

MOUNT ALEXANDER SHIRE

**HAPPY VALLEY/MOONLIGHT FLAT
STRATEGIC PLAN &
DEVELOPMENT PLAN OVERLAY**

SITE ANALYSIS REPORT

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with

Project Steering Committee

June 2003

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A	Historical Summary of the Happy Valley-Moonlight Flat Study Area
B	Overview of Flora and Fauna Habitat Value for the Study Area
C	Landscape Analysis - Happy Valley Study Area
D	Tourism and Recreation - Happy Valley Study Area
E	Bushfire Issues - Happy Valley Study Area

1. BACKGROUND

The Happy Valley/Moonlight Flat Strategic Plan project has three stages. This is the Stage one report. The three stages are:

- Site Analysis
- Planning and Environmental Design Response
- Recommendations to Council (including possible amendment to Planning Scheme).

The Study Area, particularly Pennyweight Flat and Pennyweight Cemetery, has been the subject of a series of planning appeals and ministerial call-ins since the mid 1980's. In general terms the salient issues have been protection of a heritage place and setting, protection of landscape values, and residential growth.

Council has taken the initiative to instigate a comprehensively planning process that establishes clear direction for future planning and development in the Study Area.

The Shire has entered a time of change with increased demand for land and housing arising from the growing interest in the Shire as a place to live. People's decisions to live in or visit the Shire include:

- lifestyle that offers an alternative to highly urbanised
- heritage character of the Shire's built form and landscapes
- comparatively lower house prices, and
- proximity to Melbourne and Bendigo.

2. HOUSING GROWTH AND HOUSEHOLD CHANGES

Whilst the 2001 Census indicates only moderate growth in the Shire it also reveals that a significant number of people moving to the Shire from Melbourne and other areas of the central Victorian region. Housing growth has been a lot stronger than population growth due to declining household size, a trend reflected in the broader community.

Table 1 Population & Household Changes 1991-2001

	Population 2001	Households 2001	Av Household Size 2001	Population 1991	Av. Annual Change 91-01
Happy Valley/Colles Road	433	182	2.38	407	0.6%
Total Castlemaine Urban Area	9,870	3,601	2.74	8,519	1.5%

Table 2. Age Structure, Castlemaine and Happy Valley/ Colles Road

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	Total
Happy Valley/ Colles Road	12.1%	14.5%	10.3%	13.8%	15.2%	11.4%	10.5%	8.0%	4.2%	448
Total	12.0%	12.0%	10.0%	13.0%	15.0%	12.0%	10.0%	10.0%	8.0%	

Source 2001 Census data

NB Happy Valley/ Colles Road Collection district includes the residential area between the Pyrenees Highway and Forest Creek

In general household sizes are declining, with a greater number of 1 or 2 person households. Additionally, household structures are reflective of broader social trends with increasing numbers of single parent households, high numbers of couples without children and single person households.

In 2001, over 65% of all households in the Shire included only one or two persons, including 29.5% (or 971) single person households. In Castlemaine, 35% of all households included only one person, reflecting the comparatively older population.

The Mount Alexander Population Review (2003) reports that...” population increases have been moderate compared to others areas such as Macedon Ranges Shire, however there is potential for future growth in both population and housing resulting from changes to commuting patterns and improved access to larger urban centres.

Regional projects such as the Calder Highway upgrade, sewerage of townships, and the proposed Melbourne to Bendigo Regional Fast Rail Service are likely to drive higher and sustained population and housing growth in the future.

Recent population growth rates that have occurred in Macedon Ranges Shire are useful indicators for population growth scenarios in Mount Alexander Shire. There is a correlation between population growth and travel time to Melbourne confirmed by recent growth rates in Macedon Ranges and other fringe areas of Melbourne. A population forecast that adopts recent average growth rates for the Kyneton area (1.85% p.a.) would see the Shire’s population increase by about 7,000 to 8,000 by the year 2021.

3. SITE

The site is shown on the Study Area Map (See Fig 1). Photographs of the site are included in the following pages with a location index map (Figure 2).

The study area is generally bounded on three sides (east, north and west) by the Castlemaine Diggings National Heritage Park and a residential area south of Forest Creek. The size of the study area is approximately 250 hectares (including private land and Heritage Park). Both Forest Creek and Moonlight Flat Creek flow through the study area.

The site is generally formed at its western, eastern and northern boundaries by bushland hillslopes of the Heritage Park.

Existing land use in the Study Area consists of:

- Residential including low density and larger bushland lots
- Small scale agriculture eg grazing
- Pennyweight Flat cemetery
- Castlemaine Gun Club
- Recreational use of roads and trails
- Nature conservation for flora and fauna habitat
- Forest and Moonlight Flat Creeks and natural drainage system

For the purpose of this study, the study area has been divided into two parts:

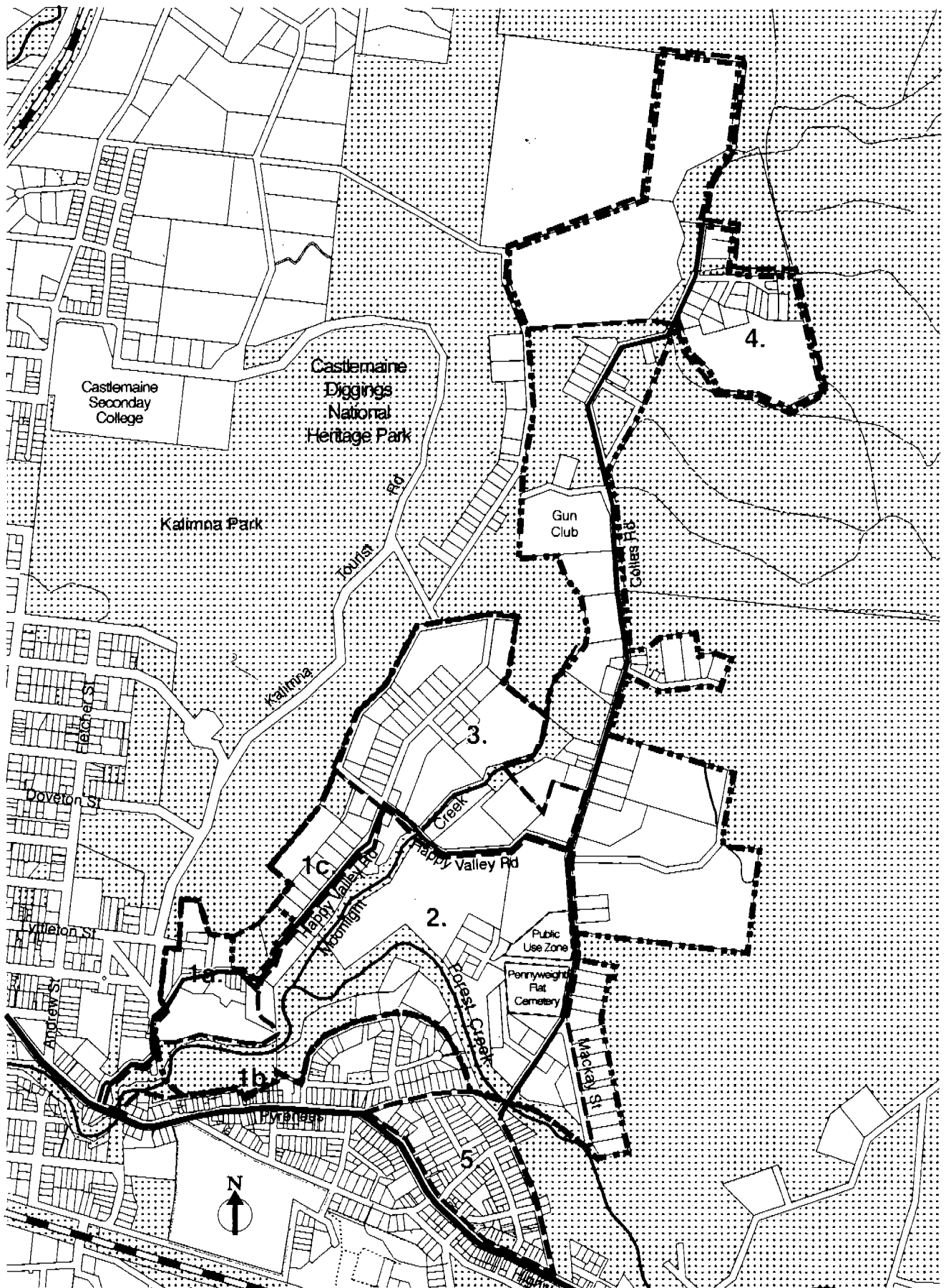
South - Happy Valley, Pennyweight Flat and Hundred Weight Hill

North - Moonlight Flat generally north of Dirty Dicks Gully

4. TOWNSHIP CONTEXT

The site is situated approximately one kilometre from residential areas in Happy Valley Road to the Castlemaine Town Centre and two kilometres from Zeal Bridge via the Pyrenees Highway.

Kalimna Park and the north-south ridgeline separate the site from the original Castlemaine township. The site lies adjacent to Forest Creek and the northern edge of Wesley Hill.



HAPPY VALLEY/MOONLIGHT FLAT STRATEGIC PLAN

STAGE ONE: SITE ANALYSIS
Study Area & Stage Two Investigation Areas

- | | |
|-----------------------------|---|
| 1. Happy Valley Road | 3. Hundredweight Hill/Moonlight Flat |
| 2. Pennyweight Flat | 4. Lady Gully/Moonlight Flat |
| | 5. Wesley Hill Exit from Site |

Handwritten signature or initials



Scale 1:10,000

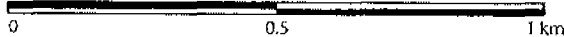


Figure 2.



1. Pennyweight Flat, Happy Valley, Forest Creek. View from Pyrenees Highway.



2. Forest Creek, Pennyweight Flat, Happy Valley. View from Zeal Bridge.



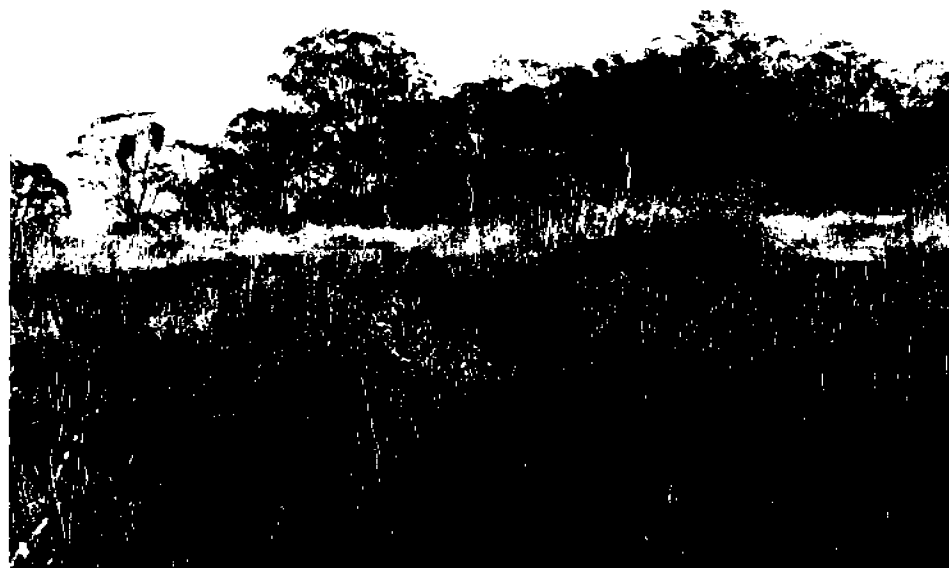
3. Happy Valley from Pennyweight Flat Cemetery.



4. Happy Valley from Pennyweight Flat Cemetery.



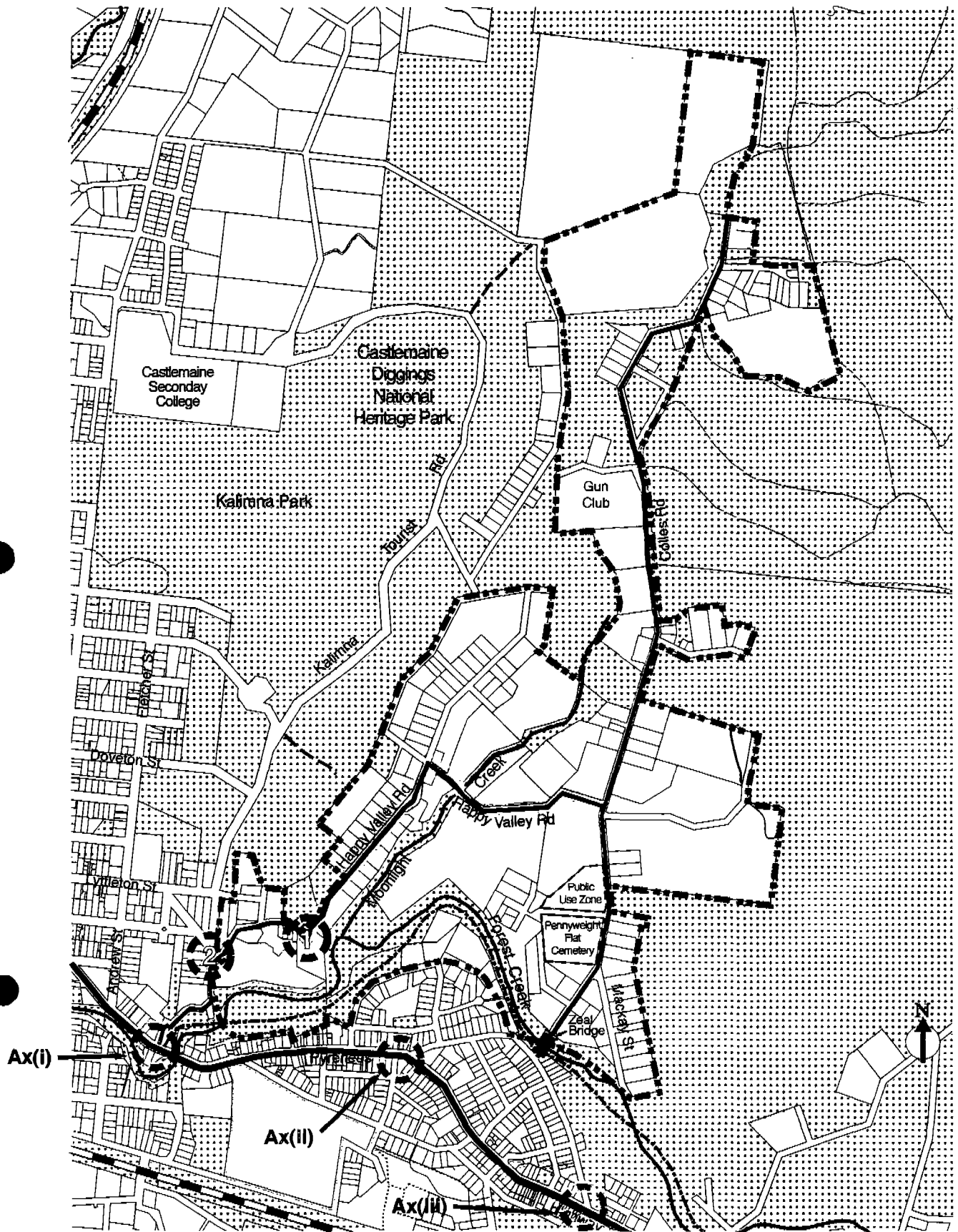
5. Moonlight Creek, Happy Valley. View of Mount Alexander.



7. Happy Valley wildlife. Kalimna in background









6. Pennyweight Flat from Happy Valley Road. View across Moonlight Creek to Forest Creek.



HAPPY VALLEY/MOONLIGHT FLAT STRATEGIC PLAN

STAGE ONE: SITE ANALYSIS
ACCESS: Constraints and Opportunities

- 
 Potential for traffic conflict due to road alignment (Happy Valley Rd)
- 
 Verlin Street - currently being used as a shortcut to town centre

- 
 Zeal Bridge - Historic bridge (1890). Increased traffic volumes would require upgrading of bridge.
- 
 Heritage Walking Trail
- 
 Kalimna Park walking trails linking with site
- 
 Road access to existing LDRZ land is a major issue to be investigated at Stage Two.

Significant opportunities for new residential development in Castlemaine are available to the west of the urban area south and north of the Pyrenees Highway. There are considerable infill opportunities in Campbells Creek. The existing low-density residential zoning in the Happy Valley/Pennyweight Flat area is recognition of the potential for new housing in this area.

There are two vehicle access points to the site; Zeal Bridge with access off the Pyrenees Highway at Murphy Street; and Happy Valley Road. Verlin Street is also used for access into and out of the site.

Access issues are described in plan form in Figure 3.

Pedestrian connections to the site are via existing roadways, the recently constructed walking trail along Forest Creek and walking trails through the surrounding Heritage Park.

The residential area south of Montgomery Street is serviced with reticulated sewer. The site falls within the Castlemaine Sewerage District.

The section of Forest Creek running through the site has been regarded as the urban boundary of Castlemaine. The Mount Alexander Planning Scheme has established this boundary with the existing Low Density and Rural zoning of the site. Previous planning appeal decisions have referred to the urban edge being formed by Forest Creek.

Zoning of the land since the introduction of the former Castlemaine Planning Scheme does indicate that successive Councils have viewed the site as an area that offers the choice of low density living or living environments with a rural or bushland character.

5. PLANNING SCHEME CONTROLS

Existing zones and overlays are shown on the following Figures.

Zones	Figure 3
Development Plan Overlays	Figure 4
Significant Landscape Overlay	Figure 8
Land Subject To Inundation Overlay	Figure 8
Heritage Overlays	Figure 7
Wildfire Management Overlay	Available at meeting 12/06/03

Planning Scheme zone and overlay provisions have previously been circulated to Project Steering Committee members.

The Planning Scheme also contains strategy statements and policies about heritage and landscape protection that apply generally throughout the Shire and within towns.

6. PLANNING HISTORY

More planning attention has been given to the Study Area than any other area in the greater Castlemaine area. The following discussion summarises the strategic studies that have included an examination of the site, determinations on planning application applications by successive Councils and appeals tribunal, and reports by Independent Panels appointed by the Minister for Planning relating to rezoning requests within the Study Area.

EXISTING ZONING

FIG. 4.

RUZ : Rural Zone

LDRZ : Low Density Residential Zone.

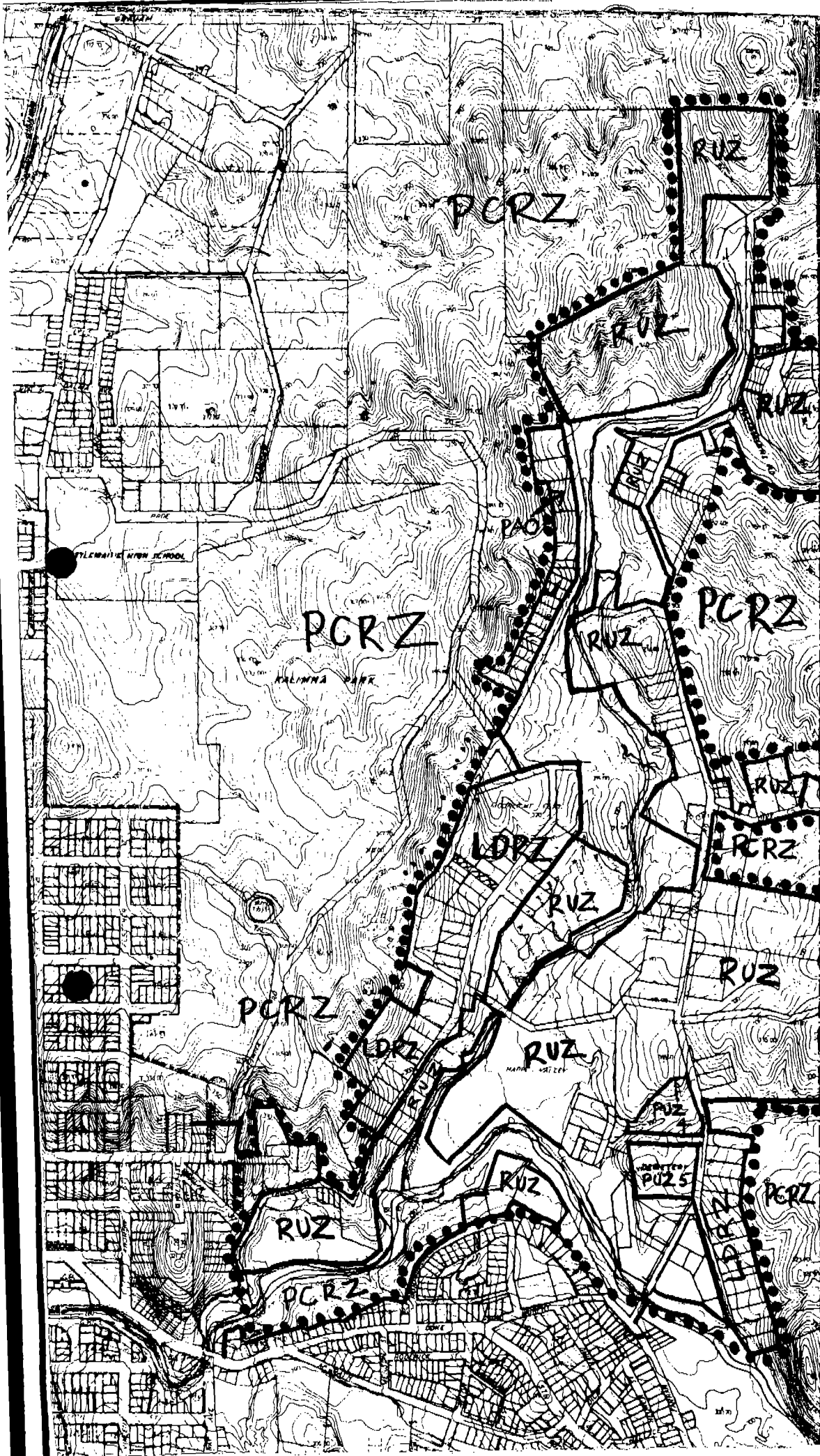
PCRZ : Public Conservation & Resource Zone.

PAO1 : Public Acquisition Overlay

PUZ 4 : Public Use Zone 4: Transport

PUZ 5 : Public Use Zone 5: Cemetery

NB Check Planning Scheme for precise boundaries



EXISTING DEVELOPMENT PLAN OVERLAYS

FIG. 5.

DPO 1
Development
Plan Overlay

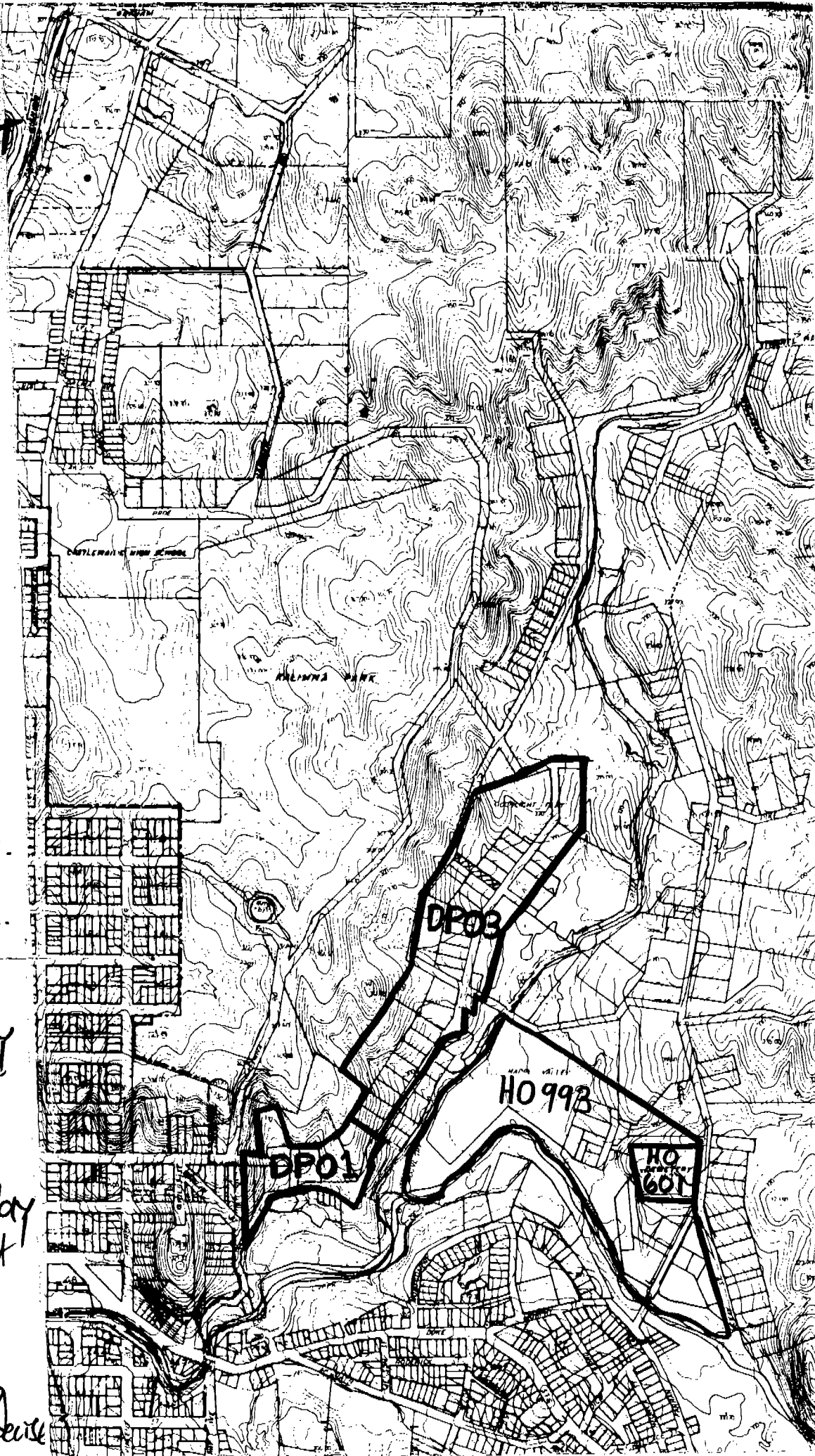
● : Residential 1
Development
Plan

DPO3
Development
Plan Overlay 3.
Low Density
Development Plan.

● HO 601
Heritage Overlay
Pennyweight Flat
Cemetery.

HO 993
Heritage Overlay
Pennyweight Flat
Cemetery.

NB. Check Planning
Scheme for precise
boundaries.



Strategic Studies

Castlemaine Sub Regional Land Use Strategy Plan - Loddon Campaspe Regional Planning Authority, 1982

The purpose of the Strategy plan was to provide a co-ordinated framework for the future provision of serviced residential land in and around Castlemaine. The Strategy Plan comments that the "... area is still primarily rural... however increasing demand for land and the extension of services are likely to increase development pressure ...in favour of subdivision. The area is generally more attractive for rural residential use than a number of others around Castlemaine.

The Strategy Plan recognises that "some rural residential forms of development may therefore be appropriate if and when the land passes out of its current use of grazing. "

The Plan recommends that the area be zoned for rural use in the interim with minimum subdivision size permitting lots down to 2 hectares.

Directions of Residential Growth for Castlemaine - Loddon Campaspe Regional Planning Authority, 1986

This study reviewed the 1982 Strategy Plan examined existing and future residential land use in the former City of Castlemaine. Recommendation for the Happy Valley/ Moonlight Flat Investigation Area were to zone the area for low density residential purposes in the south-western corner (existing residential area in Happy Valley Road area), reserved residential purposes in the south eastern (Mackay street area), remaining land left in the Rural Zone, and avoid development on flood prone area along the creeks.

Mount Alexander New Format Planning Scheme 1998-99

In 1998 all Councils in Victoria were required to prepare new planning schemes consistent with the Victorian Planning Provisions. Council received a submission from Adrian Cummins & Associates (on behalf of Leech Earthmoving Pty Ltd). This submission requested the following:

- A change in zoning of the Happy Valley Road from Low Density Residential Zone (LDRZ) to Residential 1 Zone (R1Z) as the area can be fully serviced with all infrastructure. A preliminary Outline Development Plan was submitted for consideration.
- A rezoning of the Colles Road/Moonlight Flat to Environmental Rural Zone (ERZ) with no minimum area for subdivision with the use of overlay controls to cover environmental significance issues.

Council comment with respect to this submission was as follows:

This submission raises Council's concerns in regard to accommodating future development. This matter has been identified in the Land Use Strategy Plan and new Planning Scheme but requires much more detailed Land Capability Analysis by Council before a final strategic position can be made. As indicated in other submission comments, Council will be undertaking this detailed assessment in the near future.

Mount Alexander Council decision resolved not to change the planning scheme as requested and to refer the submission to an independent panel.

The Independent Panel appointed under sections 151 and 153 of the Planning and Environment Act 1987 reported as follows:

“ The Panel has significant reservations regarding the need for such extensive residential zonings in Castlemaine and believes that consideration should be given to infrastructure sequencing to minimise the costs to the community.”

The report of the Panel agreed with Council that significant issues remain unresolved notwithstanding that Council had indicated its support for residential development along the Happy Valley Road axis. These issues included:

- site responsive concept planning,
- open space provision;
- the extent of the area to be developed with particular reference to the lower lying land east of Happy Valley Road
- access issues including traffic volumes generated by development by the submitter would be approximately 1,000vpd along Duke Street / Happy Valley Rd which is unmade ; and
- protection of the landscape/ environmental values near Kalimna Park and Moonlight Flat.

The Panel recommendation, later supported by the then Minister for Planning was as follows:

The Panel does not support rezoning of the land in Happy Valley Road to Residential 1 at this stage.

The Happy Valley/Moonlight flats residential investigation area on the Castlemaine Structure Plan in Clause 22.03-02 be amended to exclude the Pennyweight cemetery and its immediate environs and to focus on the Happy Valley Axis.

Planning Applications and Appeals

The subject site generally known as Happy Valley and Moonlight Flat has a long and involved planning history, including two previous appeals, two Ministerial “call ins” and a panel hearing.

A. May 1986

Planning application for a 69 lot subdivision in the Colles Road, Mackay Street Area. At the time the land was zoned Rural under the Castlemaine Planning Scheme. The application was refused by Council. Appeal No. P87/1728 was disallowed, no permit issued.

B. June 1988

Applications for four dwellings, one on each of Crown Allotments 33, 17, 5 and 3 of Section G1. The application was refused by Council. Appeal against the refusal of the permit application was referred to the Governor-in-Council by Minister Roper. Appeal No's P88/2423 – P88/2426 disallowed by the Governor-in-Council.

C. September 1992

Application PA1480 for a dwelling on Crown Allotment 16, Section G1. Following a request for further information in respect of PA1480, regarding the of total number of dwellings proposed by the owner of the land in Mackay Street, application PA1494 was lodged for 14 dwellings on the east side of Mackay Street and Colles Road. In February 1993 Council issued a Notice of Decision to grant a permit for 14 dwellings. In July 1993 Appeal No's P88/2423 – P88/2426 against the decision to grant the permit application was referred to the Governor-in-Council by Minister Maclellan.

In September 1993 Administrative Appeals Tribunal recommended to the Governor-in-Council that the appeal be disallowed and that permits issue for the construction of single dwellings on each of the lots, subject to strict conditions.

Permits subsequently issued at the direction of the Governor-in-Council for the construction of 10 dwellings, subject to strict conditions, which included the consolidation of lots on Colles Road, closest to the cemetery site.

D. August 2002

Planning Application 255/02 lodged for Single Dwelling on Crown Allotment 24, Section G1, Parish of Castlemaine, Colles Road, Castlemaine.

The applicant was directed to give notice of permit application 255/02 to adjoining and opposite property owners. Thirty-three objections to the permit application had been received by Council.

Generally speaking the grounds of objection can be summarised as follows:

- close proximity to the Pennyweight Flat Children's Cemetery
- inconsistency with the purpose of the Rural zone, and provisions of Heritage overlay and schedule 2 of the Significant landscape overlay
- owner of the land should be required to prepare a development plan for all of his land which provides for future development consistent with the existing overlays.

Council resolved

1. To Refuse to Grant a Planning Permit for the use and development of a dwelling and Ancillary Outbuilding on Crown Allotment 24, Section G1, Parish of Castlemaine, Colles Road Castlemaine, for the following reasons.

- The application is inconsistent with State Planning Policies 13, 14, and 15.11.
- The application is inconsistent with Local planning policies 22.01, 22.20 and 22.22.
- The application is inconsistent with the purpose of the Rural zone.
- The application is inconsistent with the purpose of the Heritage overlay, including Schedule 601 thereto.
- The application is inconsistent with the purpose of the Significant Landscape overlay, including Schedule 2 thereto.
- The grant of a permit for the use and development sought would result in unacceptable adverse impacts on adjoining land.

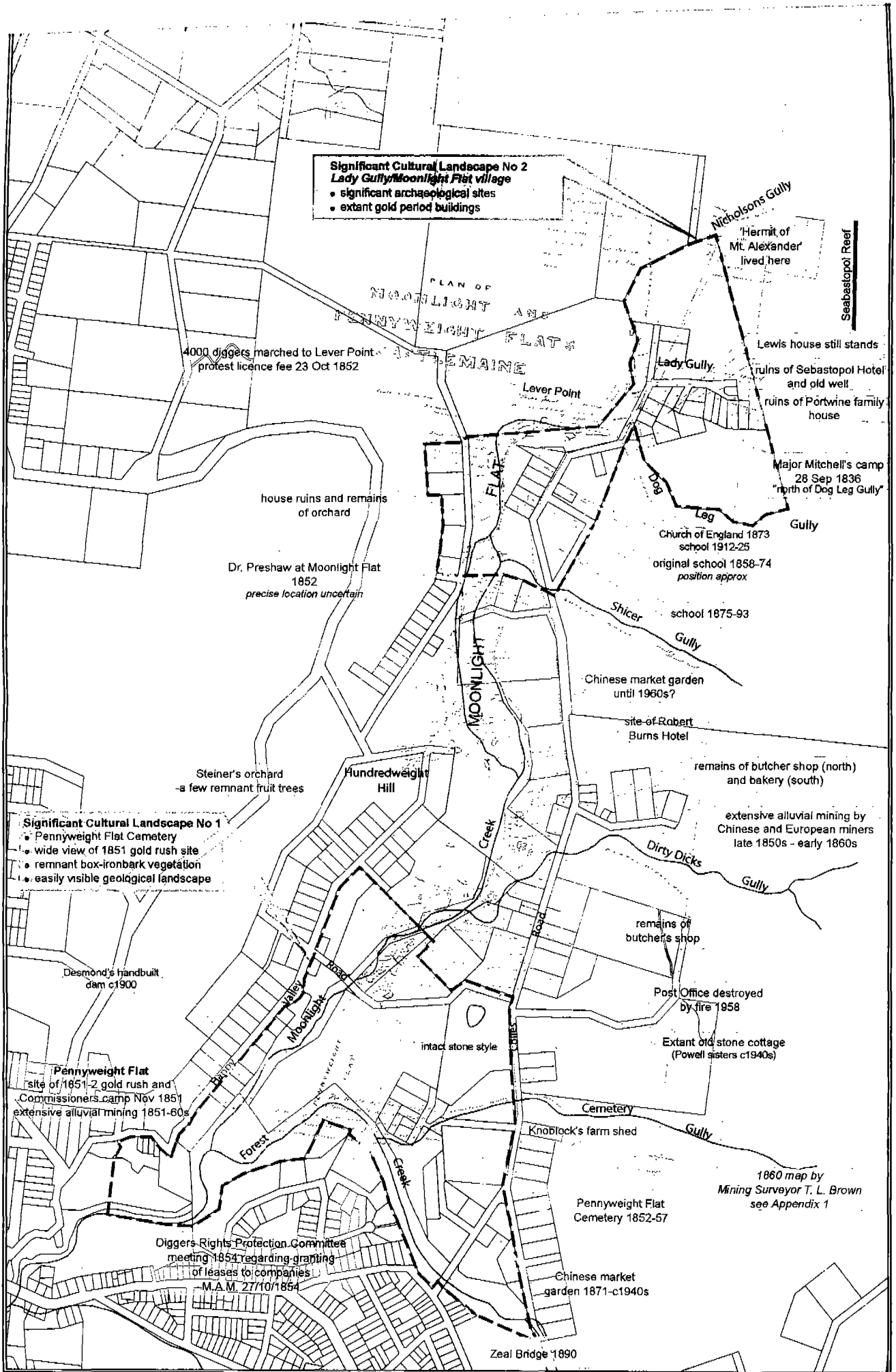
2. That a strategic plan be prepared for the Moonlight Flat/Happy Valley area including land between Forest Creek, Cemetery and Happy Valley Road in order that planning issues be resolved on a long term basis.

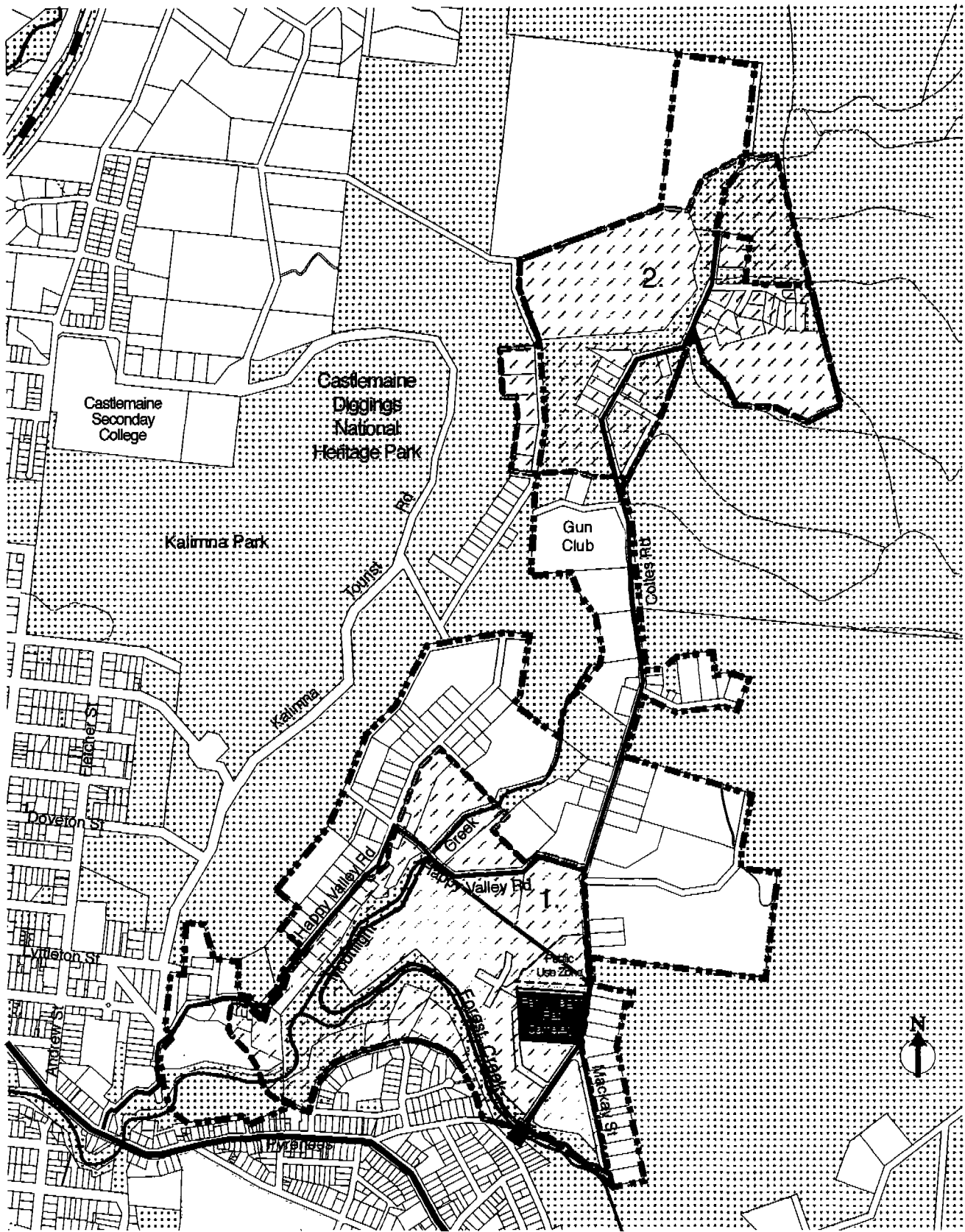
7. HERITAGE SIGNIFICANCE

Heritage overlays (HO 601 and HO 993) apply to Pennyweight Flat Cemetery and the cemetery environs. The Planning Scheme contains strategic statements and local policies to generally protect heritage features in Castlemaine and the Shire.

An historical summary of the Study Area that identifies and describes places and sites of heritage significance is included in Appendix A.

The Historical Summary identifies two areas considered to be of special cultural landscape significance. These two areas, Pennyweight Flat and Lady Gully/Moonlight Flat are shown on Figure 6. They are also shown on Figure 7.





HAPPY VALLEY/MOONLIGHT FLAT STRATEGIC PLAN

**STAGE ONE: SITE ANALYSIS
HERITAGE
Constraints and Opportunities**

- Pennyweight Flat Cemetery HO 601
 - Pennyweight Flat Cemetery Environs HO 993
- Significant Cultural Landscape Area
 - 1. Pennyweight Flat
 - 2. Lady Gully/Moonlight Flat Village
 - Zeal Bridge
Historic Bridge (1890)

The definition of a 'cultural heritage landscape' used by Heritage Victoria and other heritage authorities was used as a reference for identifying the areas. It is not intended that these areas should necessarily be free from development. Their special significance does however need to be carefully considered in Stage Two of the project.

The Historical Summary report is summarised as follows:

- The Pennyweight Flat – Moonlight Flat Valley reflects the early exploratory and later goldrush phases in the history of the Castlemaine area.
- In November 1851 the valley was rushed by miners and a government camp was established on Pennyweight Flat.
- In 1852 the same year the Bryce Ross Diggings Directory records a number of businesses on Pennyweight Flat, Moonlight Flat and Moonlight Hill.
- The influx of people from all around the world led to the Mount Alexander goldfield becoming a centre of political agitation, which had its culmination at the Eureka Stockade. This is one of the crucial periods in Australia's political and social history (see ...). The Happy Valley/Moonlight Flat area was a stage for some of these events, for example, a protest meeting at Lever Point in 1852 and a political rally at Pennyweight Flat in 1854.
- The miners formed a culturally diverse group including a community of Germans at Lady Gully and Chinese at Moonlight and Pennyweight flats.
- It is notable that the Chinese and European miners worked in the valley together and both were interned in the Pennyweight Flat cemetery.
- Later some Chinese acquired land and turned their hand to market gardening. One extensive Chinese market garden was operated from at least 1871 to the late 1940s on land between Colles Road and Mackay Street.
- Once the initial rush was over, mining activity became more organised into small quartz mining companies centred on Lady Gully. With this economic base, tents were converted to more permanent structures. Substantial houses, stores and hotels were built as the community consolidated. The building of a school, a church and a post office reflected the establishment of this more permanent community.
- By 1881 horticultural pursuits had started to flourish in the valley, however mining was revived about 1900 when the Scott brothers sluiced gravels at Moonlight Flat, until about 1914¹. As mining waned during World War 1, agriculture and horticulture became the dominant land use. This change led to a decline in population, a symptom of which was the closure of the Moonlight Flat school in 1925. The cessation of mining heralded a long period of inactivity, apart from a few small farming holdings.

Significant Cultural Landscapes

Two significant Cultural Landscapes have been identified in Historical Summary report. It is explained in the report that the term is generally used by heritage authorities in the following context.

Cultural landscapes are illustrative of the evolution of human society and settlement over time, under the influence of physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal. ... The term "cultural landscape" embraces a diversity of manifestations of the interaction between humankind and its natural environment."

The Historical Summary report refers to the Environment Conservation Council *Final Report* (June 2001) which states that:

the importance of the Castlemaine diggings is not just 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.

Significant Cultural Landscape No.1 – Pennyweight Flat

The Historical Summary Report describes the significance of the area as follows:

- This landscape contains a section of the bed of Forest Creek, Pennyweight Flat and the Pennyweight Flat Cemetery.
- The Flat and the Cemetery are both listed on the Australian Heritage Commission Register of the National Estate and the Cemetery is listed on the Victorian Heritage Register and by the National Trust. It is also protected under Heritage Overlay 601 and Schedule 2 of the Significant Landscape Overlay of the Mount Alexander Planning Scheme.
- Part of the value of the site is derived from its setting on a small rocky hill surrounded by open farm land, which was also the site of the 1851 gold-rush
- There are evocative and wide views from the Cemetery looking across the valley. The views towards the Cemetery are important as they place the site in its goldfields landscape context. It is one of the most appreciated cultural landscapes in the Shire.

Significant Cultural Landscape No.2 – Lady Gully area

The Historical Summary Report describes the significance of the area as follows:

- This area surrounds the site of a small German and British community who conducted mining operations along the Sebastopol Reef near Lady Gully. The area defined as significant extends southeast past Lever Point and includes the northern part of Moonlight Flat.
- The area contains numerous archaeological habitation sites and several important buildings that are still in good repair. These include the old Church of England and the Lewis house.

8. FLORA AND FAUNA HABITAT

A report title "Overview of Flora and Fauna Habitat value for the study area" is included in Appendix B. A summary of this report is as follows:

- The Happy Valley / Moonlight Flat study area although degraded through past and present land use, has significant habitat value for a range of native species occurring in the North Central bioregion.
- The study area itself is a mix of open grassy areas, isolated pockets of remnant bushland (i.e. Pennyweight Flat Children Cemetery) and urban/rural development.
- The section of Forest Creek in the site is degraded with major weed infestation, notably Gorse and Blackberry.
- Moonlight Flat creek, a tributary to Forest Creek is considered an intermittent creek. Moonlight Flat has serious infestation of Bridal Creeper which impacts directly on the diversity of other species in the area.
- The mature Eucalypt overstorey across the upper reaches of Moonlight Flat Creek provides an important link to Kalimna Park as well as refuge for a variety of birds and other animals.
- With appropriate restoration works both Forest Creek and Moonlight Flat Creek have potential to provide excellent habitat for native animals in the future.
- Roadside vegetation provides important links from the larger forest blocks on the boundary and through the study area. Colles Road has "Significant Roadside" signs installed by Shire of Mount Alexander.
- Many of the remnant trees in the study area are considered important due to their age and size.
- Open grassy areas throughout the study area are remnants of endangered (EVC) ecological vegetation class (Alluvial Terraces Herb-rich Woodland/Creekline Grassy Woodland Mosaic). Due to clearing and agriculture use this EVC is highly degraded with many agricultural grasses replacing indigenous grasses and herbs, and environmental weeds such as Gorse and Blackberry dominating the shrub layer.

- habitat for many local bird species most notably the *Temperate Woodland Bird Community* that is listed as vulnerable under Victoria's Flora and Fauna Guarantee act. Birds in this category include, Scarlet Robin, Hooded Robin, Jacky Winter and Speckled Warbler. Threats to this community include loss of habitat through clearing, inappropriate fire management, fragmentation of forest blocks, and predation from cats, dogs and foxes.
- Breeding records for *Eltham Copper* butterfly have been recorded in Kalimna Park, this species is considered vulnerable under Victoria's Flora and Fauna Guarantee act and is listed for national consideration under the Environmental Protection and Biodiversity Conservation Act 1999. Threats to this species include displacement of habitat through weed invasion, inappropriate fire management, habitat loss through disturbance or clearance.
- The remnant bush land adjoining the study area provides habitat for several nocturnal marsupials i.e. **Brush-tail Phascogale and Sugar Glider**. As the study area provides an important link between the larger forest blocks consideration for these species must be given. Predation by cats, dogs and foxes are a real risk to these animals as is loss of hollow bearing trees for nesting.
- In summary, the habitat values of the study area are varied and include mature large old trees; mature overstorey canopy along Moonlight Flat Creek and remnant endangered EVC. It is considered degraded through fragmentation, weed infestation, and urban pressure, but has the potential for habitat improvement with a view to enhancing the forest linkages.

9. LANDSCAPE AND ENVIRONMENT

A summary of Landscape and Environment constraints and opportunities is included in Figure 7.

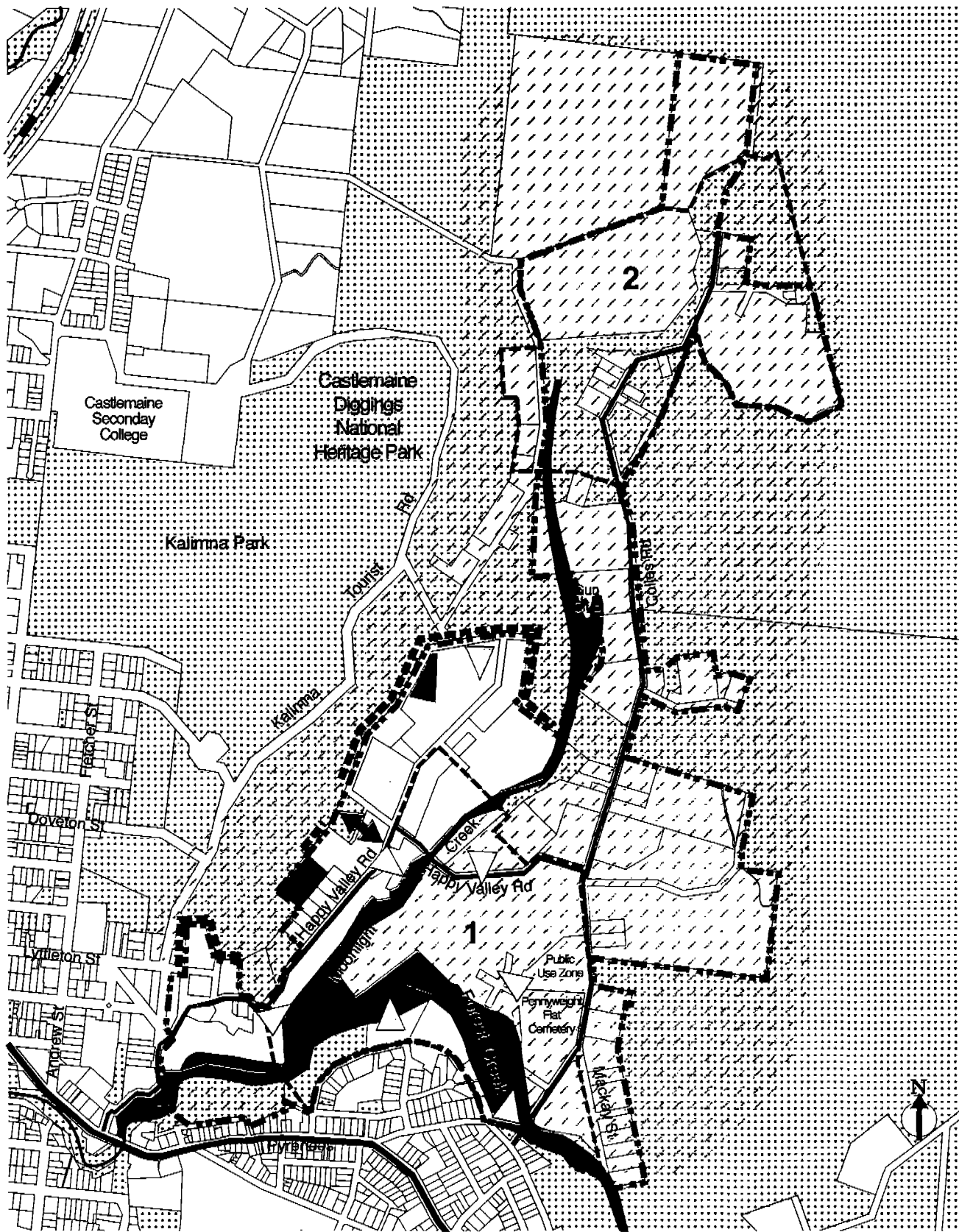
A Significant landscape Overlay – Schedule 2 applies to the majority of the Study Area. Refer to Figure 7).

A report titled "Landscape Analysis – Happy Valley Study Area" is included in Appendix C. This report contains a brief outline of the main landscape features in the study area.

Figure No. 2 is an index to the location and viewing directions of photographs No's 1—7 included in chapter 3 of this Site Analysis report.


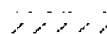





A summary of this report is as follows:

- The combination of cleared agricultural land, remnant box-ironbark forest at Pennyweight Flat Cemetery and the backdrop of forested hills combines to form an attractive landscape relatively uninterrupted by buildings. The valley is an enclave within the Castlemaine Diggings National Heritage Park.
- The high visibility of the landscape from numerous vantage points allows a clear view of the various landforms that, under the action of geological processes, led to the formation of gold-bearing alluvium in the valley floor.
- Europeans settled in Castlemaine because of the gold. The origin of the gold is directly related to landscape processes. Hence, there is strong link between the gold-bearing landscape and our local cultural heritage.
- The value of this landscape is enhanced because it is within walking distance of the Castlemaine business centre.
- Forest Creek once flowed along the south side of the Pyrenees Highway evidenced by a series of gravel deposits between Castlemaine and Chewton. Over time, this ancient course was abandoned and the creek cut downwards, and at the same time migrated northwards until finally reaching its modern position. The relatively wide Forest Creek valley suggests that the modern creek has been meandering back and forth across the valley for a long time.



HAPPY VALLEY/MOONLIGHT FLAT STRATEGIC PLAN

**STAGE ONE: SITE ANALYSIS
LANDSCAPE & ENVIRONMENT:
Constraints and Opportunities**

-  Land Subject to Inundation
(refer to LSIO in Planning Scheme for precise boundaries)
-  Significant Landscape Overlay
(refer to SLO2 in Planning Scheme for precise boundaries)
-  Land Constrained by Slope and Erosion
-  Potential Wildlife Corridor (link to Kalimna Park)
-  Significant View Corridors
-  Identified Significant Cultural Landscape Areas
1. Pennyweight Flat
2. Lady Gully/Moonlight Flat
-  Interface with Kalimna Park
Environmental values of park to be protected.

- The hills surrounding Forest and Moonlight creeks have been eroded by more than 20 m over this long history of activity. Gold contained in quartz reefs has eroded from the hills and has washed down into the valleys, together with clay, silt, sand, and gravel. All these materials, including the gold, have accumulated in the valley floors to form the gold-bearing alluvium that was targeted by the early alluvial miners.
- Pennyweight and Moonlight flats are enclosed by a well defined valley that retains its rural character, although less than 2 km from the Castlemaine CBD. The features that help to characterise the valley include:
 - an attractive and uninterrupted expanse of bush and grasslands,
 - the geological and fluvial context of the alluvial gold deposits can be easily seen from roads that skirt the valley,
 - the valley is surrounded by the Castlemaine Diggings National Heritage Park
 - the valley is a focus for recreation and tourism (see Tourism and Recreation report), and
 - the landscape provides the appropriate cultural heritage setting for the Pennyweight Flat Cemetery.
- The Mount Alexander Planning Scheme – Municipal Strategic Statement recognises the landscape assets of the Shire, especially as it relates to the context of gold mining heritage. Many of the Shire's heritage assets have local, state and national significance.
- The scheme seeks to
 - identify and protect significant geological, landscape and bushland features
 - preserve heritage buildings, places and significant landscapes
 - protect places of natural and cultural significance and support the preservation of those localities threatened by development or neglect
- The Mount Alexander Planning Scheme includes stated strategies to ensure that all new developments are in sympathy with the character and the built and natural heritage associated with the town areas or the general surrounds and minimize development footprints within or adjacent to bushland areas
- The Box Ironbark forests of the region are important as they host threatened species and provide a recreational and tourism asset for the Shire. This has been recognised by the declaration of the Castlemaine Diggings National Heritage Park.

10. TOURISM & RECREATION

An analysis report titled "Tourism and Recreation - Happy Valley Study Area" has been prepared, a copy of which is included in Appendix D.

A summary of tourism and recreation attractions described in the appendix report is as follows:

Castlemaine Diggings National Heritage Park

- From 1851 to 1854 the Castlemaine area was the world's richest shallow alluvial goldfield and home to tens of thousands of migrant gold seekers.
- The park is Australia's first National Heritage Park, part of the new Box-Ironbark Parks and Reserves network.
- The Jaara Jaara are the traditional occupiers of the area.
- Almost every gully, flat and hill was named in the gold rush, offering insights into the ethnic and regional backgrounds of the gold seekers.
- The Castlemaine Diggings National Heritage Park is a rare place where you can still see authentic traces of the great Victorian gold rushes of the 1850s, sites and relics that harbour secrets and tell stories about how life really was on the diggings.

The Mount Alexander Diggings Trail

This trail takes you to heritage sites in and around the Park.

A comprehensive guidebook takes you on a journey, many journeys, through one of the most remarkable periods of Australian history.

Pennyweight Cemetery

Victoria's most intact and evocative gold rush cemetery containing the marked graves of children and adults (including Chinese) who died in the early gold rush period.

Kalimna

Kalimna is a good example of the Box Ironbark Forest, hard and dry in summer it provides a diverse habitat including 28 types of orchids and 2 rare species of butterflies. It is a popular spot for locals to walk. It is located on a prominent ridgeline east of Castlemaine. (From Parks Heritage Notes Brochure and Map, Feb 2003)

Self Guided Walks

Great Dividing Trail Association –

GDTA plans to complete Leanganook Track and open it to the public in late October 2003.

One of the major unfinished tasks is the construction of a suitable pedestrian bridge/crossing over Forest Creek below Happy Valley Road.

Other Walks to Significant Sites -

"Commuter Track" - Castlemaine to Chewton via Forest Creek Walk

Botanic Gardens via Kalimna Reserve

Kalimna Circuit Track

Happy Valley to Moonlight Flat via Old Happy Valley Road

Colles Road, Happy Valley Road, Quartz Hill Track, Lady Gully etc.,

Mountain Bike Trails

From "Off Road Cycling Adventures"

Melbourne's definitive Mountain Bike guidebook by Keiran Ryan, Orca Publishing

Page 29 – 2 Welsh Village

Ride Description : "How much more can you pack into a 25km ride? This ride takes you into two amazing historical sites followed by a 9km single track that will have you grinning... A few gentle climbs and narrow tracks gets you to the Welsh Village historical site. Please treat this unique site with respect, explore on foot and avoid disturbing the ruins. At 9.7km is the Garfield Water Wheel."

Activities/Events

Castlemaine Gun Club –

Operating as shooting ground for more than 60 years. Current Gun Club – 30 years old, previously a private venue built by Tom Botten, born in Lady Gully, as personal shooting range.

Current Membership – 84. Open to State-wide and International competitors.

Meet each week for practice - Monday afternoons (20-30 participants).

Meet twice monthly for Competitions - Saturday afternoons (300 participants).

Unofficial wildlife refuge.

Opportunities

- To develop Indigenous Cultural Tourism
- To develop Eco-tourism in this area.
- To develop network of Heritage Walks/Trails linking National Heritage Park with Forest Creek.
- To develop unique Wildlife Park through rehabilitation of Moonlight & Forest Creeks, Grasslands on Flats, and Box and Ironbark Forests.
- To create a fenced-in section of parkland for dogs to run freely (without disturbing wildlife), within easy walking distance of Castlemaine.

Existing Uses

Local residents, Bushwalkers, walkers, Dog walkers (including greyhounds), Joggers, Horse Riders, Cyclists, Trail Bike Riders, 4wd drivers, fossickers.
Castlemaine Community and tourists/visitors use area.
Painting Groups from Melbourne regularly visit Castlemaine and Happy Valley is one of their main stops, due to its scenic qualities. The Valley is well known in painting circles in Melbourne.

11. BUSHFIRE ISSUES

A Wildfire Management Overlay applies to part of the site. The Country Fire Authority plans to review wildfire maps in July/August 2003.

An analysis report titled "Bushfire Issues - Happy Valley Study Area" has been prepared, a copy of which is included in Appendix E.

A summary of the bushfire issues report described in the appendix report is as follows:

The Study Area has a number of characteristics that make it very vulnerable to extreme bushfire risk. Any development plan involving a significant increase in housing in the valley needs to consider the fire risk to future residents, their ability to escape in an emergency and the measures that households should adopt to lower the individual and community risk.

Risk Factors in the study area

- A housing estate developed in Happy Valley would interface with Bush on three sides - west, north and east.
- It is part of a bush Corridor that links to the north with Barkers Creek and south-east to Chewton.
- Moonlight Flat Pine Plantation is situated in the middle of the forest a short distance east of the study area.
- Forest Creek and Moonlight Creek flanked by grassy flats.
- Much of the wide Creek Flat area is infested with gorse and blackberry presenting high fuel loads (Dead wattle etc)
- Bushfire, fanned by a north to westerly wind would threaten the lives and property of Happy Valley/Moonlight Flat residents.
- Further risk to region, particularly the Pine Forest, by hazard of south-westerly change.

Suggested Defensive infrastructure

- A housing estate would require reticulated water with fire hydrants.
- Firebreaks between housing and high fuel load areas.
- Road access enabling fire trucks to enter and private vehicles to leave, where desired with adequate turning circle for fire trucks?
- Compulsory Water tank reserved for fire purposes with every house (with CFA outlet).
- Compulsory Community Fireguard/Education.
- Acknowledgment, and ideally participation in, Community safety plan mandatory for residents.

Status of Existing Defensive infrastructure

- Reticulated Water to Gun club.
- Tank water for the 7 dwellings north of gun club.
- Community Fire Guard area - Colles Road
- Water availability for firefighters = all dams extremely low or empty for 2002-3 season.
- One permanently full 10,000 gallon tank with CFA outlet – lot 77-79 Colles Road (Opp Church).

Moonlight Flat Pine Plantation and fire risk

Moonlight Flat Pine Plantation is used with increasing popularity by visiting 4 wheel drive vehicles, trail-bikes, cyclists, horse riders, walkers, joggers, and campers. The Pine Plantation authority has allowed many tracks to become overgrown in order to deter usage, however this practice has increased the fire hazard risk.

Current Wildfire Protection Plans

- CEA Municipal Fire Protection Plan
- Fire Management, Municipal Fire Prevention Plan – significant review of Fire Prevention and Community Preparedness - New Report due to be complete – Oct. 2003
- Significant consequences from review for municipalities, CFA and DSE.
- Bendigo/Loddon/Mt Alexander Study re Firebreaks, Refuges (first of its kind in Australia) Due to be complete - July/August
- CFA reviewing Wildfire map – July/August

Previous Fire Risk Assessments

Colles Road Area Potential Fire Risk

Report by Municipal Fire Prevention Officer, 1993 –

“The grassed and timber areas of Moonlight Flat have been identified on the plans as “high hazard” areas. The plan defines a high fire hazard area as:

“Areas where, if fire occurs, it would create a dangerous situation for both residents and fire fighters.”

12. STAGE TWO INVESTIGATION AREAS

The results of the Site Analysis stage are summarised on an investigation area basis. These issues will be addressed in Stage Two of the project. The investigation areas are shown on the plan at the end of this summary.

Area 1. Happy Valley Road - Issues

Access

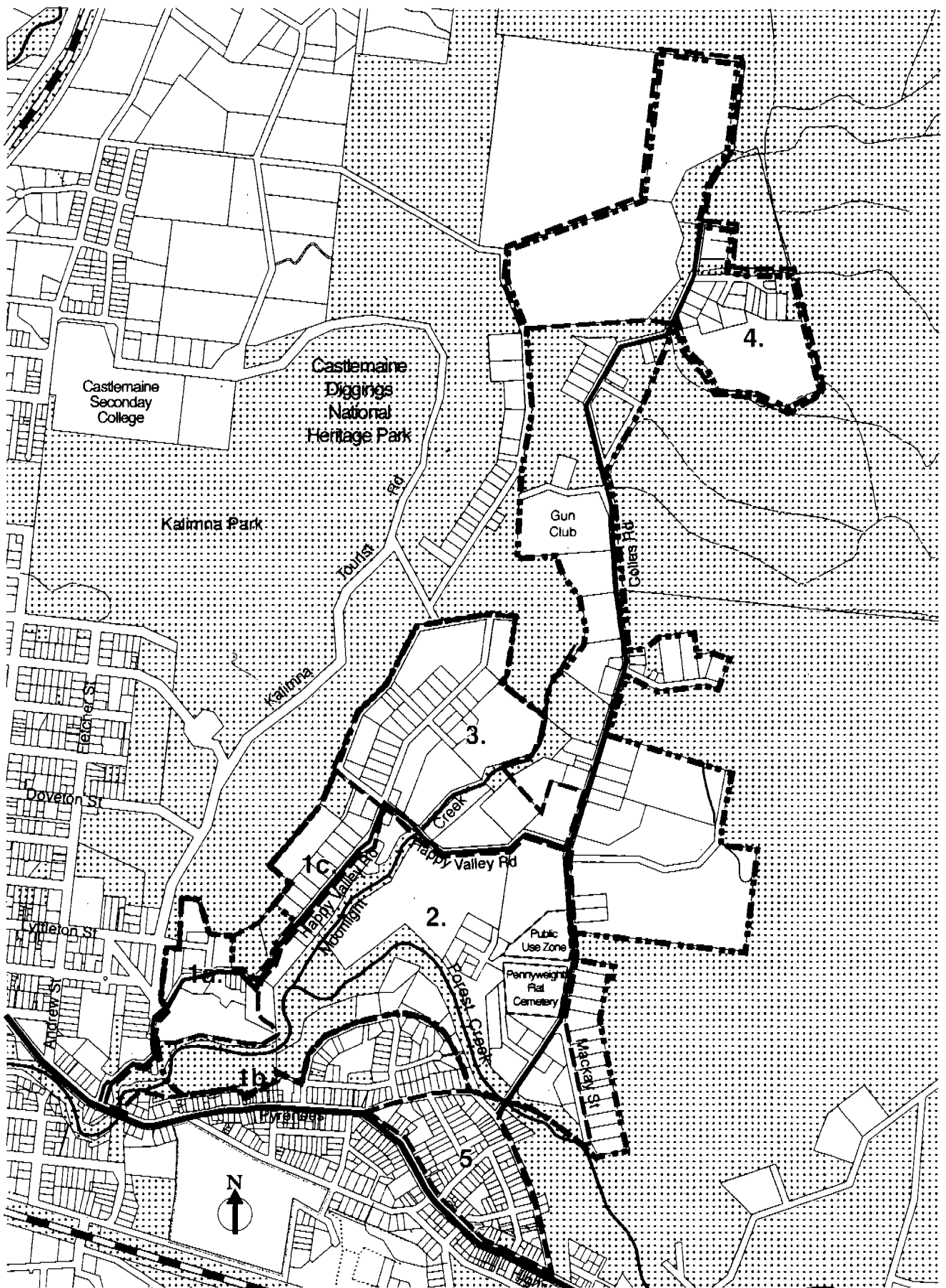
- Poor sight distances for vehicles entering and exiting the Pyrenees Highway at Duke Street /Happy Valley Road. Improvement to sight lines to be investigated.
- Future access via Verlin Street. Currently Verlin Street is used as short-cut to town centre.
- A change in the alignment of Happy Valley Road at the bend on the hillside is required to improve traffic safety.

Landscape and Environment

- Significant views are available into the valley and along Forest Creek from the southern end of the Investigation Area
- A parcel of freehold land wedged between the Heritage Park located below Lyttleton Street is covered with a Significant Landscape Overlay
- Recent weed clearing along Forest Creek and Moonlight Flat Creek provides opportunities for revegetation to inhibit further weed invasion.

Heritage

- Heritage Overlay (HO 993), and a significant cultural landscape area identified in Site Analysis report, lie adjacent Happy Valley Road (northern section).
- There are no significant heritage buildings or sites.



HAPPY VALLEY/MOONLIGHT FLAT STRATEGIC PLAN

STAGE ONE: SITE ANALYSIS
Study Area & Stage Two Investigation Areas

- | | |
|-----------------------------|---|
| 1. Happy Valley Road | 3. Hundredweight Hill/Moonlight Flat |
| 2. Pennyweight Flat | 4. Lady Gully/Moonlight Flat |
| | 5. Wesley Hill Exit from Site |

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Future Development Potential

- A Development Plan Overlay applies to land within investigation area
- There is potential to separate existing residential area along Happy Valley Road from undeveloped existing LDRZ land to north (ie Area 3) with a wildlife corridor. Happy Valley Road could become a no-through road. This will be investigated in Stage Two.
- The southern and lower portion of the investigation area could have redevelopment potential with an increase residential density or for non-residential use such as tourist accommodation.
- Any further filling of areas adjacent Forest Creek needs to consider hydrological issues.

Area 2. Pennyweight Flat - Issues

Access

- Future development of LDRZ land in Area 3 will require upgrading of existing unsealed section of Colles Road.
- Developer contributions towards road improvements.
- Improvement works to Zeal Bridge would need to be brought forward into Council's current five-year program if subdivision and housing development takes place at Area 3 in near future.
- Potential for extension of walking trails along Moonlight Creek with links to Kalimna Park.

Landscape and Environment

- Openness and landscape character of valley needs to be protected.
- Significant viewlines across the valley and towards Pennyweight Flat Cemetery need to be protected.
- Remnant native vegetation with Cemetery, adjacent Moonlight Creek and within roadsides needs to be retained.
- Weed clearing required along Forest Creek and Moonlight Flat Creek providing opportunities for revegetation and prevention of further weed invasion.
- Landscape importance is recognised in the Planning Scheme ie. Significant Landscape Overlay.

Heritage

- Pennyweight Flat Cemetery and its setting need to be preserved. Existing Heritage Overlays afford protection.
- Site analysis report identifies a significant cultural landscape area covering the entire area of Area 2, implying that development should only take place if it can be demonstrated that the significance of the heritage place or cultural landscape area will not be destroyed.
- Pennyweight Cemetery and Pennyweight Flat are listed on the Australian Heritage Commission Register of the National Estate.

Future Development Potential

- Stage Two needs to consider the extent of new housing development that would be appropriate at boundaries of Area 2. eg. west side of Mackay Street, east side of Happy Valley Road, and south side of Happy Valley Road (north end).

Area 3. Moonlight Flat/Hundredweight Hill

Access

- Standard of Happy Valley Road is inadequate to service future housing in Area 3.
- Traffic volumes from new housing (@ 10 daily trips per household) would necessitate substantial road works and increase the potential for traffic conflict at Duke Street intersection.
- Alternative vehicle access needs to be investigated including access via Colles Road to service future residential area. East-west route alignment options for Happy Valley Road also need to be investigated

Landscape and Environment

- Design criteria required for residential design.
- Environmental values of adjacent Kalimna Park need to be protected.
- Remnant native vegetation within roadsides, adjacent Moonlight Flat Creek and to the north of Area 3. needs to be retained.
- Potential for wildlife corridor linking to Kalimna Park
- Planning for bushfire protection is a key issue for residential subdivision and new housing.
- Weed clearing required along Moonlight Flat Creek providing opportunities for revegetation and prevention of further weed invasion.
- Moonlight Creek could be a linear open space corridor linked to new housing areas and Kalimna Park.

Heritage

The northern part of Pennyweight Flat significant cultural landscape area covers the southern part of Area 3.

Future Development Potential

- The majority of new housing in the study Area can occur on land currently zoned LDRZ located in Area 3.
- A request to change the zoning of this land to Residential 1 zone was disallowed following an Independent Panel hearing and report in 1999. It is understood that the current landowner still has higher density residential in mind. An assessment of demand and supply for residential land needs to be carried out to support a rezoning in this case and other urban fringe locations in Castlemaine.
- Development of Area 3 must involve a site responsive design process. Site characteristics of Area 3 include the common boundary shared with Kalimna Park, sloping land, adjacent Moon light Creek and exposure to views from across the valley. The existing Development Plan Overlay covering Area 3 in fact requires the preparation of a plan that responds to site features.

Area 4. Lady Gully/Moonlight Flat

Future Development Potential

- A letter has been received from the landowner of two parcels in the Lady Gully/Moonlight Flat area requesting a change of zoning to enable creation lots with a minimum lot size of 2.0 hectares.
- A proposal to rezone the area should be accompanied with a detailed site analysis and design response that has regard to vegetation cover, slope, and significant heritage sites.

Access

- Access along Colles Road would need to be improved if any new housing was proposed in this Area.

- Difficulty in providing vehicle access to the Lever Point area.

Landscape and Environment

- Significant Landscape Overlay applies to Area 4.
- Remnant native vegetation exists as a dense cover in the Levers point area and in more isolated stands east of Colles Road. Protection of remnant native vegetation is an important issue in Area 4.
- Moonlight Flat Creek has serious infestation of Bridal Creeper. Restoration works along Moonlight Flat Creek will restore habitat value for native animals.

Heritage

- Lady Gully/Moonlight Flat significant cultural landscape area identified in the Site Analysis report covers Area 4 implying that any development should not destroy the significance of the heritage place or cultural landscape area.

Area 5. Wesley Hill Exit from Site

This is included as an investigation area due to the off-site traffic impact that will result from new housing in the Study Area.

Access

- A priority exit/entry point onto the Pyrenees Highway (Duke Street) that minimise potential traffic conflict will be investigated in Stage Two.
- Traffic management may be required as means to direct traffic to priority exit point.

Heritage

- Improvement works will be required to Zeal Bridge with increased traffic volumes arising from new housing within the Study Area.