.

19. Develop and implement an annual program of interpretative works, guided by an interpretation plan. The interpretation plan should take into account the promotion of partnerships with the Shire of Mount Alexander. Interpretative works and visitor facilities will meet current Parks Victoria environmental and facility standards for key visitor destinations, within any limitations imposed by heritage conservation considerations.

    The preliminary list of key sites for the most active level of interpretation, prior to the development of an Interpretation Plan (which might change these priorities) should be those sites where *promotional management* is recommended at 6.1 above, these being;

Key interpretation sites	**Interpretative emphasis**
Vaughan Mineral Springs	Historical use and people's experiences of the mineral springs, recreation, and the Chinese

	presence and experience on the field.
Eureka Reef Visitor Area	The varied approaches to mining on the field, lifestyles and human experiences, continuity of mining, the diversity of technologies represented, and Aboriginal occupation of the land.
Spring Gully Visitor Area	Reef mining techniques, people's experiences of mining and living of the field, and revegetation processes.
Garfield Waterwheel Visitor Area	Use of water as a power source, and the history of the water schemes and the people who built them and worked with the water.
Forest Creek Diggings Area	Hydraulic sluicing technology and practice, and general introduction to the mining heritage of the Park, including origins of gold and how it was won, and people's experiences of mining.
Sebastopol Gully Visitor Area	The 1850s alluvial mining landscape and sites, and the diggers experience of working and living on the field..
Specimen Gully Visitor Area	Discovery of gold and early company mining.
Pennyweight Flat Cemetery	Mining communities, disease and death.
Wattle Gully Mine	Large company reef mining and processing, and the life of reef miners.

Archbold's Gold Treatment Works, Herons Reef Gold Diggings, Duke of Cornwall and parts of Welsh Village, while not in the Park offer complementary parts of the interpretative story (living on the diggings, Cornish pumping and winding technology and ore processing technology), and close liaison on interpretation should be encouraged.

Walking tracks developed at visitor areas should be sited, constructed and signposted consistent with the conservation of significance of adjacent archaeological sites and cultural landscapes. Assist in the development of the Great Dividing Trail (Dry Diggings and Leanganook sections) as a tool to promote and interpret the Park.

20. Where consistent with an Interpretation Plan, when developed:

- Develop a program of group walks / car tours which should be advertised in advance to maximise patronage.

- Update the Mount Alexander Diggings guidebook, or similar, to ensure that the most up to date is always available. Re-badging to reflect the joint interests of the Shire Council and the National Heritage Park should be considered.

- Investigate the viability of developing a Chinese Heritage Centre to house artefacts, documents and art showcasing the multicultural nature of the Park's mining history. The Chinese community and the management of other major Chinese museums / mining interpretative facilities should be consulted and involved as appropriate. Potential locations include the vicinity of the Vaughan Chinese Burial Ground, and the Forest Creek Diggings Area, among others.

21. Interpretation and associated works are to be viewed as conservation tools, and are uses that have to be compatible with the retention of significance.

22. Encourage research into the social and technological history of the Park. Incorporate the findings of the current PhD research projects on Chinese occupation of the field in the conservation and interpretation programs.

23. Record and maintain historical place names within the Park.

24. Work with others to develop digital mapping linked to cultural databases to cater for and enhance personalised touring, and promote the linking of websites and cross promotion.

25. Develop an appropriate management approach to the coppiced regenerated box/ironbark forest in the context of the cultural landscape which:
    a) recognises the various different coppicing styles aplied by different forest users over time; and
    b) ensures thinnings left on the ground do not obscure cultural heritage values and/or impact on access to sites selected for interpretation and visitation.

26. Work with others to review and critique the development of cultural heritage interpretation and management in regional Victoria and the marketing and promotion of cultural tourism.

6.3 STATUTORY OBLIGATIONS

Places entered in the Victorian Heritage Register or Heritage Inventory will be managed in a way that recognises the statutory obligations, and relevant permits and consents will be sought. Where appropriate, such exemptions as would streamline management will be negotiated with Heritage Victoria. This might include agreeing on approved management practices within a Memorandum of Understanding.

Preliminary consideration of the exemptions appropriate to gold mining sites (Heritage Victoria draft 29/3/99) suggests the following exemptions that would be relevant to management of sites in the Park:

- Exemptions for all classes of work involved with;
  - Safe and controlled access;
  - Information signage;
  - on-site works, limited to stabilisation and protective works;
  - pest species control;
  - public safety.

- Exploration work, limited to preliminary exploration by geological, geophysical and geochemical surveys, and archaeologically guided drilling.

- Fire suppression and fuel reduction activities.

POLICIES

Policy 11 Parks Victoria will comply with both the spirit and letter of all relevant statutory obligations in respect to cultural heritage and develop, with State and Commonwealth agencies where necessary, agreed management practices that minimise the need for referral of works for approval. This will apply to agencies such as Heritage Victoria, Aboriginal Affairs Victoria and Environment Australia.

MANAGEMENT STRATEGIES

27. Manage places in the Victorian Heritage Register and archaeological sites, including those already in the Heritage Inventory, in both the spirit and letter of the legislative obligation.

28. Negotiate with Heritage Victoria such exemptions incorporating agreed management practices, as would streamline Parks Victoria's management.

29. Authorise and train rangers as inspectors under the Victorian Heritage Act 1995.

6.4 COMPATIBLE USES AND POTENTIAL USE OPPORTUNITIES

As discussed at 4.4 above, all activities in the Park should be compatible uses, and wherever possible those uses should actively enhance the conservation and presentation of the significance of the Park. Such compatible uses might include:

- passive recreation (including short and long distance walking trails, and potentially cycling and horse riding)
- interpretation (see 6.2 above)
- controlled commercial tourist activities
- controlled mining
- controlled fossicking (see 6.2 above)
- activities, displays, installations and events (not directly related to heritage interpretation) to promote and stimulate awareness of the Park among visitors and in the local community. These activities must pose no risk to heritage significance.

POLICIES

Policy 12 All uses within the Park will be compatible with the cultural significance of the Park and of individual sites within it, and involve no, or minimal impact on significance. Where possible, compatible uses should be ones that actively contribute to the understanding, conservation and presentation of the significance of the Park.

MANAGEMENT STRATEGIES

30. Mining should only be allowed under the controls outlined in the current zoning requirements (100m sterile zone, portal access from outside Park or existing lease areas, limited impact ventilation shafts inside Park). Assessment of any potential impact on heritage resources should be considered in detail before approval, and monitored as necessary during mining.

31. In the development of an interpretation plan, identify potential commercial tourism activities, define the sites likely to be involved, assess risks and implement a program to maximise conservation and interpretation, and control potential adverse impacts. Vaughan Springs has been identified as one such opportunity, and Forest Creek Diggings Area and Wattle Gully Mine may be others.

6.5 MANAGEMENT ARRANGEMENTS, FUNDING OPPORTUNITIES, AND COMMUNITY INVOLVEMENT.

Parks Victoria, recognising the strong community interests and involvement in the management of the Park, expressed particularly through the cooperative arrangements entered into with the Mount Alexander Shire and FOMAD, is committed to maintaining and expanding community involvement. This commitment brings with it

the need to ensure that standards of interpretation, conservation and works are clearly articulated and conveyed in an understandable form to all those involved in management activities.

This approach is consistent with the Government's response to the EEC Box-Ironbark Forests Report[36], which identifies the forests as a 'community landscape'.

A range of funding opportunities exist and new ones will arise during the life of this plan. Parks Victoria will continue to work cooperatively with key stakeholders and community groups to identify and coordinate the applications for funding. The Mount Alexander Diggings Management Board shall maintain a business plan containing a list of works and projects needing funding, so that bids can be quickly developed when opportunities arise.

[36] *Box-Ironbark Forests and Woodlands: A Community Landscape*, 2002.

POLICIES

Policy 13 Parks Victoria will ensure that appropriate expertise (in fields such as history, archaeology, cultural heritage management and cultural tourism) is utilised in the management of the park, and that in-house expertise in these fields is recruited as needs dictate.

Policy 14 Parks Victoria will facilitate adequate and appropriate training in cultural heritage management for those individuals involved in management of the Park.

Policy 15 Parks Victoria will encourage and seek to develop community interest and involvement in the conservation and management of the Park, where appropriate in conjunction with the Mount Alexander Shire Council.

Policy 16 Parks Victoria will develop and foster a partnership with the Shire of Mount Alexander to maximise the conservation, promotion, marketing and appropriate management of the Park and related heritage places outside the Park, through the local planning scheme and by joint ventures.

MANAGEMENT STRATEGIES

32. Develop and implement an induction course for all existing and new rangers and work crews to introduce them to the history of the Park and concepts of cultural significance, and the principles and practices of cultural heritage management, and the inherent dangers of historic mining sites.

33. Require the attendance of contractor staff, tour operators and commercial operator staff attendance at a staff induction course by making it a requirement of contracts and licenses.

34. Identify external advanced training courses in archaeological site management and/or cultural heritage management practice, or develop such courses internally, and encourage and facilitate key staff attendance.

35. Encourage and support ‘Friends’ and other like-minded organisations whose objectives are consistent with this plan, such as the Great Dividing Trail Association, Mount Alexander Shire Weeds and Streamside Board, North Central Catchment Management Authority, Castlemaine Pioneers and Old Residents Association, Chewton Domain Society, Friends of Vaughan Springs, Friends of Kalimna Park, Golden Point Landcare Group, Expedition Pass Reservoir Committee of Management, Specimen Gully Landcare Group, Castlemaine Field Naturalists, Castlemaine Land Care Group, Mount Alexander Shire Walks Committee.

36. Encourage and support structured volunteer involvement in Park management tasks.

37. Develop a Community Involvement Strategy that identifies among other things:

- the range of management tasks appropriate for community involvement and skills;
- the range of community groups that can offer management assistance;
- the ethnic and regional groups which made up the gold rush population and forms the base of the current community;
- the limits and constraints that would apply to community involvement in relation to issues such as public safety, works control, funding support and legal liability;
- the level and nature of Parks Victoria direct assistance for community activities (planning, funding, staff involvement, publicity, works programming etc);
- the consideration of the use of International Volunteer Programs and the use of the Vaughan House for volunteer accommodation.

38. Maintain close liaison with the Shire of Mount Alexander to ensure a clear understanding of activities of mutual interest, and to develop partnership approaches to projects beneficial to both the Park and the Shire, such as the presentation of interpretative material in the Castlemaine Market building and the functioning of the Mount Alexander Diggings Management Board. Also maintain close liaison with the Shire of Mount Alexander in other areas such as Arts, Weeds and Streams, and Walks & Trails.

39. Facilitate the development, in conjunction with the Shire of Mount Alexander, of a 'neighbouring lands policy', to address such issues as:
    - the nature and scale of adjacent developments that might be detrimental to heritage values in the Park;
    - the control of fire hazard and the facilitation of fire fighting in areas adjacent to heritage sites;
    - the control of weed and feral animal species fighting in areas adjacent to heritage sites;
    - the control of unauthorised vehicle access;
    - the conservation of significant cultural sites outside the Park;
    - the related heritage-compatible management of those areas of the Park adjacent to non-Parks Victoria land to reduce hazards for neighbouring land.

40. Cooperate with Mount Alexander Shire Council to support the effectiveness of management provisions in the 1999 *Mount Alexander Planning Scheme*, including the application of the Heritage Overlay and a Significant Landscape Overlay, in relation to the management of freehold land adjoining and within the Park.

6.6 COSTED SCHEDULE

The following provides very general cost estimates for ongoing management of the cultural resources of the Park on a broad program basis.

There are a number of planning processes still to take place before more than maintenance and existing conservation and interpretative programs can commence within the Park. The specific requirements for conservation works, visitor facilities and interpretative infrastructure and materials have not been proposed in detail in this plan, so only very broad indicative costs can be proposed.

One-off interpretative facilities, such as a Chinese Centre or development of the Wattle Gully Mine have not been planned at all, so no costing for these is indicated here. The scale of these and other programs of interpretative works will be more clearly identified through the development of an Interpretation Plan which integrates all proposals Park-wide and evaluates need, visitor support and economic viability of such facilities.

The staff numbers indicated in the table below are in addition to existing staff, and may prove to be conservative, especially when proposed conservation and interpretative program works get under way. Additional staff resources may be specified as part of the latter program. A number of the costs are for specific programs that last one, three or five years.

Program description	HAP Strategy	Indicative new cost
One-off or short-term costs		
Interpretation Plan development	19, 20	$30,000
Site identification program, Aboriginal and historic sites.	2	$30,000 pa for 3 years
Develop supplementary HAPs (9 + places)	11	$18,000 pa for 5 years
Training—development of induction and advanced training courses for staff, contractors and tour operators.	30, 31, 32	$35,000 devpt
Recurrent costs—Conservation, monitoring, interpretation and liaison		
Conservation works	6, 8,	$90,000 pa
Interpretation works	5, 19, 20	$20,000 pa
Publicity, liaison and promotion	1, 33, 34, 35, 36, 37	0.25 staff member + $5,000 pa
Monitoring of site condition and effectiveness of management actions.	9	0.25 staff member
Program management		1 staff member pa
Recurrent costs—Training		
Training—induction and advanced training for staff, contractors and tour operators.	30, 31, 32	$10,000 pa

Year 1 $238,000 + 1.5 staff (plus existing staff and funding)

Year 2 $173,000 + 1.5 staff (plus existing staff and funding)

Year 3 $173,000 + 1.5 staff (plus existing staff and funding)

Year 4 $143,000 + 1.5 staff (plus existing staff and funding)

7 FURTHER INVESTIGATION AND RESEARCH

- Findings of the PhD programs currently underway should be incorporated into the significance assessment and policy development areas of the plan when they become available.

- An Interpretation Plan and a Tourism Plan should be developed to complement this HAP and guide the Parks interpretation and visitor management.

- The future operation of the Wattle Gully Mine and its visitor use potential should be considered in detail, and, if appropriate, the visitor facility leasing arrangements worked out. The status of the contents and machinery of the mine should be clarified and the future of the contents and machinery in Parks Victoria ownership secured.

- Investigate, in the context of an Interpretation Plan and a Tourism Plan, the viability of developing a Chinese Heritage Centre within or adjacent to the Park to house artefacts, documents and art showcasing the multicultural nature of the Park's history.

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APPENDIX A

GLOSSARY OF MINING TERMS

APPENDIX A

GLOSSARY OF MINING TERMS

The following terms are based on Pearson and McGowan 2000.

adit	A horizontal or gently inclined passage or opening from the surface into a hillside, for the purposes of exploring, accessing an ore deposit, removing mined material, drainage, or ventilation. Sometimes called a *drive*.
alluvial gold, alluvial deposit	Gold removed from its parent rock by erosion and incorporated in water deposited alluvium (silt, sand, clay, gravel etc)
alluvial mining	The extraction of gold from alluvial deposits. he mining was generally shallow, by pits and shafts, or by ground sluicing or hydraulic sluicing, or by dredging.
battery / stamper battery	A machine with sets of *stampers* that rise and fall onto metal bearing ore to crush and separate the components in the presence of water. The stamps operate in a *mortar box* with a metal screen regulating the size of the discharged material (*slimes*).
bucket dredge	A gold recovery plant mounted on a pontoon and equipped with digging, washing and concentrating apparatus, although some of this could be located on shore rather than on the dredge itself. The material was excavated by buckets on a continuous belt, the dredge moving under its own power and cutting its own channels and ponds.
Chilean mill	A circular trench in which two large stones with iron rims rotated around a central axis. The mill was horse powered, and used to crush ore. Modern steel versions are still used.
chlorination	A method of capturing gold from ore, used most commonly in the 1880s and 90s but rapidly replaced by the *cyanide* process. The method involved roasting the ore, usually in *reverberatory furnaces*, then dissolving the material containing the gold in chlorine solution in wooden vats. The gold was precipitated from the gold chloride solution with ferrous sulphate, then filtered. It was much more expensive and not as effective as *cyanidation*.
collar	The timber, steel or masonry framework erected around the entrance to a *shaft* to prevent the ground surface collapsing into the shaft. The collar is sometimes extended part of the way up a *headframe* to prevent items falling into the shaft from the ground level.
costean / prospect cut	A trench or slit cut into the ground to expose the geology. Used as a prospecting technique to identify the location of reefs or ore bodies.
cradle	A timber box, open at one end, resting on curved rockers. The box was fitted with two movable slides with *riffles*, and the base of the box also had riffles. *Washdirt* was placed in a removable hopper on top of the cradle, and the earth washed through the hopper's perforated base by ladling water into the hopper. , The dirt then washing over the riffle plates below as the cradle was rocked by hand.
cyaniding / cyanidation	A process of extracting gold by treating the finely crushed ores with a solution potassium cyanide or sodium cyanide in large tanks or 'leaching

	vats', which are commonly found on gold mining sites. The gold was then recovered by filtration and the precipitation of gold on metallic zinc. Cyaniding came into use in Australia from 1892, and replaced the more expensive and less effective *chlorination* process. It greatly improved the efficiency of gold retrieval from low-grade ores. Cyanide tailings are a distinctive bone-white colour
deep lead mining	The mining of an auriferous or tin bearing alluvial deposit at a considerable depth from the surface in the old course of a buried stream, and entirely covered by basalt or by soil or weathered rocks.
flume	A trough or launder usually mounted on trestles and used to carry water over a depression, a water course, or around the side of a cliff. Used in combination with *races* and pipes to carry water to or from workings and mills.
ground sluicing	The washing of shallow alluvial deposits with running water in a channel cut into the ground or bed rock, rather than in an elevated *sluice box*. The ground sluice was often lined with riffles, battens, wood blocks, or stones to prevent erosion of the floor and to increase the capture or ore. Ground sluicing required an adequate fall of land to allow sufficient flow of water through the sluice and for the water-born *tailings* to escape.
head / sluice head	A measure of water flow and volume. Used on those fields where water *races* were provided by companies other than those operating the particular mine drawing the water, in order to measure water usage and charge for it. A 'head' is usually given as one cubic foot of water per second. Races were sometimes referred to as carrying a certain number of sluice heads
hydraulic elevator / jet elevator	An arrangement used to lift alluvial material and water to a higher level, so that gravity *sluicing* could be effectively utilised. Introduced from the 1880s. A sump was dug in the base of the alluvial area, and a vertical pipe with a constricted throat was placed in the sump. A hydraulic hose was led to the base of the pipe, and a nozzle directed up it. Any dirt and gravel washed into the sump was blown up the pipe onto sluices above.
hydraulic sluicing / hydraulicking	The sluicing of deeply buried and often poor deposits with the assistance of high-pressure water hoses. Required a reliable water source and a suitable fall of water to the sluice nozzle (monitor) to provide sufficient pressure to hose down the overburden and wash material. Resulted in large open workings cut into hillsides, with high steep faces. High pressure hydraulic sluicing was introduced into Australia from California in the 1870s, having been invented there in 1852. Hydraulic sluicing was sometimes used on ground previously worked by ground sluicing, and remnants of ground sluicing are often found adjacent to the hydraulic face.
monitor	A large nozzle which directs a stream of water under high pressure on to alluvial ground. It was invented in 1870, had joints which allowed the nozzle to be swivelled to sweep the water jet across a face, and was used in *hydraulic sluicing*.
mullock	Waste, barren or uneconomic rock obtained in the course of mining. Either deposited in *mullock dumps*, generally seen as the long heaps extending from an *adit* or surrounding a *shaft* or *pit*, or used to backfill worked out *stopes*.
open cut	An excavation for the purpose of working an ore body or lode that is close to the surface.

panning	The method of testing *washdirt* or finely crushed lode material for heavy minerals by washing a quantity of it in a dish so that the clay, sand, gravel etc are removed and the mineral allowed to concentrate in the rim of the dish. A common early method used for prospecting.
pit	A depression, usually 2-3 metres in diameter, wider than it is deep. Commonly seen on alluvial fields where they are the remains of shallow *shafts* dug to access ore-bearing ground.
puddlers / puddling machine	Annular troughs 15-20 m. across in which dirt and water were mixed, and the contents thoroughly mixed and broken up by rakes attached to a long pole pivoted in the centre of the circle and pulled around by a horse walking around the outside of the puddler, or by an engine. This broke up intractable alluvium and clay, and allowed the heavy minerals to separate and fall to the bottom of the puddler, where it was cleaned up at intervals and final separation carried out by other means, such as panning and tomming.
quartz mining	The mining of gold from quartz veins or reefs, either from exposed quartz outcrops, or more commonly by way of shafts, drives and adits.
race	An open channel for conveying water. It can be a simple earth ditch, or lined with timber or metal, or a masonry structure, and often incorporated *flumes* to cross declivities and maintain a constant fall. Races ranged from short earthen ditches gathering storm water for opportunistic alluvial mining, to company-operated water supply channels many miles long and linked to supply and storage dams. A race supplying water to a workings or mill was a 'head race' while that removing water or tailings was a 'tail race'.
reef	A well-defined vein of mineralised ore.
roasting / roasting kilns or pits	The treatment of ore by heat and air in order to remove sulphur and arsenic, and, in early mining, to make ore more friable. The most simple form of roasting took place in pits or in kilns similar to lime kilns.
shaft	A hole that is deeper than its maximum dimension across at ground level. It may be vertical or inclined. Commonly seen on alluvial fields where they are dug to access *washdirt*, and in hard-rock country to access ore-bearing leads. Usually equipped with a windlass or headframe for raising material from the shaft.
sludge	The residue or tailings resulting from the *puddling* of *washdirt*. Sludge clogged up watercourses and caused them to be redirected.
sluice sluicing sluice box	Washing alluvial material through a channel with riffles (a set of bars or slats) in its base for the capture of a heavy mineral released from its surrounding material. A sluice box is a wooden box used for this purpose, while a *ground sluice* uses a channel cut into the ground.(see also *ground sluicing, hydraulic sluicing*)
stope	An underground excavation formed by the extraction of ore. Sometimes exposed at the surface by working an ore body upwards, or by later open cutting of the deposit (an 'open stope'). *Stulls* are inserted into the stope to support the roof and provide a working platform.
surfacing	The removal of surface soil for treatment to extract gold.
tailings	Rock, earth, gravel, sand etc that is the residue from the separation or other

	treatment of washdirt or ore. Different types of tailing can indicate different mining processes.
tribute / tributing	A contract under which a party of miners working on their own account ('tributers') gave the mine owner a proportion of all metal they mined. Often found in mines where the owner has ceased viable company operations, but where mineral can still be won.
Turbidite	A sedimentary rock deposited by a turbitity current, or recurrent episodes of turbidity.
washdirt	The auriferous gravel, sand, clay or cement in which the greatest proportion of gold is found.

APPENDIX B

CULTURAL LANDSCAPES AND CASTLEMAINE DIGGINGS NATIONAL HERITAGE PARK

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CULTURAL LANDSCAPES AND CASTLEMAINE DIGGINGS NATIONAL HERITAGE PARK

1. IDENTIFYING AND CATAGORISING CULTURAL LANDSCAPES

Every Australian landscape can be said to be a cultural landscape because of the impact of humans on modifying the naturally evolved ecological system from the Pleistocene onwards. It is this essence of the interaction of humans with the environment over a long time resulting in a distinctive landscape of features and patterns derived from that interaction which is of interest for all those involved in conserving cultural landscapes, irrespective of the level or hierarchy of the values expressed in that landscape. World Heritage listing which must consider the outstanding universal values of such landscapes, while national or State listing will consider the cultural values in the context of the chronological history of that nation or State.

The *Operational Guidelines for the Implementation of the World Heritage Convention* (1999) sum up succinctly the definition, selection and value of protection of cultural landscapes.

> Cultural landscapes are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal. They should be selected on the basis both of their outstanding universal value and of their representativity in terms of a clearly defined geo-cultural region and also for their capacity to illustrate the essential and distinct cultural elements of such regions (paragraph 36).
>
> The term "cultural landscape" embraces a diversity of manifestations of the interaction between humankind and its natural environment (paragraph 37).

Three categories of World Heritage cultural landscapes adopted in 1992 are described below.

CULTURAL LANDSCAPE CATEGORY	EXTRACT FROM PARAGRAPH 39 OF THE *OPERATIONAL GUIDELINES FOR THE IMPLEMENTATION OF THE WORLD HERITAGE CONVENTION*
i	The most easily identifiable is the **clearly defined landscape** designed and created intentionally by man. This embraces garden and Parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles.

ii	The second category is the **organically evolved landscape**. This results from an initial social, economic, administrative, and/or religious imperative and has developed its present form by association with and in response to its natural environment. Such landscapes reflect that process of evolution in their form and component features. They fall into two sub-categories: - a **relict (or fossil) landscape** is one in which an evolutionary process came to an end at some time in the past, either abruptly or over a period. Its significant distinguishing features are, however, still visible in material form. - a **continuing landscape** is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time it exhibits significant material evidence of its evolution over time.
iii	the final category is the **associative cultural landscape**. The inclusion of such landscapes on the World Heritage List is justifiable by virtue of the powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent.

Since 1992, 30 cultural landscapes have been inscribed on the World Heritage List.

Heritage Victoria's 2001 *DRAFT Guidelines for assessing the cultural significance of landscapes in Victoria* (supplementary to Heritage Victoria 'Registration Assessment Guidelines') outline the terms and steps to be used in assessment of landscapes. Terminology and typologies follow both World Heritage and the Burra Charter practice.

The guidelines relate to all places which have landscape elements or components, although some of these may not be considered specifically as a 'landscape' site:

- Some types of landscape, such as Parks, gardens and reserves, have already been commonly assessed by Heritage Victoria, and precedents exist for how these are considered on a day-to-day basis. While the guidelines clarify the assessment process for these places, they also extend to other landscape types.

- Landscapes which are significant for their natural values and pre-contact Aboriginal landscapes are not dealt with by the *Heritage Act 1995* or Heritage Victoria, and are covered by other legislation.

- 'Landscape character', whether urban, industrial or rural, should be distinguished from landscape heritage as a concept and is not dealt with in its own right here.

- Terminology and typologies follow both the World Heritage practice and the Burra Charter. It is valuable to note that a landscape as a heritage place will include knowledge of it through photos, paintings, poems etc, as well as its physical manifestation.

- *Cultural heritage significance* means aesthetic, archaeological, architectural, cultural, historical, scientific or social significance for past, present or future generations (Burra Charter 1999).

The general approach for assessing a cultural landscape is to consider factors and attributes progressively, from larger scales and a general context toward smaller scales and specific components and elements. This process differs in some ways from the assessment of places such as buildings, when the specifics of the structural fabric are often among the first components to be considered. Practical issues, such as scale and physical boundaries, are also considerations, and will in some cases determine how the assessment will proceed.

The following 'ABC' procedure provides a general framework for considering the landscape factors relevant for assessment, and can be undertaken as a 'step by step' process. Documentation of assessment should include use of graphics to support the material.

These factors are:

A – **A**rea and Environmental Context

B – **B**oundaries

C – **C**haracteristics relating to Historical Development

D – **D**istribution of Elements

E – **E**lements

Given the World Heritage cultural landscape types and Heritage Victoria's assessment procedure, it is possible to identify specific landscape units within the overall cultural landscape of the Castlemaine Diggings.

2. CULTURAL LANDSCAPES IN THE CASTLEMAINE DIGGINGS NATIONAL HERITAGE PARK

The Environment Conservation Council in its *Box-Ironbark Forests and Woodlands Investigation Report*, 1997, had a chapter (13) devoted to scenic landscapes. It discussed landscape characteristics of the area –landform, vegetation, water form and land use patterns for the dissected uplands and the older alluvial plains. Box –Ironbark forest predominates north of Forest Creek, while dry foothill forest predominates to the south until it merges with grassy dry forest north of Daylesford.

In its justification for designating the Castlemaine Diggings National Heritage Park, the ECC in its *Final Report* (June 2001, p.147) stated:
The Victorian goldfields were the cradle of modern Australia, radically reshaping the nation's destiny in the course of a dramatic few decades in the mid 19th century. In many areas though, notably Bendigo and Ballarat, the wealth generated on the goldfields was spent on the spot, building cities and towns which largely obliterated the goldfields themselves. However, the Castlemaine diggings are significant at an Australian scale, in the extent to which their goldfields landscapes have been preserved –that is, the importance of the Castlemaine diggings is not just in the considerable significance of the individual relics and sites themselves but in the cultural landscapes formed where large numbers of sites and relics persist in their

original settings and demonstrate a range of cultural themes over several phases of human occupation.

The benefits of designating the Castlemaine Diggings National Heritage Park included heritage protection: the suite of Aboriginal and gold era sites and relics are compellingly evocative of the area's absorbing history and protecting these in this unique landscape would thereby highlight their significance. As a result tourists would be attracted by the pre-eminent suite of significant goldfields era cultural landscapes and sites.

What are these cultural landscapes within the Park?

The recommended Castlemaine Diggings National Heritage Park covers a total area of 7442 ha and comprises the existing Castlemaine-Chewton Historic Area (3511 ha), 2744 ha of state forest and uncommitted land near Castlemaine, Guildford and Upper Loddon, Upper Loddon Flora Reserve (820 ha), Vaughan Springs mineral Reserve (83 ha), Expedition Pass, Crocodile and Golden Point Reservoirs and Water Production Areas (46 ha total), Faraday Education Area (42 ha), and 196 ha of various other public land units, all reserved to a depth of 100m below the surface.

The Park landscape is gently rising forested upland to 200m in three large blocks dissected by Forest Creek and the Loddon River. The river valleys were occupied for mining and then horticulture so that a patchwork effect has evolved. Obviously within this area there are many distinctive landscapes from the granitic outcrops along ridge lines, dissected rocky uplands, narrow gullies with intermittent water courses, wider valleys with permanent streams such as those of Forest and Campbell Creeks and the Loddon River. Within the uplands, the landscapes change depending on aspect which along with topography controls the forest species distribution so that one side of a ridge, the wetter side, can be dominated by one forest type and on the other drier side another species will predominate. These major species and their associated understorey cause different landscape effects in terms of colour, density of cover etc.

Many gullies contain mining relic sites and could be classified as continuing cultural landscapes –either organically evolving due to continuing use or relict ("fossilised"). The main ones within the Park are:

- Specimen Gully –where one of earliest gold finds recorded in July 1851;
- Garfield –Sailors Gully –with Garfield waterwheel abutments and Golden Point water race;
- The gravely course of Forest Creek between Pennyweight Flat and Wattle Gully;
- Red Hill, Forest Creek gold mine;
- Eureka –Poverty Gully network, around The Monk;
- Wattle Gully group, Chewton;
- Spring Gully group;
- Red Hill/Old Red Hill-Loddon water race group, Vaughan
- Loddon water race group, Vaughan;
- Golden Gully group, Fryerstown;

- Vaughan Springs –gold mining gave way to Chinese market gardens and then Edwardian picnic grounds with 'taking the mineral waters' and formalized swimming as attractions;
- Butchers Gully and Sailors Gully – Tubal Caine groups, south of Vaughan
- Middletons Creek

Various settlement sites which are largely archaeological in character, could also be described as relict cultural landscapes now; for example:

- Settlement site at Welsh Village, Lady's Gully, Eureka reef, Cornish Town, Irish Town and along the Loddon River.
- Trapps or Sailors Gully, northeast of Chewton off the Faraday Road;
- Duke of Cornwall mine engine house and associated workings;
- Spring Gully –with its substantial mining machinery foundations, building foundations and orchards.

Designed landscapes could include the cemeteries, for example:

- Deadmans Gully, Golden Point;
- Cemetery Reef Gully, Chewton;
- Pennyweight Flat, Castlemaine;
- Deadmans Gully, Fryerstown;
- Vaughan Chinese Cemetery

and man-made reservoirs, such as at:

- Expedition Pass;
- Blacksmith Gully Reservoir;
- Golden Point;
- Crocodile Reservoir; and
- Vaughan Springs swimming enclosure.

Landscape protection:
Irrespective of their classification, all these landscapes require protection from adverse developments in and around them.

The major internal threats come from poor management allowing uncontrolled access to fragile sites such as earthworks, vandalism and theft of components, fires, and unconsidered visitor facility upgrades such as overly large walkways, poorly sited paths and facilities, new mining operations requiring access to older or deeper workings.

The major external threats come from developments on adjoining freehold land. These include overly large housing impacting on the aesthetic qualities of the landscape as viewed by visitors arriving at the sites; ugly and inappropriate ancillary developments such as sheds, stables and hobby farm junk lying around impacting again on the scene; wandering animals knocking against fragile structural ruins; clearing and large scale new agricultural or mining/quarrying activities; subdivision and new developments obliterating the pattern of ancillary or contributory features in the wider landscape; development and /or replacement of utilities such as power lines, transmission towers and pipelines; inappropriate planting of non-indigenous native trees and replacement of senescent exotics with native species; loss of general

vegetation amenity arising from the evolved landscape pattern of both native and exotic trees by clearing, replacement and large scale pruning.

Heritage Victoria has published *Guidelines for the Assessment of Heritage Planning Applications* (August, 2000) which can be used by the local planning authorities to assist in landscape protection.

Viewsheds should be determined for all the smaller landscape units as well as for the major ridge lines in the Park.

Permits or impact statements would then be required for any proposed works within those viewsheds –either externally through the municipal planning process or internally via head office for Parks Victoria works such as fire breaks or facility development.

Jane Lennon

APPENDIX C:

CASTLEMAINE DIGGINGS AND WORLD HERITAGE

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CASTLEMAINE DIGGINGS AND WORLD HERITAGE

The case for World Heritage listing of the Victorian gold fields, and in particular, the Castlemaine Diggings, has been proposed on numerous occasions. In 2001 a study concluded that the public land described as the Castlemaine Diggings has outstanding universal values which would make it a worthy candidate for inscription on the World Heritage List.

Current status of World Heritage potential nominations

The potential of the Central Victorian region to represent a neglected universal historic theme- of population movement for economic gain (gold rushes) has been mooted on various occasions. However, all places to date forwarded by the national government (which is referred to as the State Party in the World Heritage Convention) to the World Heritage Bureau (WHB) in Paris for assessment and eventual listing have been natural and or indigenous places. Currently there are three active nominations with historic/cultural values of outstanding universal significance under consideration by the Commonwealth government:

i) the Sydney Opera House nomination – revised so that it is only the building not its harbour setting,
ii) a serial site nomination of Australian Convict sites, and
iii) the Melbourne Exhibition Building.

The statutory time- table is prescribed in the *Operational Guidelines* to the World Heritage Convention for nominations. It takes 18 months from submission by the State Party to consideration formally at the World Heritage Committee. In addition, the Operational Guidelines have been amended to allow only one nomination per year from each State Party. The Commonwealth Minister forwarded a nomination in February 2002 for Purnululu (The Bungle Bungles in the eastern Kimberleys, WA) - as a "mixed" site containing natural (criteria i, ii, iii) and cultural (iii, v, vi) and cultural landscape values (ii, iii), especially Indigenous values.

Nominations must follow a prescribed format in accordance with paragraph 64 of the *Operational Guidelines*, which covers the following:

1. Identification of the property
2. Justification for Inscription
3. Description
4. Management
5. Factors Affecting the Site
6. Monitoring
7. Documentation
8. Signature on behalf of the State Party.

Nomination options for Victorian Gold fields

a. Essential criteria

The Central Victorian gold fields as a place of *outstanding universal value* could be considered for World Heritage listing under two cultural categories:

i) as an historic place -either alone, or as part of a serial site nomination for Australian gold fields, satisfying World Heritage criterion 24 (a) (iv), or
ii) as a cultural landscape itself (organically evolving category although there are relict and associative landscapes within the gold fields as well), satisfying World Heritage criterion 39 (ii).

In addition, the place must meet the test of *authenticity* in design, material, workmanship or setting and in the case of cultural landscapes their distinctive character and components [criterion 24 (b) (i)] and, have adequate legal protection and management mechanisms to ensure the conservation of the nominated cultural properties. Furthermore, in order to preserve the *integrity* of cultural sites, particularly those open to large numbers of visitors, the State Party concerned should be able to provide evidence of suitable administrative arrangements to cover the management of the property, its conservation and its accessibility to the public [criterion 24(b)(ii)].

Articles 1 and 2 of the World Heritage Convention specify that the cultural and natural heritage must be of 'outstanding universal value.' Australia proposed in June 2001 that 'outstanding universal value' is taken to mean cultural and/or natural significance which is so exceptional at the international level that its preservation is important to humanity as a whole. Properties must possess such value to be inscribed on the World Heritage List and must also be demonstrably the superlative example of their kind.

b. Possible candidates

A case has been made that the Central Victorian gold fields have 'outstanding universal value' - for illustrating *"in the material form … Victorian gold mining, the world's greatest immigrant-minded nineteenth century gold rush, the evolution of the Victorian alluvial gold fields, towns and cities, and the development and integration of Victoria and Australia into a global economy by the sheer volume of gold put into the world economy in the 1850s."*[37]

There are a number of ways of constructing a nomination to reflect these claimed values, ranging from a serial nomination reflecting all Australian gold areas, through a nomination dealing with all Victorian gold rush areas and towns, to one concentrating on the Castlemaine Diggings. The selection of places for a nomination would also be influenced by the ownership status of the land involved—it is much simpler to guarantee the appropriate management of public land than it is of private land.

Discussions about these issues have been held within Heritage Victoria These discussions concluded at that stage (March 2001) that the most likely candidate

[37] Lennon, J. June 2001. Discussion paper on World Heritage listing for Victorian Goldfields, for Parks Victoria.

characteristics for a successful nomination to the World Heritage list would include the following:
a) single ownership to lessen management conflicts,
b) intact, authentic and extensive physical evidence (archaeological and geological) of the rushes to enable interpretation of the population impact, the mining activity on site, and gold rush, and
c) in comparison with others be so exceptional at the international level that its preservation is important to humanity as a whole and be a superlative example.

Nomination as a landscape

If a site is selected with on-going mining it would probably have to be as a cultural landscape category (ii) – continuing or organically evolving landscape. There are now 30 cultural landscapes inscribed on the World Heritage list. However, World Heritage Committee support probably would be greater for an historic area with archaeological attributes as the expression of outstanding universal value rather than for a cultural landscape. This is because the member countries have strong views about what constitutes cultural landscape values based on such concepts as sacred mountains – oriental nature/culture mix or concepts embedded in the newly signed European Landscape Convention and Australia already has Uluru Kata -juta inscribed as an associative cultural landscape.

If the site was no longer subject to mining and major landscape changes, it could be considered as a relict landscape (category ii also) –with the archaeological evidence as the major feature of the historic theme of population movement for economic gain (gold rushes).

Cultural landscapes for World Heritage listing must illustrate the long term interaction of people with their environment resulting in cultural values in the landscape. Combined works of nature and humankind, they express a long and intimate relationship between peoples and their natural environment. It is usually a heritage of many eras of natural evolution and of many generations of human effort. As well such landscapes must have authenticity and integrity.

The essence of applying the **test of authenticity** in the assessment of nominated sites is in the verification of information sources about relevant values. That is, that they are truthful and that the site is a genuine and authentic representation of what it claims to be. Even though cultural heritage resources in the landscape can be classified according to type or historic function, each individual site would still be assessed for its specificity and uniqueness, its *genus loci*.

The landscape must illustrate **integrity**. Integrity is the extent to which the layered historic evidence, meanings and relationships between elements remains intact and can be interpreted in the landscape. It is also the integrity of the relationship with nature that matters, not the integrity of nature itself. If a clearly defined landscape, designed and intentionally created by man remains as created without substantial modification it would satisfy the integrity criterion, as with the inscribed landscapes of Lednice -Valtice or Studley Royal. Continuing landscapes reflect a process of evolution in form and features which can be ‘read’ like documents, but their condition

of historical integrity can also be defined by the continuity of traditional functions, and the relationship of parts with the whole landscape. This is clearly the case with the inscribed Philippines rice terraces and the terraced vineyards of Cinque Terre and the Amalfi.

The World Heritage Bureau has recommended greater recognition of the continuum of, and interactions between, culture and nature with respect to the implementation of the *World Heritage Convention,* by revising sections of the *Operational Guidelines.*

Nomination as an historic site

Under the current *Operational Guidelines* the Castlemaine Diggings could be nominated under criterion 24 (a) (iv):
be an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates a significant stage in human history; or
under criterion 24 (a) (iii):
bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or has disappeared.

Although the former refers to landscapes (composed in this case of structural remnants of buildings, industrial processing plants, aqueducts, cemeteries etc. scattered through the natural bushland) illustrating a significant phase in human history (i.e, the largest mass migration for gold mining the gold rushes of mid nineteenth century), it could also apply to the place/site as a whole. Equally the place could be said to bear exceptional testimony to a cultural tradition which has disappeared, i.e mass migration from all over the world to a gold field in search of fortune. However, as mining is still continuing in the district, although not as alluvial rushes with vast numbers of people flocking to the sites, this criterion would not be as robust as the "significant phase" criterion relating to the mid nineteenth century rushes.

Under either category the site/place would have to also meet the criteria of authenticity and integrity which the Castlemaine Diggings does.

Current status of consideration of a World Heritage nomination

The considerations by Heritage Victoria in 2001 led its selection of the Mount Alexander Goldfield (also known as the Mount Alexander Diggings, Castlemaine Diggings or the Castlemaine Goldfield) as a potential candidate for World Heritage nomination. [38] The reason for this choice are as follows.

The Mount Alexander Goldfield demonstrates the necessary authenticity and integrity of its archaeological sites, geological features and has a potential continuing gold mining focus. The comparative analysis of nineteenth century gold fields shows that Mount Alexander diggings are remarkably intact archaeologically compared with say those of California.

[38] Lennon 2001 Discussion paper.

The Castlemaine Diggings National Heritage Park making up the nomination is owned by the Victorian State Government (Department of Natural Resources and Environment) and is managed by Parks Victoria. It has the largest collection of Victoria's significant gold mining heritage, spanning 150 years of gold mining history. The mining relics have survived because they have lain relatively untouched by urban development in the box and ironbark forests surrounding Castlemaine, Ballarat and Bendigo. These urban centres although equally significant in respect to exhibiting the impact of gold on creating fine architecture and prosperous settlement, have become great cities resulting in their early gold mining heritage being built over and destroyed.

At the time of writing (April 2002) there has been no action taken to pursue this recommended approach with the Commonwealth Government, who would have to agree with the case made and be prepared to put forward the nomination. The gold mining theme is understood to be one of those considered a possible basis for an Australian World Heritage nomination, and this is supported by Australia ICOMOS. However, with the constraint that only one nomination can be put forward by each member country per year places any development of a gold rush nomination in competition with other potential natural and cultural nominations.

References:
Jane Lennon, June 2001. Discussion paper on World Heritage listing for Victorian Goldfields, for Parks Victoria.

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[i]Notes - Chapter 4.

i Australia ICOMOS *Charter for the conservation of places of cultural significance* (the Burra Charter), as revised 26 November 1999. Australia ICOMOS, Sydney, 1999.