Graduate Diploma in Applied Science (Horticulture)

Graduate Project C

An investigation into the use of indigenous species in the context of a cultural landscape, with particular reference to the township of Castlemaine

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1.0 INTRODUCTION

"The natural factors affecting the development and rebuilding of our towns and cities are all too frequently ignored, and there is little evidence of an organic relationship between the city and the landscape in which it has been built" (Laurie, I. ed. 1979)

The following study looks at the importance of a natural landscape to a specific township; in this case, the central goldfields town of Castlemaine. It assesses the current state of this original landscape and looks at how the aboriginal and post settlement effects have influenced that terrain.

Given the relationship the town has with its natural vegetation, the study then goes on to look at the representation of indigenous plants within the urban area and addresses the cultural issues which have usually precluded their use in municipal landscaping.

Meaning in landscape is a concept not often discussed, too often the decisions surrounding planting are made solely on the basis of the cultural requirements of the plants and how their selection can best be matched with the relevant site conditions. Indeed, philosophical considerations are often left to play a minor supporting role in horticultural decision-making – a situation compounded when the plants in question are indigenous and the context in which they're to be used, urban. (Hitchmough, 1994). In this study meaning is given a greater prominence, whilst not denying the central part played in plant selection by the horticultural sciences.

Castlemaine's visual character relies a great deal on its natural surroundings and there's a significant need both in this town and others across the state for a contextual use of indigenous plants in municipal landscaping.. The sense of place they establish is not to be underestimated in this age of Plane Tree Avenues and "quick-fix" townscape renovations.

The study is not blinkered, however, and sees a use for both local *and* exotic plantings when a suitable cultural context is established. This is the aim of three case studies which conclude the report. The recommendations made in them address the central tenants of the study which can be summarised as follows:

- The historic visual character of Castlemaine owes as much to its local species as it does to introduced exotics and that these local species be utilized to a far greater degree in municipal landscaping in the town.

- That if municipal planting is to have any *meaning* it has to take into account not just the local buildings and post settlement structures but also the existing natural vegetation and its historical part in making Castlemaine unique.

Berkeley Street, Castlemaine
Meaning in landscape. Do these rows of planes and brachychitons in the same street have any meaning in the landscape beyond being good street trees? Wouldn't a staggered planting of the brachychitons on *both* sides fulfil shade/winter sun requirements and also be more appropriate to the visual character of the town?

Edward Street, Castlemaine
Another largely meaningless deciduous planting. No cars park here to require summer shade and there are next to no houses needing any. Surely this street provided an opportunity to plant some local tree species. Its elevated position would have enabled visual links to be made with the bushland at the top of the picture and elsewhere.

- That where at all possible links be established between the choice of plantings and the cultural landscape which they will inhabit, and that this choice recognise that indigenous plants have a cultural context too.

2.0 PHYSICAL BACKGROUND

2.1 Location

Castlemaine is located 119km north west of Melbourne on the Pyrenees Highway, a route taken from the main Calder Highway. The area in which it lies is generally referred to as the Central Goldfields a term which relates it to the period 1851 – 1860 when up to 30,000 miners worked the creeks and quartz reefs in order to extract the gold which had been discovered there. The dominant physical feature of the area is Mount Alexander, a granite mass which gives rise to the many creeks which flow down to the Loddon River.

2.2 Geology

To trace the geological history of the Castlemaine area back 450 million years is to find a shallow sea and movements of various sediments. Over time these built up to form beds of clay, silt and sand. As they hardened they became sedimentary rocks: mudstones, shale and sandstone. 50 million years later molten activity beneath the surface of these deposits caused various changes to take place and in the event some of the sandstone was changed to quartz and the mudstone and shales to slate. These rocks underwent great pressure which in turn created many folds and breaks. The molten rock which cooled without being forced above ground formed granite. These metamorphic activities sometimes lead to gold being deposited with the quartz.

Over the subsequent 200 million years the area underwent a long process of erosion which eventually lead to the granite being exposed. The metamorphic rocks were more resistant and today form the unexposed ridges around the granite outcrop of Mount Alexander. Major Thomas Mitchell, looking at these outcrops in September 1836, made the first geological observations of the area. (Castlemaine Art Gallery & Historical Museum display.)

Volcanic activity in more recent geological times brought basalt to the area as lava flows cooled. Where the basalt resisted erosion one can now see the tributaries of the Loddon and the basalt plateauxs left above.

This vast expanse of geological activity has left the physiology of Castlemaine one of low, undulating hills based on the underlying sedimentary mudstones, slates and sandstones. These are disected by the quartz reefs which lead to the mining activities of the 1850's and which caused the irrevocable change in the landscape which this study often refers to.

2.3 Soil

The make-up of any soils will always depend upon the interaction between a number of diverse factors. Climate, bedrock, topography and micro-organisms are perhaps the most important. The agent of Time then plays its own role.

The Castlemaine soils are perhaps less determined by variations in climate than those elsewhere in Victoria. The bedrock Palaeozoic deposits of slate, sandstone and, to a lesser extent, granite; together with the various alluvial deposits derived from them, have created soils which are shallow and of a low fertility. The fine-textured clays are particularly low in nutrients. On countless sites the bedrock is so close to the surface of the ground that the "soil" for plant roots is simply disintegrating rock. The ground vegetation which these circumstances lead to is often patchy to say the least. A bare, dry ground surface not being uncommon.

2.4 Climate

2.4.1 Rainfall

Being situated north of the Great Dividing Range the annual rainfall of Castlemaine falls into the band between 400 and 700mm., with the highest amount being during winter. The amount of rainfall doesn't necessarily equate with the amount of water available for plant growth and in Castlemaine there is certainly a potential for high temperatures, which in turn lead to water loss because of evaporation and the shallow soil types. Table 2 addresses this problem.

Table 1: Castlemaine's Mean Rainfall (mm)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
40	34	40	46	58	44	58	73	60	62	46	35	596

Adapted from Bureau of Meteorology readings, 1997

Table 2: Castlemaine's "Effective Rainfall" (% frequency of rain = to or > than the "effective amount)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	18	33	58	81	92	99	93	85	62	24	22

Adapted from Land Conservation Council, Victoria, 1978

The figures in Table 2 indicate that Castlemaine has a less than 50% chance of receiving "effective rainfall" between November and March. This means there is a significant liklihood that during this period each year plant growth will be detrimentally affected. This has particular implications for the establishment of exotic plants and especially those in municipal planting which may require a higher tolerance of neglect. Some of the *Platanus* sp. planted around the town over the past few years can even be seen to be struggling to get established.

2.4.2 Temperature

As far as temperature goes, Castlemaine is a place of extremes. January and February are the warmest months and June and July the coldest, but within those broad generalities there can be significant highs and lows. A minimum of -5°C during July is quite possible, for instance. The relationship between these temperatures and plant growth is not insignificant. During the months of May to September, when the mean temperature is below 10°C plant growth will certainly be reduced and when the daily temperature goes below 5°C there will be "little appreciable growth" (Land Conservation Council, 1978). When this scenario is combined with the the affects of reduced "effective rainfall" it's clear that the climate of Castlemaine doesn't do any favours to plants and goes a long way to restricting the range of plants it's possible to grow. Both indigenous and exotic plants are effected. Personal observation of indigenous tubestock planted in the autumn has revealed a high loss rate, due in part to the factors mentioned above. This raises important questions for public plantings where adequate back-up maintenance is not always possible.

Table 3: Castlemaine's Average Maximum, Minimum & Mean Daily Temperatures (°C)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Max.	28.4	29.2	25.1	20.3	15.8	12.7	11.8	13.4	15.6	194	22.8	258	20.0
Min.	12.6	13.4	108	7.3	5.0	2.7	2.3	3.5	4.7	6.5	8.8	10.8	7.4
Mean	20.8	21.3	17.5	13.7	9.8	7.6	7.0	8.2	9.9	12.8	15.4	17.8	13.5

Adapted from Bureau of Meteorology readings, 1997

2.4.3   Frost

Frost is a major element in Castlemaine's climate, the township experiencing an average of 38.1 frosts a year. Put another way, Castlemaine can have frost on at least 1 day a month for 6 months.

Table 4: Severe Frosts in Castlemaine (Average numbers at screen temps. of 0°C or less).

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
0	0	0	0.7	4.5	10.3	10.2	6.6	3.6	1.1	0.1	0	38.1

Adapted from Land Conservation Council, Victoria 1978

These frosts cause particular problems for vegetation and planting. Even if plants are theoretically tolerant of frost the recent planting of them can still lead to loss occuring. Personal observation of indigenous tubestock planted in autumn showed heavy losses due

to the effects of frost. Exotic plantings associated with new landscaping around Victory Park were similarly affected, though in the main this was due to poor specie selection – echiums and frost are not good partners! Furthermore, the fact that frost occurs at ground level doesn't always mean that it will a metre above ground. As frosts occur in Castlemaine over a large, 8 month span it also means that the possibility of growing *any* frost-sensitive plants is extremely remote unless very favourable localised conditions prevail.

2.5   Vegetation Profile

The natural vegetation of Castlemaine is a continuum of the Box-Ironbark region of north-central Victoria which extends from as far north as Wodonga, on through Shepparton, to the west, and then through the Goldfields and down to the easterly ranges of the Grampians. Like any broad band of dominant vegetation, there are numerous distinctive plant communities within the Box-Ironbark region and more than 1,000 species have been identified as a whole (Calder & Calder, 1994). However, of the 62 "major vegetation alliances" in Victoria (Frankenberg, ed, 1971) only six occur in the Central Goldfields area. The forests around Castlemaine, whilst not as immediately impressive as, say, the Wombat forest south of Daylesford are still of great natural beauty and are now being recognised by the Environment Conservation Council, which, at the time of writing, is to consider affording them National Park status.

When looking specifically at the Castlemaine area the predominant natural vegetation is that of open box forest with a sparse understorey. Patches of stringybark forest and ironbark regrowth are also present. The rocky, shallow soils mean that the trees are often restricted in height to a mere 3m, though in places where soil and topographical conditions are more suitable they will grow to between 8 and 15m. (Land Conservation Council, 1978). Survey work carried out by the Castlemaine Field Naturalists Club (Perkins, ed. 1998) has identified 654 indigenous species within the 10 minute grids M46, M47, M48, Ni, N2, N3, N10, N11 & N12 formulated by the Department of Natural Resources & Environment Flora Section.

For the purposes of gaining an understanding of the characteristic natural vegetation of Castlemaine I've extracted the plants most commonly occuring in the grids closest to the town and which also occur with the most regularity in the surveys as a whole. The survey area is bounded by Lockwood (in the north), Baringhup (in the west), Tylden (in the south) and Redesdale (in the east).

Table 5. Dominant Eucalypts of Castlemaine:

Botanical Name	Common Name
Eucalyptus goniocalyx	Long-leaf Box
Eucalyptus macrorhyncha	Red Stringybark
Eucalyptus melliodora	Yellow Box
Eucalyptus microcarpa	Grey Box
Eucalyptus nortonii	Mealy Bundy
Eucalyptus obliqua	Messmate
Eucalyptus polyanthemos	Red Box
Euclayptus leucoxylon	Yellow Gum

Table 6. The most commonly occuring understorey plants of Castlemaine:

Botanical Name	Common Name
Acacia acinacea	Gold-dust Wattle
*Acacia baileyana**	Cootamundra Wattle
Acacia dealbata	Silver Wattle
Acacia genistifolia	Spreading Wattle
Acacia gunni	Ploughshare Wattle
Acacia implexa	Lightwood
Acacia melanoxylon	Blackwood
Acacia paradoxa	Hedge Wattle
Acacia pycnantha	Golden Wattle
Arthropodium stricta	Chocolate Lily
Astroloma conostephioides	Flame Heath
Austrostipa mollis	Soft Spear-grass
Brachyloma daphnoides	Daphne Heath
Brachyscome perpusilla	Rayless Daisy
Bracteantha viscosa	Sticky Everlasting
Brunonia australis	Blue Pincushion
Burchardia umbellata	Milkmaids
Bursaria spinosa	Sweet Bursaria
Carex appressa	Tall Sedge
Cassinia arcuata	Coffee Bush
Cheilanthes austrotenuifolia	Green Rock Fern
Crassula decumbens var. decumbens	Spreading Stonecrop
Danthonia eriantha	Hill Wallaby-grass
Danthonia setacea	Bristly Wallaby-grass
Daucus glochochidiatus	Austral Carrot
Dianella revoluta	Black-anther Flax-Lily

Dillwynia sericea	Showy Parrot-pea
Drosera peltata ssp. auriculata	Tall Sundew
Drosera whittakeri	Scented Sundew
Exocarpos cupressiformis	Cherry Ballart
Glossodia major	Wax-Lip Orchid
Gonocarpus tetragynus	Common Raspwort
Hardenbergia violacea	Purple Coral-pea
Hovea linearis	Common Hovea
Hydrocotyle laxiflora	Stinking Pennywort
Hypericum gramineum	Small St. John's Wort
Joycea pallida	Red-anther Wallaby-grass
Juncus amabilis	Common Rush
Juncus holoschoenus	Joint-leaf Rush
Juncus remotiflorus	Remote-flowered Rush
Juncus subsecundus	Finger Rush
Lomandra filiformis	Wattle Mat-rush
Lomandra multiflora	Many-flowered Mat-rush
Microseris aff. lanceolata	Yam-daisy
Oxalis perennans	Forest Wood-sorrel
Ozothamnus obcordatus	Grey Everlasting
Pelargonium rodneyanum	Magenta Stork's-bill
Pimelea linifolia	Slender Rice-flower
Poa sieberiana var. sieberiana	Grey Tussock-grass
Schoenus apogon	Common Bog-rush
Senecio tenuiflorus	Purple-leaf Groundsel
Stackhousia monogyna	Candles
Stuartina muelleri	Spoon Cudweed
Stylidium graminifolium	Grass Trigger-plant
Tetratheca ciliata	Pink-bells
Thelymitra pauciflora	Slender Sun Orchid
Themeda triandra	Kangaroo-grass
Thysanotus patersonii	Twining Fringe-Lily
Wahlenbergia stricta	Tall Bluebell
Wurmbea dioica	Early Nancy

* Non-indigenous

It can be seen from these lists that the whole spectrum of plant types are represented throughout the natural vegetation of Castlemaine providing a high biodiversity. Plants occuring come from the woodland eucalypts, through larger growing shrubs: *Acacia pycnantha, Bursaria spinosa*; to smaller shrubs: *Dillwynia sericea, Cassinia arcuata*; perennial daisies: *Bracteantha viscosa*; shrubby heaths: *Brachyloma daphnoides*; grasses: *Poa sieberiana var. sieberiana, Themeda triandra*; terrestial orchids: *Thelymitra pauciflora, Glossodia major*; rushes: *Juncus amabilis, Lomandra filiformis;* lillies:

Arthropodium strictum, Dianella revoluta; sedges: *Carex appressa.* and ferns: *Cheilanthes austrotenuifolia.*

As the lists suggest, it's something of a misnomer to classify the Castlemaine bush under the term Box-Ironbark forest. In reality the natural vegetation is really open woodland with a light understorey. What isn't in doubt is that this vegetation mix certanly provides food and shelter for native mammals, birds, reptiles, birds and insects and is well adapted to the unusual swings of the local climatic conditions. In addition it's adapted to the low nutrient soil types. In cultivation many of these plants have proven that (once established) they are drought and frost tolerant (Sprague, M. prop. Goldfield's Revegetation Nursery, pers. comm., 1998); they also aren't likely to become environmental weeds; they require far less water and fertilizer use in times of reduced municipal resources and they avoid the attendant environmental pollutants – a factor not insignificant at a time when the state of our waterways has produced its own new management authority and attendant tariff. In time the greater use of local plantings will also open up extended wildlife corridors for local fauna.

3.0 HISTORICAL PERSPECTIVE ON VEGETATION

3.1 Major Mitchell's discovery

On September 28th 1836 Major Thomas Mitchell looked down from a hill in central Victoria. Before him he would have seen: "The pretty valley, its rolling hills folded neatly back on either side of the gently meandering creeks." (Hocking, 1994 p.7).

He and his party were 10km east of what came to be called Castlemaine. Mitchell was on his way back to Sydney, having gone in search of the point where the Murray and Darling rivers meet. The expedition was to change the landscape of Victoria forever because "the Major's Line" was to open-up the country to all the pastoralists of New South Wales eager to find new grazing lands. During the course of the next four years thousands of squatters were to follow in Mitchell's wake. So much so that by 1840 almost all the land around Mount Alexander had been claimed.

3.2 The Jajowurrong and the landscape

On July 13th 1836 Mitchell had written in his diary: "We had at length discovered a country ready for the immediate reception of civilised man; and destined to become eventually a portion of a great empire..." (quoted in Hocking, 1994, p.13). Of course the imperious Mitchell completely ignored the fact that local Aboriginal tribes inhabited the areas he was traversing and chose instead to imagine the landscape as empty and undisturbed. But what Mitchell saw several weeks later as he stood on what is now McKenzie's Hill was neither empty or undisturbed. The local Jajowurrong , of the Kulin people, roamed the area and their "management" of the land (to use current parlance) would have included "fire-stick farming", (or light, regular burning-off). The tribe is said to have numbered around 1,300 at that time, (Land Conservation Council, 1978). It's perhaps ironic that when Mitchell refers to a landscape which "had so much the appearance of a well kept park" (quoted in White, 1981, p30) this park-like appearance was probably the consequence of the systematic burn-offs.

The early colonialists insisted on viewing the landscape as a sort of wilderness or non-human landscape which needed "civilising", (to use Mitchell's word.). Sylvia Hallam, puts it another way saying that in Australia the land "was not as God made it. It was as the Aborigines made it" (quoted in Rickard & Spearritt, 1991, p23). Of course, if the landscape is seen as untouched then it's as good as saying that the aborigines didn't even exist. But exist they did and as such it's very important to note that 1836 wasn't a simple watershed for the evolution of the landscape around Castlemaine. The subsequent changes may have been more dramatic, but prior to Mitchell's expedition the Aboriginal influence on the landscape would have been of considerable significance.

The burning, hunting and food gathering activities of the Jajowurrong are referred to by Calder & Calder (1994). They note that in December 1824 Hamilton Hume had reported extensive fires burning across Central Victoria, which they attributed to the Aborigines. The journals of Hume and Hovell also refer to a grassy understorey and a very scattered distribution of trees, consistent with regular burning, (Calder & Calder, 1994, quoting

Bland, W. (ed.), 1965, *Journey of discovery to Port Phillip, New South Wales, by messrs. W.H. Hovell and Hamilton Hume: in 1824 and 1825,* facsimile edition, Libraries Board of South Australia, Adelaide).

Eric Rolls, (quoted in Garden, (ed.) 1993, p. 2,) speaks more generally of Aborigines spending "about 50,000 years opening up Australian forests with fire and the next 50,000 years keeping them open... making... a very beautiful land of Australia but... a land modified to their own needs, varying open complex grassland broken with belts of thick trees to shrubs." What becomes clear from these and many other early eyewitness accounts is that the pre-settlement landscape of Victoria wasn't a natural one, but instead a cultural one, shaped by the active intervention of aborigines in its ecology. And even then there were different treatments for differing ecological associations: roughly every five years the drier forests were burnt, whereas the grasslands and stands of plants such as Typha were burnt annually and the higher forests weren't burnt at all. (Office of the Commissioner for the Environment, 1991). Cultural landscapes in Australia are normally regarded as those which have evolved since white settlement but there is surely a need to readdress this concept if we are to extract a real sense of meaning from the landscape we inherited (read, "stole") from the Aborigines.

As Tom Griffiths has pointed out, there are no "primeval, non-human landscapes." (quoted in Rickard & Spearritt, 1991, p. 23). The idea of "wilderness" has always been to deny "a civilization other than our own", (Ibid, p.23, quoting Thoreau in Nash, 1989, *The rights of nature: a history of environmental ethics,* Madison.).

3.3   Settlement and the landscape

If the Aborigines had at least tried to "manage" the landscape so that it would continue to yield the plants and animals they needed to survive, what followed in the wake of European settlement was another form of vegetation impact altogether. Hard-hooved animals compacted the soil; ate or trampled the smaller plants and ruined the waterways. Land clearing began and continued at an incredible rate so that by 1991 only 6% of Victoria's freehold land had retained its native forest cover. (Office of the Commissioner for the Environment, 1991). At least 75% of the Box-Ironbark community has been cleared (Calder & Calder, 1994); pest plants represent 24% of the total number of plant taxa in Victoria (Office of the Commissioner for the Environment, 1991) and pest animals such as rabbits make up 10% of Australia's terrestrial mammals (Ibid, 1991). Add to these statistics the secondary effects of soil erosion, soil acidification, soil salinity, chemical residues and global climatic change and the landscape of Castlemaine can be said to have been under a kind of siege since 1836.

3.4   Gold and the landscape

Yet, in many ways, Castlemaine has been under more than a siege. If the settlement which arose after Mitchell's expedition had developed as a purely small rural outpost the landscape would look very different to the one we see today. The problem was: gold was discovered in 1851.

The following impressions of the landscape at Forest Creek in Castlemaine were provided by one prospective miner arriving there in 1854:

> "The scenery is very pleasant – wooded ranges, and hills scattered with crags, bounding these fertile slopes and glades: and the diggers are actually digging up, and converting into a wilderness of gravel heaps, slopes of such verdue as it would make an English farmer's heart ache to see it destroyed."
> (Saagazio, 1992, quoting William Howitt, 1972, in *Land, labour and gold*, Melbourne, p 130.).

Elsewhere:

> "Dusty, denuded of trees and heavily pock-marked with shafts and mullock heaps, one observer thought Mount Alexander like 'what one might suppose the earth would appear after the day of judgement had emptied all the graves" (Dingle, 1984, p. 44).

And it only got worse:

> "Timber was a vital material on the diggings. It was used to line shafts and build shelters, for furniture and for warmth and for cooking. Trees were wastefully felled in their thousands" ' a man chops down a tree to boil a can of tea...the sound of the axe could always be heard on the diggings as forests were savaged', as if the loftiest tree were the growth of a single night, and was placed there merely to be irreparably damaged or destroyed: In England only the wealthy owned trees and could order them felled, but in the bush anyone could knock one over." (Ibid, p.50).

One miner even complained of having to walk two miles out of Castlemaine to collect firewood, such was the extent of forest clearing. Any vegetation which *was* left was often grazed bare by foraging horses. The nature of alluvial mining was such that large areas of vegetation and top-soil had to be removed entirely before the practice could begin. Since the *Eucalyptus leucoxylon* and *Eucalyptus microcarpa* communities were the ones situated along the creeks these were the ones most affected by the mining.

Looking at the earliest photographs of the township in the archives of the Castlemaine Art Gallery & Historical Museum, the most striking feature is the almost moonscape appearance of the landscape, the odd trees which *were* left, standing like haunted ghosts, surrounded by stark hillsides. It's of some interest that the place where any reasonable number of eucalypts *did* remain was the Government Camp (*View from Camp Hill, east over Castlemaine*, 1865, Collection of Castlemaine Art Gallery & Historical Museum – see photograph). Today, one of those trees is still possibly in existence, standing tall opposite the old Court House in Goldsmith Crescent (see photograph of Goldsmith Crescent). The tree, a *Eucalyptus microcarpa*, is listed on the National Trust register of significant trees in Victoria. It's claimed it was used to tie up prisoners during the

1850's, but a local historian, though agreeing with the use of such trees, casts doubt over this being the tree in question. (Hockley A., pers. conv., 1997). Nonetheless the Government Camp provided *some* respite from the rabid clearing of local eucalypts, being one of the few places within many kilometres which wasn't the subject of intense mining. Photographs of the Camp which exist today now provide us with an important image of Castlemaine, that being one of eucalypts as part of the landscape, an image often overlooked when considering the many photographs of the grand buildings erected in the town on the back of the gold mining era.

3.5   The Twentieth century impact on the landscape
Since the earliest days of Castlemaine the surrounding natural vegetation has been the subject of consistent sieges. A great deal of the bush which we see now is at best second-generation re-growth, but more likely to be third or fourth as a result of repeated timber clearing exercises. The timber has been cleared for mine supports, railway sleepers, fence posts, telegraph posts, power posts and firewood and to such an extent that any mature trees which *did* survive the clear-felling of the gold miners have almost certainly gone today. There are also no dead trees left standing and precious little fallen timber either so the availability of habitat for local fauna is at best, limited.

So this is the history which has determined the cultural landscape around Castlemaine. One of constant intervention and mass manipulation by human beings; from the activities of the Jarowrong tribe through to the miners and graziers of more recent times.

4.0 THE URBAN LANDSCAPE OF CASTLEMAINE

4.1 The visual context

Given the turbulent treatment afforded the landscape of Mount Alexander Shire since the 1850's it's hardly surprising that when you approach Castlemaine from Melbourne you're greeted by an often degraded landscape of broom and blackberries, albeit interspersed with *Acacia baileyana* and *Cassinia arcuata* (the two native shrubs which have predominated since natural regeneration has occurred) But there's also the bush... and significantly you *are* aware of the surrounding bush, unlike, say, when you approach Kyneton or Malmsbury, towns to the south. This is also the case when you enter Castlemaine from all but the Campbell's Creek approach (and even then it's preceded by largely uninhabited bush terrain all the way from Daylesford). In other words the visual context in which the town is located is one which relates it to the surrounding native vegetation and to the disturbed landscape of the goldrush era. It's certainly not a visual context based on pasture and arable land.

It's this simple fact which allows the urban landscape of Castlemaine to be seen quite differently to that of many other rural towns in Victoria. Even though the architecture of the town is often grand and very much related to its 19th century origins; and even though the urban layout is a product of late 20th century road treatments; and despite the fact that avenues of Planes and Elms and Oaks have been established over the course of this century there is still a great sense of the town being a part of the surrounding bush. In simple visual terms it can be because of the dusty verges or the consistently undulating streets which often end, incompleted, at the edge of the bush. But perhaps more importantly it's because of two factors. Firstly, the substancial number of native trees and shrubs which are scattered throughout the town and secondly because of the dominant band of natural vegetation which surrounds Castlemaine and which can be seen from almost anywhere within the urban area.

4.2 Turning away from natural vegetation

If, as Jane Shepherd has suggested, there *are* cultural connections which can be made between indigenous terrain and cultivated urban landscape (Shepherd, 1996), there is surely a case to be made in Castlemaine.

Like other rural towns Castlemaine has had an urban landscape imposed upon it courtesy of designers, engineers, town planners , developers and council officials dating back to the surveying first done by William Urquhart and William Templeton in 1852. This lead to the adoption of a systematic grid layout for the town. Within the space of twenty years a large number of the grand buildings which can still be seen today had further marked out the urban area. In its own vernacular these then lead to a culture of heritage and a turning inwards, away from the surrounding bush. Indeed, in many cases it really became an eradication and the adjoining natural vegetation was replaced with something which makes only scant reference to it. But this often deliberate exercise to quell the bush has only been partly successful, and the "giant unfolding lawn" (Ibid, p.10) which Shepherd fears has engulfed Australia isn't in too much evidence in Castlemaine.

Goldsmith Crescent, Castlemaine
Statuesque eucalypts and dirt road – the way Castlemaine used to be and the way much of it still is.
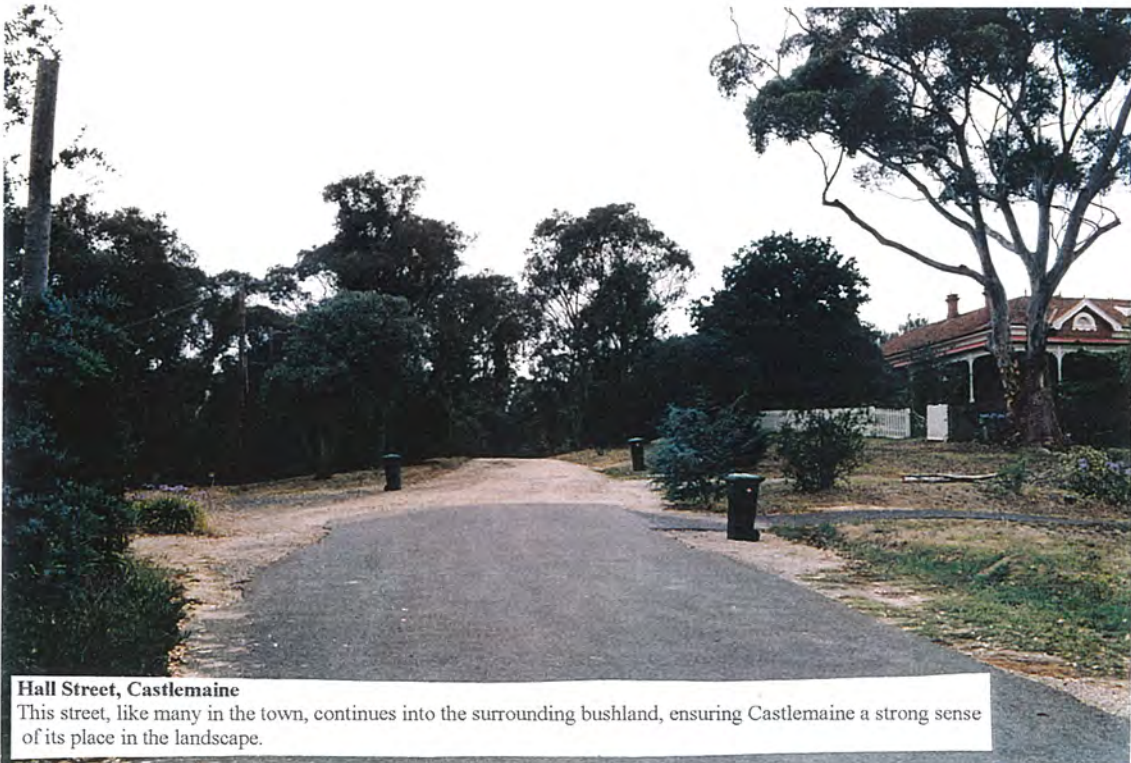
Hall Street, Castlemaine
This street, like many in the town, continues into the surrounding bushland, ensuring Castlemaine a strong sense of its place in the landscape.

Back in the late 1950's Robin Boyd had similar fears when compiling his seminal work on "featurism". He saw progress being measured "by the number of acres transformed from the native state of sloppiness to the desirable state of clipped artificiality." (Boyd, 1960, p. 95). Though, it's also true, that Geoff Carr's "wild paddock" isn't much in evidence either – this being the attempt he made in 1988 to plant his Lawson Street garden in Hawthorn with indigenous grasses and shrubs before he fell foul of the local council.

4.3 Castlemaine losing a sense of place

Carr is someone who, during the past few decades, has been highly critical of the rush by urban planners and landscape architects towards a kind of "internationalist" style of landscaping, where cities the world over adopt a limited pallette of species and as a result become almost interchangeable in their appearance. Like most things it's a concept which starts in major cities and slowly permeates to those in country areas. Carr makes the point that the indigenous species of a particular area are the only unique feature of that area and that if you went to Chile or Santiago or Buenos Aires you'd see Plane trees lining the streets – just as in Castlemaine. In underlining this view he uses the example of Canary Island Palms along the bayside at St. Kilda, asking whether, in order to preserve the character of the place, it's necessary to plant them for evermore. Afterall, wasn't the selection of that particular species almost certainly fortuitous at the outset in order to establish a certain "Mediterannean" style to the landscape? (Carr 1988). Then again, it's quite possible that one or two may have been planted and the fact that they survived just lead subsequent planners to continue the trend. If this was the case it may well have parallels in Castlemaine because there seems to be little obvious reason for some of the street plantings beyond this sort of explanation.

4.4 Previous plantings

When it came to researching the origins of either existing or former street plantings it soon became clear that a formidable barrier lay in my path and one which was beyond the scope of this study. At the time of changes to the structure of Local Government (1995), the records of the Shire were transferred to the Public Records Office at Laverton. At the same time a substancial turn-over of Shire employees took place. Many people with a long-term knowledge of the Shire were replaced by a new group of employees with little or no knowledge. This has made the task of unearthing the origins of the street plantings very frustrating.

Whether formal records of these street plantings exist is another matter altogether. It may transpire that the only useful accounts of public plantings lay hidden amongst the copious back editions of the Castlemaine Mail. Council records should contain approvals for any large number of plantings, but whether more specific site information was committed to paper is open to conjecture, let alone the reasoning behind it. Shire officials I spoke to were of the opinion that this sort of "professionalism" was not a characteristic of former Parks and Gardens undertakings.

Studying the archival photographs in the basement of the Castlemaine Art Gallery & Historical Museum and interviewing local senior citizens, it soon became clear that the selection of street plantings was probably the result of any number of diverse factors, many of which had little to do with any horticultural input. Time and again the photographs show entirely new plantings, often within the space of a few years. Avenues come and go and more often than not in places where, today, none exist. This was widely remembered as a typical practice of new Town Engineers, who, like heads of government departments, swept away the legacies of previous incumbents and established a "memorial" to themselves. (Vellacott, H. & Cuffley, P. pers. comm., 1998).

This sense of an urban landscape coming together through a series of unrelated decisions, can be seen in a study of the urban landscape at nearby Maldon (Department of Crown Lands and Survey, 1981). It makes the point that after the mining activities had ceased in the mid-19th century the trees which were planted in Maldon were simply the ones most popular at the time. Most of these have subsequently proved to be unsuitable for the soils and climate of the area. The report does conclude, however, that despite the problems associated with plant establishment and the fact that there was *next to no intentional design involved*, (my italics) the planting legacy is still one which has left "a strong landscape character," (Ibid, p.1). In other words, whether it was intended or not; a hundred years ago plantings were made which are seen today as providing that character.

This notion of an "accidental" visual character being formed could also be applied to Castlemaine. When trying to uncover the history of the town's street plantings, some of the accounts from days gone by certainly provide the impression that no clear idea as to a stable visual character for the town were really being considered. As a young girl Helen Vellacott remembered an avenue of elm trees which "met in the middle" all the way along Kennedy Street near the Castlemaine railway station. In 1917 they were all removed in order to allow for the safe passage of houses being transported to the town from Maldon on the backs of trucks. In a semiotic way this echoes the actions of the miners 66 years previously who eradicated the, then, native species, in order to service their immediate needs. But the story doesn't end there. A photograph in the Art Gallery & Historical Museum, *Panorama of Castlemaine from Gaol Hill, east*, circa 1920, shows Eucalypts dotted along the same street – a strange choice in the wake of an avenue of elms and further evidence of a confused vegetation character for the town.

The extensive report on the highway routes into Bendigo (TBA Planners, Planning Australia Consultants, O'Brien, A & Associates and Chris Dance Land Design, 1994) identified vast amounts of vegetation composition which were the result of incremental growth in the urban area and plantings which reflected particular fashions in garden design or preferences by certain parks and gardens superintendents, rather than landscape planning which was based on urban design criteria. A further example of this incremental approach to Castlemaine's landscaping is the fact that the Canary Island Palms planted at the western end of Mostyn Street were done so as a memorial after World War I. The trees have done well but one could argue for any number of species to have served the same purpose. It always seems curious that native trees haven't been

planted in honour of Australians killed in wars, surely there would be a case for them having some appropriateness?

The report of the Urban Consulting Group (1997) also documents a widely contrasting selection of tree species outside the historic Market Building. From as early as the 1860's there were probably elms (*Ulmus sp.*) planted there, but by the late 1890's these had been replaced by a row of *Washingtonia filifera*. Today, neither species is represented as part of the "historic" renovation of the Market Building and precincts. Instead, two advanced *Phoenix canariensis* have been planted – the comparison with St. Kilda is tempting! In front of them are two *Platanus orientalis* 'Digitata', of "no significance" (Ibid, p. 82).

According to the same report, Council minutes of 1943 mention a discussion on the possible planting of Golden Poplars around the Market precinct and along Forest Street, (Ibid, p.90). The trees which transpired are a mixture of Claret Ashes, (*Fraxinus* 'Raywood') and *Prunus x blireiana*. The latter came about as a result of a personal suggestion of one Jack Lawson in the early 1960's, (Vellacott, H. pers. comm., 1988). The 1997 Report recommends the removal of the *Prunus x blireiana* because of the way they relate so poorly to the scale of Forest Street. Only a year later, the report by Sanderson, 1998, recommends that they *stay* and their numbers be increased! No mention by him of street scale.

These examples of historical accidents and diverse opinion can only lead one to question the whole basis of the existing visual character of the town. The evidence at hand suggests that very little has been done in the name of historical continuity and that more often than not the street plantings have come about as a result of current fashions, whims or partly thought-out schemes. The current Manager of Technical Operations for the Mount Alexander Shire – the person responsible for street plantings – told me he has no horticultural background, (Keogh, J. pers. comm., 1997), so the likelihood of an impasse over the considered visual character of the town will continue.

This was a situation recognised by Hitchmough, (1994), which he regarded as a process whereby previous landscaping work, regardless of how poorly conceived or "ad hoc" it may be, is nonetheless perpetuated and given undue levels of significance. "Rarely is the role of these landscapes reviewed ... to see if what now makes up the landscape is still of relevance or value." (Ibid, p.17).

What has been highlighted, first through an examination of the vegetation profile of Castlemaine, then the various historical perspectives on the creation of that vegetation and now through examining some of the more conscious decision-making processes (or lack of them), leading to the existing street plantings, is that the urban landscape character of Castlemaine has essentially evolved through two avenues. Firstly, through the mass clearing of the indigenous vegetation, and secondly through a meandering series of historical decisions, some of which would have been made in good faith and others which have had little or no horticultural origins. The paradox is that both these avenues are regarded in the same cultural landscape context.

4.5 Current cultural landscape interface

To date there is no conservation study which establishes the overall significance of the town of Castlemaine, but in general terms the phrase, "historic character" is used to define that significance. This, of course, largely refers to the architectural quality of the town.

Geoff Austin from Heritage Victoria (pers. comm., 1997), feels that there are parts of Castlemaine which could be regarded as of significant cultural heritage value and that as such the principles of the Burra Charter should be applied to them. However, as a whole, the town – or "place" – is probably not, in toto, of cultural heritage significance. Indeed, if it was regarded as such then those parts of the town which are truly so would probably be devalued. With this being the case, it then it makes much more sense to define the township in terms of general historic character.

The Castlemaine Town Centre Townscape Improvement Plan (Westmore,1989) in part defines that "historic character" by way of :

> "the modifications to the natural environment arising from human settlement and activity both deliberate and accidental including removal of indigenous vegetation, introduction of exotic species, stream relocation etc., and the consequences over time of all these activities." (p.5)

Herein, again, lies the dichotomy of Castlemaine's urban landscape. Through "deliberate" and "accidental" "modifications" the town has removed its indigenous vegetation and gone along with the "consequences" of these "activities" for the last 150 years. In this respect the "historic character" of the town should really be measured through a number of perameters and certainly not just the architectural and fiscal activities of a certain era or the actions of miners over a ten year period. This would be to deny a vegetation history which in simple Time measurements far outways any other perameter.

Landscape architect, Neil Clarke, had this sort of distorted scenario in mind when he commented about the banks of the Yarra near the Arts Centre; "There would have been a marvellous array of native plants through that area – red gums, yellow box; further down there are still some remnant she-oaks. But the best we've managed is a row of uniform plane trees, evenly spaced in little brick planting tubs." (Carr & Clarke p. 463).

Surveys carried out by the local Field Naturalists Club and published in their series of booklets, (Perkins, 1995 and 1998 and Higgins, n.d.), indicate an urban environment which reflects this cultural interface. What emerges is an urban area characterised as much by Eucalypts and Acacias as *Platanus x acerifolia* and *Fraxinus excelsior 'Aurea'*.

Table 7. The most commonly occuring street trees in Castlemaine:

Botanical Name	Common Name
Acacia baileyana	Cootamundra Wattle
Acacia dealbata	Silver Wattle
Acacia decurrens	Early Black Wattle
Acacia floribunda	White Sallow Wattle
Acacia howittii	Sticky Wattle
Acacia longifolia	Sallow Wattle
Acacia mearnsii	Blackl Wattle
Acacia melanoxylon	Blackwood
Acacia podalyriifolia	Queensland Silver Wattle
Acacia prominens	Golden Rain Wattle
Acacia pycnantha	Golden Wattle
Acer negundo	Box-elder Maple
Acer negundo 'Variegatum	Ghost Maple
Acer palmatum	Japanese Maple
Betula pendula	Silver Birch
Brachychiton populneus	Kurrajong
Callistemon salignus	Willow Bottlebrush
Casuarina cunninghamiana	River She-oak
Cupressus macrocarpa	Monterey Cypress
Eucalyptus botryoides	Mahogany Gum
Eucalyptus camaldulensis	River Red Gum
Eucalyptus cladocalyx	Sugar Gum
Eucalyptus ficifolia	Red-flowering Gum
Eucalyptus globulus	Tasmanian Blue Gum
Eucalyptus goniocalyx	Long-leaf Box
Eucalyptus leucoxylon	Yellow Gum
Eucalyptus macrorhyncha	Red Stringybark
Eucalyptus melliodora	Yellow Box
Eucalyptus microcarpa	Grey Box
Eucalyptus nicholii	Willow-leaved Peppermint
Eucalyptus polyanthemos	Red Box
Eucalyptus saligna	Sydney Blue Gum
Eucalyptus sideroxylon	Mugga Ironbark
Eucalyptus spathulata	Swamp Mallett
Eucalyptus tricarpa	Red Ironbark
Eucalyptus viminalis	Manna Gum
Eucalyptus viridis	Green Mallee
Fraxinus excelsior	English Ash
Fraxinus excelsior 'Aurea'	Golden Ash
Fraxinus ornus	Manna Ash
Fraxinus rotundifolia ssp. oxycarpa	Desert Ash
Fraxinus rotundifolia ssp. oxycarpa	Claret Ash

'Raywood'	
Grevillea robusta	Silky Oak
Liquidambar styraciflua	Liquidamber
Malus spp.	Crabapples
Melaleuca armillaris	Bracelet Honey-myrtle
Melaleuca linarifolia	Snow in Summer
Melaleuca stypheloides	Prickly Paperbark
Platanus orientalis	Oriental Plane
Platanus orientalis 'Digitata'	Cut-leaf Plane
Platanus x acerifolia	London Plane
Populus alba	Silver Poplar
Prunus cerasifera	Cherry Plum
Prunus spp.	Purple-leaf Cherry-plum
Quercus palustris	Pin Oak
Quercus petraea	Sessile Oak
Quercus robur	English Oak
Salix babylonica	Weeping Willow
Schinus molle var. areira	Pepper Tree
Ulmus procera	English Elm
Ulmus x hollandica	Dutch Elm

Adapted from Perkins, 1995

This isn't intended to be a statistically accurate list, since the plants named by Perkins aren't quantified by numbers, just observation. The table also doesn't include large shrubs, many of which occupy dominant positions along Castlemaine's streets and could be regarded as de facto street trees. Nonetheless they back-up my own observation that the character of Castlemaine's streetscapes comes as much from its native species as its exotic ones. The Table can be seen to favour native species by a ratio of 60:40. Whilst this might seem curious to anyone passing through the town along one of the main arteries, it also has to be said that those same highways are dominated to a ratio nearer 80:20 by exotic plantings - a legacy of the European "avenue" plantings of the late 19th century and early 20th century. So the casual traveller driving through Castlemaine on the way to Maldon, Daylesford or Bendigo, could be forgiven for receiving the impression that the "character" of the urban area is one of large, exotic trees and grand old buildings.

Given the "mixed" nature of the street plantings in Castlemaine it ought to be possible to argue that future municipal plantings take into account not only the natural legacy of the surrounding vegetation and the damage accorded it in less than 150 years, but also the current existence of a body of native plantings within the urban area which are no lesser part of the town's visual landscape character. However, in trying to put forward this case its inevitable that certain underlying opinions and tensions about the appropriate make-up of a cultural landscape will come to the surface.

Perhaps the most recent well known debate on this sort of topic took place in 1992 when the City of Melbourne prompted a heated "tree-for-all" over the choice of species for avenue planting along the, then, newly established Swanston Walk. The arguments were polarized between two distinct camps: one representing cultural landscapes, conservatism and heritage; the other representing republicanism, conservation and alternative thinking. Technical arguments aside, the debate raged for several months and, perhaps predictably, went the way of Planes rather than Eucalypts.

In Castlemaine there's been no similar public debate over a recent urban design strategy (Sanderson, 1998), adopted by the Shire as a practical implementation of the Castlemaine Town Centre Townscape Improvement Plan (Westmore, 1989). At a public consultation session earlier this year I argued strongly with the plan's author, Geoff Sanderson, that there was a place for indigenous plants within the urban area, only to be dismissed out of hand with the usual architectural heritage argument " they won't blend with the buildings" and the "not suitable because they drop limbs" generalized horticultural argument. Since much of the area under Sanderson's consideration didn't actually contain any of Castlemaine's notable 19th century buildings and the fact that these days the Shire Council employs a company to provide a Vegetation Management Program (which concentrates particularly on street trees), Sanderson's defence of a "no-natives" policy seemed to side-step my argument. One only has to return to the Maldon landscape study (Royal Botanic Gardens, Melbourne, Department of Crown Lands and Survey, 1981), to see an example of a nearby urban landscape where local vegetation is given due consideration alongside the implanted exotics.

It's also interesting to note that Sanderson makes one exception to his "Planes everywhere" approach to streetscaping. This is the area at the eastern end of Mostyn Street where an array of mature Yellow Box has been allowed to survive. He supports their retention and even allows for similar replacement if they decline – "We believe this section of Mostyn Street should, however, maintain its distinctive native treed character" (Sanderson, 1998, p.30). This seems to fly in the face of his general thesis supporting exotic avenues (and no mention of falling limbs in this street!). Clearly this group of eucalypts is just too impressive to destroy. It makes one question whether the planting or survival of more indigenous trees in the past would have lead to a quite different interpretation of the urban landscape by today's landscape architects. If Yellow Box can be seen to not detract from the "historic" nature of the buildings in this part of Castlemaine why isn't this view allowed to exist elsewhere in the town?

4.6   Current alternative visions
Back in January and February of 1997 the Shire of Mt. Alexander published two more reports which could be said to offer a different picture of how the cultural landscape might be constructed, (Mount Alexander Shire Planning Department, 1997 & Mount Alexander Shire Conservation Advisory Committee, 1997). Looking through these reports a number of points became clear:

♦ The natural beauty of the Shire is highly regarded and any depletion of it would impact severely on the economic and human well being of residents and tourists.

♦ A link is recognised between the "character" of the area and its landscaping.

♦ The natural environment is seen as a source for linking the town's open spaces and unifying its landscape.

♦ There is a need to build upon the uniqueness of Castlemaine's landscape, possibly through landscaping projects.

By way of illustrating these I offer the following quotes extracted from the *Land use strategy plan*:

♦ "*Ensure that all* new developments, including the *landscaping and vegetation* selected for planting *reflect* and reinforce *the character* and heritage *of the town or area.* (p.6, my italics).

♦ "Protect and *enhance the natural and physical features* which contribute to the 'tourism experience' *including the natural environment*, heritage elements, *landscape features* and cultural activities." (p.10)

♦ "Protect and *enhance indigenous roadside vegetation* through effective management of road reserves, railway lines and other public land." (p.17)

♦ "*Develop linkages between the natural environment and tourism* through initiatives *where public reserves, bush land parks and unused railway corridors are linked together* to provide walking and cycling trails throughout Castlemaine and surrounding areas." (p. 23)

The following are from the *Environmental action plan*:

♦ "A predominant feature of the Shire is its *natural attractiveness.*" (p.5)

♦ "Marketing the Shire as an attractive location means capitalising on its most attractive features and *emphasising its uniqueness*, ie, *pursuing a different identity* and thus a different mode of development *to other places.* (P.9)

♦ "... *loss of native vegetation makes the Shire's landscape visually less attractive*, as does the loss of native wildlife, particularly native birds. This decreases the ability of the Shire to market itself as an attractive tourist destination, and an attractive place to live."
♦ (p.25)

- ◆ "*Use local species in municipal landscaping projects*, unless there is good reason not to, eg, heritage sites." (p.27)

Both these reports indicate that there is a body of opinion within the Shire which recognises the importance of the natural vegetation surrounding the town and which also favours building on *that* legacy as much as the one which embraces 19th century buildings and Plane Trees. By contrast, the Sanderson (1998) design strategy makes no detailed cultural analysis, instead opting for large-scale planting of Oriental Planes on the basis of the fact that they've "thrived...(and)...are now a strong part of the *Castlemaine vernacular*" (Ibid, p.29). Whatever that means! Surely one could make the very same statement about any number of local Eucalypts, whilst at the same time having far greater justification for it?

With this debate in mind, the study now goes on to look at three parts of the town where this cultural interface can be addressed in horticultural terms.

5.0 CASE STUDIES

5.1 Methodology

Three sites have been selected (for locations refer to adjoining map):

1. An area of Camp Reserve.
2. A roadside halt at the northern end of Barker Street.
3. The eastern end of Forest Street.

- Each of the three sites have had some form of vegetation improvement carried out during the last thirty years, but all of them can be regarded as having been neglected for some considerable time.

- The three areas exemplify three contrasting urban sites; the first is an historic site with current recreational uses; the second is a lay-by used primarily by through traffic and the third is a section of the main road into the town centre.

- The plantings on each of the three sites are visually poor; largely in poor health and have been depleted over the years.

The Case Studies set out to examine the current context for each site in relationship to their cultural landscape and to their potential for indigenous plant improvement.

## 5.2 Site 1: An area of Camp Reserve

Description

Camp Reserve is Crown Land. A Committee of Management is currently being established by the Shire of Mt. Alexander to oversee its maintenance and development.

The area of the Reserve under consideration is on its western side. A gentle slope leads up from the football oval and borders Gingell Street. In its centre is a stone monument, erected in 1934-35. This marks the site of the headquarters of the Commissioners' Camp in the early 1850's. It is the place where official government in the district began. It notes that during 1852-53 Chief Commissioner W.H. Wright administered the goldfields of Victoria from this spot. As such it is part of an area which is historically significant in both local and state terms.

The area is currently separated from the oval and entrance road by a post and rail fence, making it a fairly self-contained part of the Reserve. The only other physical structures are a pair of concrete seats in a poor state of repair.
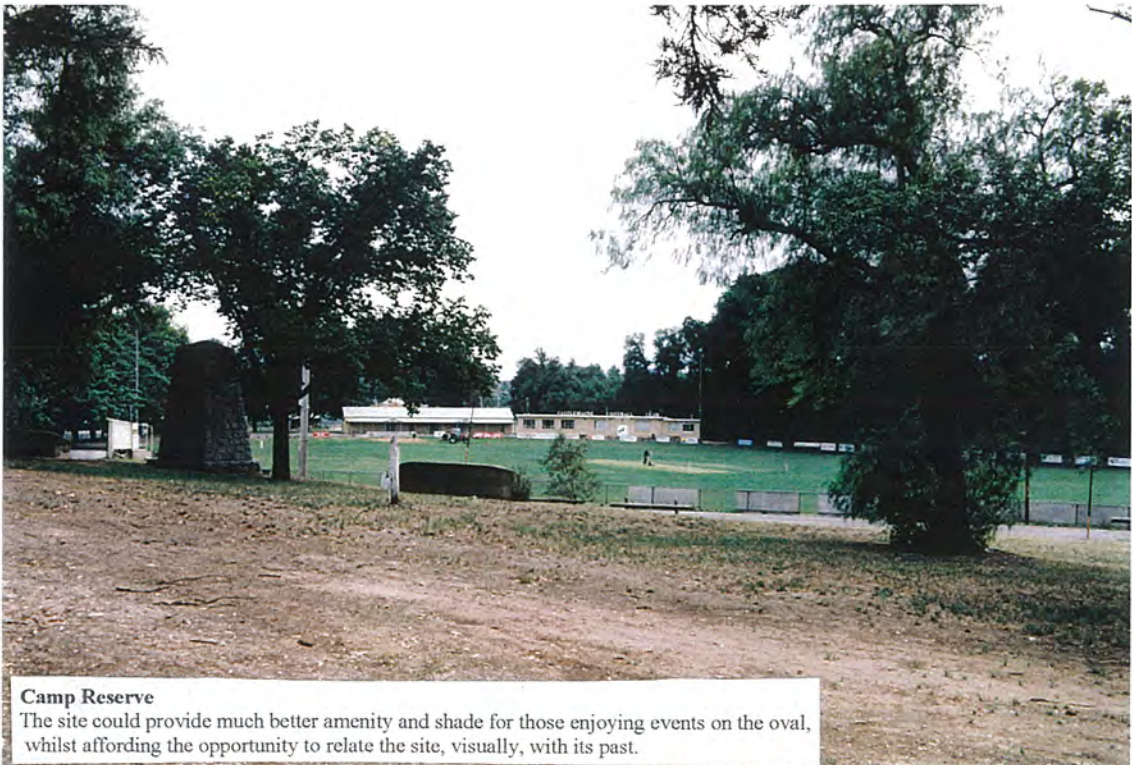
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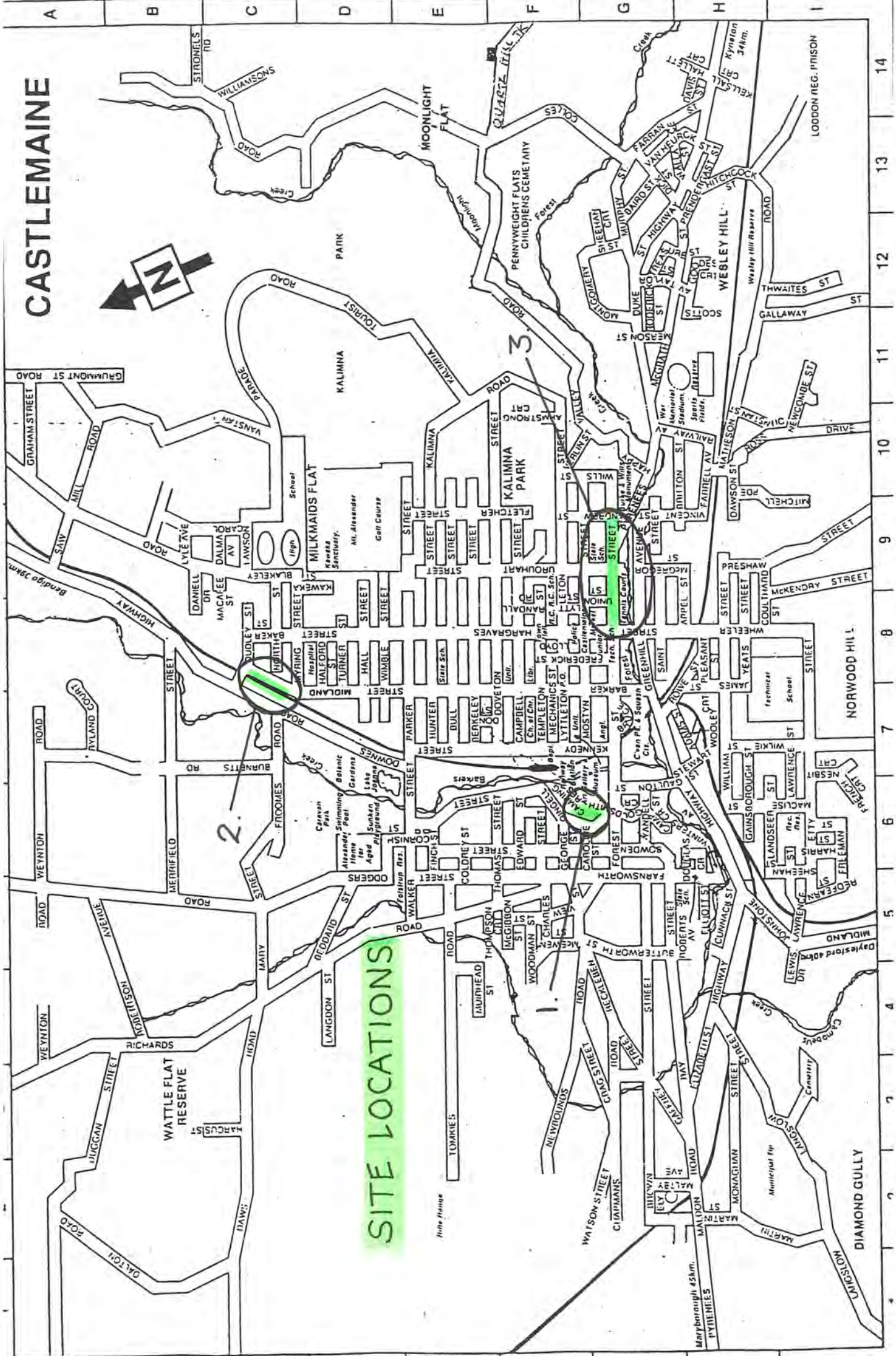
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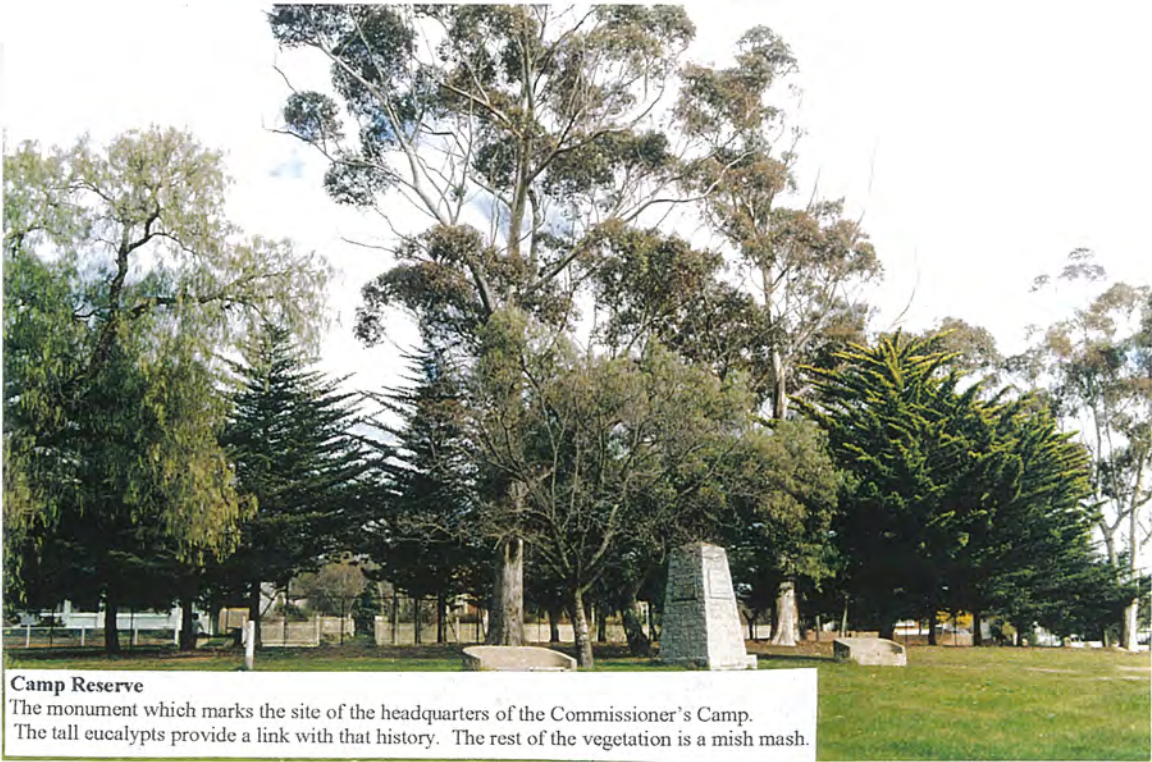
Camp Reserve
The monument which marks the site of the headquarters of the Commissioner's Camp.
The tall eucalypts provide a link with that history. The rest of the vegetation is a mish mash.

Camp Reserve
The site could provide much better amenity and shade for those enjoying events on the oval,
whilst affording the opportunity to relate the site, visually, with its past.

In topographic terms the Camp Reserve is part of the river flats and slopes which rise to the west of Barker's Creek. The slope which is of interest here contains vegetation which is limited to trees: 6 *Ulmus sp.* 2 *Schinus molle*, a *Cupressus sp.*, a *Grevillea robusta*, 2 *Eucalyptus camaldulensis*, 3 *Eucalyptus cladocalyx* and a single *Eucalyptus melliodora*. The Eucalypts are all very tall and well established. These are backed by a screen planting of *Cupressus sp.*

Perrott Lyon Mathieson (1981) made special note of the mature trees in the Reserve and recommended taking great care to protect them. They also felt the existing environmental amenity of the area should be enhanced, a recommendation never acted on by the Shire.

Analysis

The Camp Reserve as a whole is dominated by the football oval. This oval is used regularly and the entire Reserve is utilized by an array of sporting groups. As well as its sporting use a number of sizeable events are held there during the year such as the annual Show and car rallies.

The area of the Reserve under consideration is less utilized, but instead occupies an important part of its visual character. The historic stone cairn also underlines the important link the Reserve has with Castlemaine's past. The mature Eucalypts represent the significant part of this visual character and relate it to the historic nature of the site. When photographs of the original Camp are examined the visual feature most recognisable is the preponderance of tall Eucalypts, always seen to be dwarfing the miners, their tents and the official buildings first erected on the site. The adjoining photograph, *View from Camp Hill, east over Castlemaine* (1865) is a slightly later example of this.

As one of Castlemaine's most important historic areas, the Camp Reserve, even allowing for its current sporting focus, could still be enhanced to provide a much stronger cultural link to its historical lineage, whilst at the same time extend its amenity value for those who regularly use its environs.

Opportunities for planting other than tree species are somewhat limited by the general use of the slope. At the moment vehicles can access the area, but even if they were excluded it seems unnecessary to overplant the slope. An open understorey allowing plenty of space for people to laze or picnic whilst watching events on the oval and at the same time an open space for minimal maintenance would appear to be an appropriate option.

Recommendations

◆ Remove the exotic tree species surrounding the historic cairn and replant with *Eucalyptus camaldulensis* and *Euclayptus cladocalyx*. Plant these in a random fashion to echo the visual character provided by original sketches and photographs of the area.
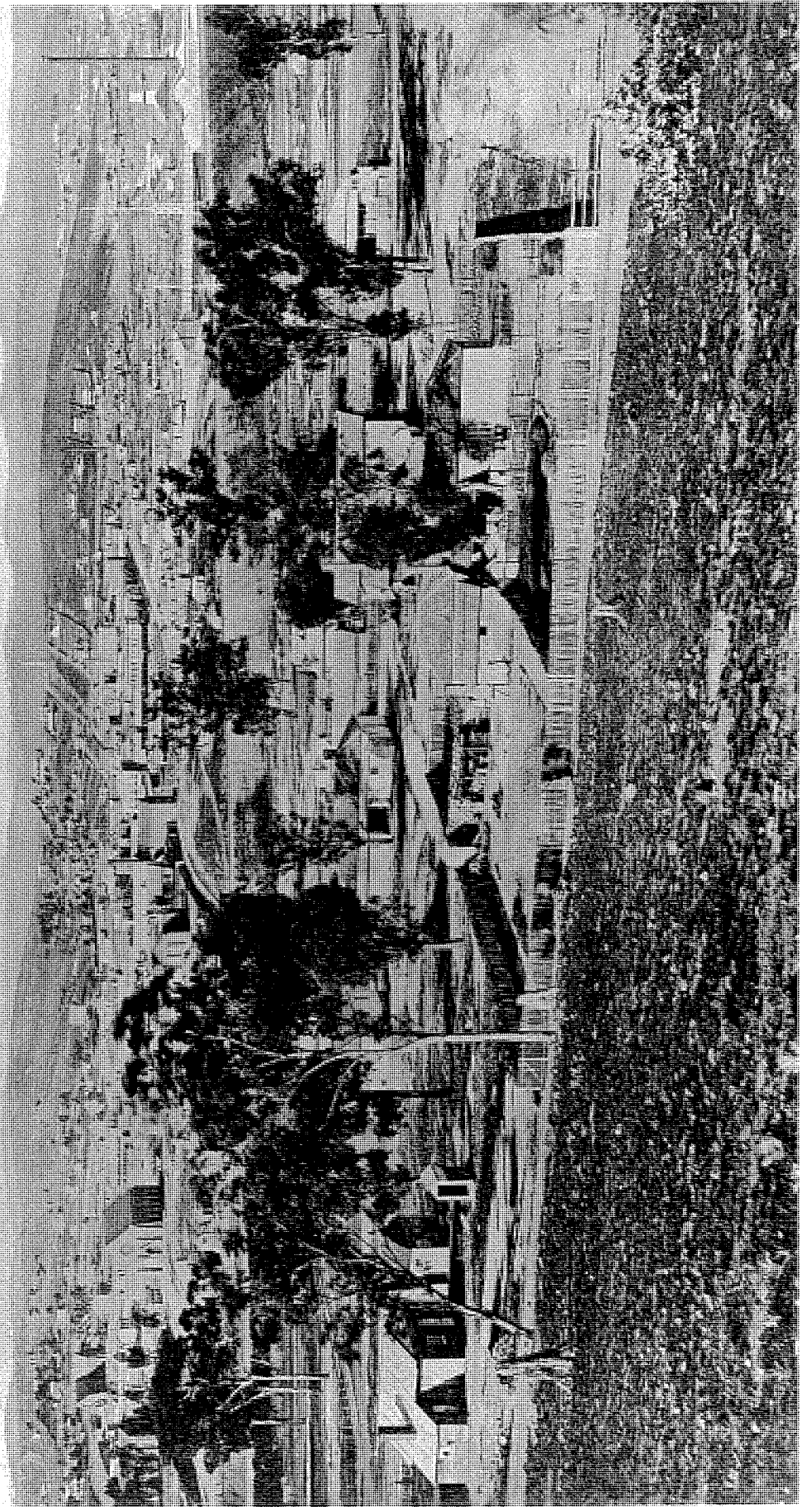
♦ Maintain an "open" visual character to the site by avoiding the temptation to add understorey plantings. This would compromise the historical reference which the tree plantings will make. The trees will, in time, provide important shade for those watching sporting events or relaxing on the slope.

♦ Provide interpretive material (as part of a historical trail) which makes clear the link between the plantings and the most famous occupier of the site – the Commissioner's Camp.

♦ As part of its current use; provide seating for those who utilise the raised site to watch sporting events. These seats could be simple timber benches copied in design from the same early sources so as to continue a cultural link. More appropriate historic fencing could also be added.

5.3   Site 2:   A roadside halt at the northern end of Barker Street

Description

The site is Crown Land adjacent to the Midland Highway. It occupies the last area of "urban" vegetation before drivers leave the town precincts and head into a section of local bushland characterized by good stands of *Eucalyptus leucoxylon* and *Eucalyptus microcarpa*. Conversely, it's also the northern entry-point to the urban area if drivers are travelling into the town.

The area contains a dirt lay-by, a hexagonal concrete table and six small seats, plus a litter bin. There is no signage to indicate usage of the area.

The vegetation around the table and seating consists of a *Platanus sp.* and an oval bed containing *Leptospermum horizontalis* and *Correa reflexa*. If more planting existed previously there is no remnant of it. There is an isolated *Eucalyptus microcarpa* nearby.

Set back from the lay-by is what appears to be a largely accidental planting (or remnants of different earlier plantings) which serve as a screen for the adjacent railway line. This planting consists of a large *Eucalyptus camaldulensis* and 10 smaller ones, 3 *Acacia baileyana* (evenly spaced suggesting deliberate planting), 2 *Acacia melanoxylon* and 2 shrubby wattles in very poor condition. There are also 2 small *Prunus sp.* (probably self-sown) and an oddity, a single *Prunis dulcis*. There are some elm suckers and some partially poisoned blackberries. Garden rubbish has been dumped here also.

The rest of the area is mown grass.
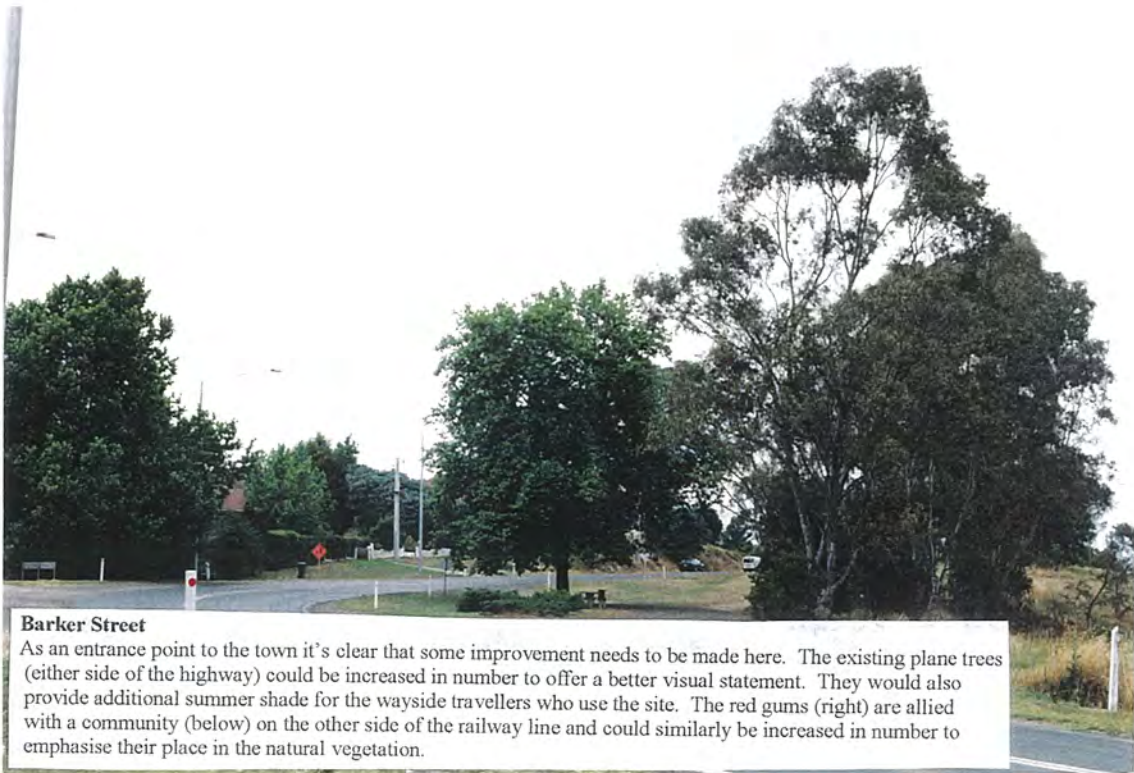
Barker Street

As an entrance point to the town it's clear that some improvement needs to be made here. The existing plane trees (either side of the highway) could be increased in number to offer a better visual statement. They would also provide additional summer shade for the wayside travellers who use the site. The red gums (right) are allied with a community (below) on the other side of the railway line and could similarly be increased in number to emphasise their place in the natural vegetation.

Barker Street
There's plenty of room to add a grove of red gums. Additional seating and picnic tables could be provided and the area utilized for historical interpretation.
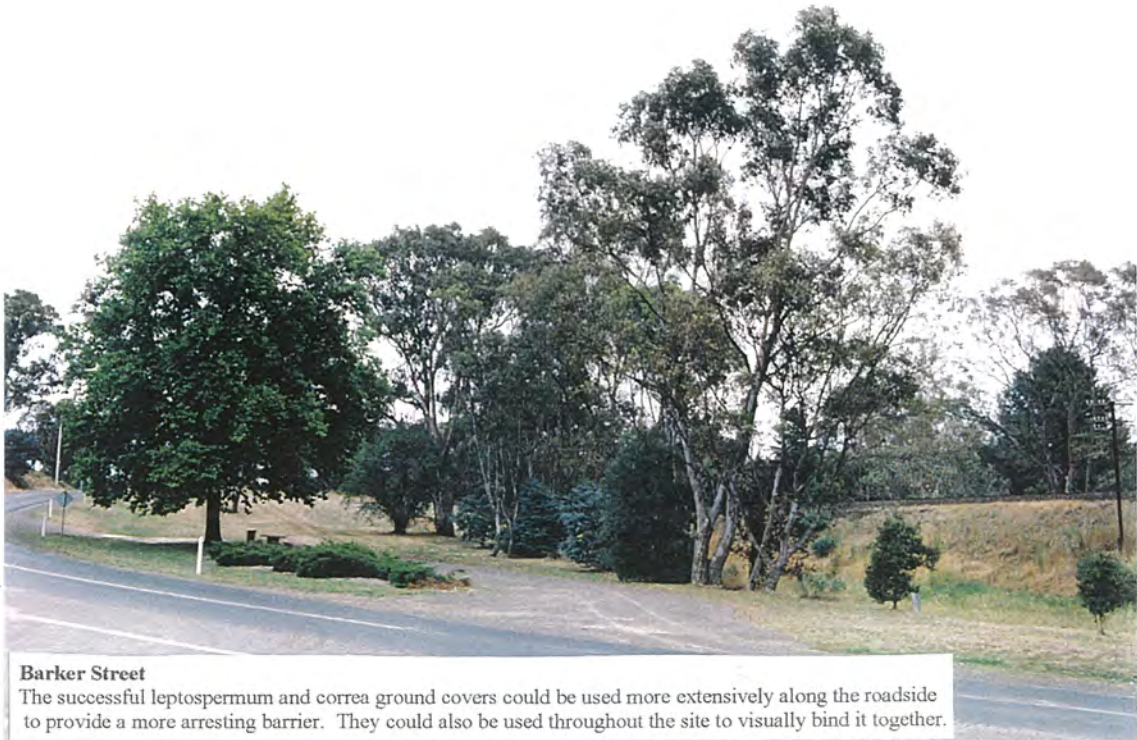
Barker Street
The successful leptospermum and correa ground covers could be used more extensively along the roadside to provide a more arresting barrier. They could also be used throughout the site to visually bind it together.

The Forests Act of 1958 gives the Shire of Mount Alexander responsibility for managing the vegetation on the site. In practice this usually means doing little more than mowing the grass and emptying the litter bins (Wallace, D. Head of Technical Operations, Mount Alexander Shire, pers. comm., 1998).

Analysis

According to David Wallace (Ibid, 1998), the lay-by is used on a regular basis. This has been determined by the number of times the litter bin needs clearing. My own observations support this. This gives an indication that the site is worth enhancing.

The imposing *Platanus sp.*, which serves as the main provider of shade, is an excellent specimen and one which is matched by a similar tree directly across the road, creating a gateway effect at the northern entrance to the township.

The large *Eucalyptus camaldulensis* is also a good specimen. It relates, in visual terms, to many others in the vicinity, the site being close to Barker's Creek. This effect is compounded by the presence of the ten other specimens on the site. There is also evidence of Red Gum re-growth at the foot of the railway embankment. This would have been greater had not the area been regularly mown.

The close proximity of the *Platanus* and *Eucalyptus* species highlights a recurring theme in Castlemaine's municipal areas. The Plane relates to other roadside specimens further along Barker Street – establishing their avenue motif - and the Red Gums tell a more ecological story of their relationship to the nearby creek and bushland. Whilst the Plane is the overriding tree specimen during the summer months, with the Red Gums providing the sensory element only eucalypts can on hot, dry days; the situation is reversed during the winter months when the bare Plane recedes more into the role of supporting specimen.

The row of native and exotic species which currently screens the rest area from the railway line is effective as a screen but provides little visual interest and is clearly an ad hoc planting.

There is a large amount of open space currently given over to mown grass. This may have previously contained tree specimens – the elm suckers hint in this direction, as does the lone Grey Box.

The amount of "deliberate" landscaping is confined to the bed of *Leptospermum horizontalis* and *Correa reflexa* and the declining shrubby plantings along the boundary with the railway line. The Leptospermums and Correas have formed a decent coverage for the bed and indicate that this sort of drought tolerant planting can be established on the site with next to no follow-up maintenance. The virtual loss of the larger shrubs indicates that, at the very least, herbicide applications should have been made in order to combat grass competition and allow for their establishment.

Recommendations

◆ That the site be upgraded in line with its obvious patronage.

◆ That consideration be given to basing an extension of the existing tree planting around the two species which have some cultural/historic significance on the site. There seems good reason to increase the number of Platanus sp. along the roadside, both for the shade qualities they bring to the rest area and the way they form a continuum with the avenue planting further along Barker Street. The *Eucalyptus camaldulensis* are a specie well adapted to the low lying conditions along the railway embankment and should be allowed to increase naturally there. Additional plantings could also be added with the intention of creating a "grove" of Red Gums, a feature which can be witnessed occuring naturally nearby.

◆ That efforts be made to stop the dumping of garden rubbish on the site.

◆ That the tree species, other than the Red Gums, be removed from the site and the blackberries be eradicated entirely.

◆ That an extension be made to the number of ground cover plantings, but that a largely unobtrusive, evergreen, effect be maintained based on the existing plantings. This planting aids the restful nature of the site, whilst also being a "neutral" balance between the exotic and native trees, in that, despite the Leptospermums and Correas being native they aren't *overtly so* in visual terms.

◆ That additional seating be added, making use of shade provided by both Planes and Red Gums – thereby utilizing two contrasting sensory experiences which epitomise the nature of the site.

◆ Interpretive material could be added to explain the cultural lineage of the Plane Trees and the historic place of the Red Gums in the local ecology. Being a "gateway" to the town, the site could also be utilized for providing tourism material of interest to visitors.

5.4 Site 3: The eastern end of Forest Street

Description

This area of Castlemaine's municipal landscaping needs to be looked at as a continuum of it's highway approaches, rather than as an isolated site.

Entering Castlemaine through Wesley Hill the roadside is characterized by old cottages and mature Eucalypts (see adjoining photograph), providing the visitor with a sense of

Pyrenees Highway at Wesley Hill
This landscape of old miners cottages and roadside eucalypts provides a wonderfully appropriate entrance to Castlemaine. The National Trust has recorded its significance……
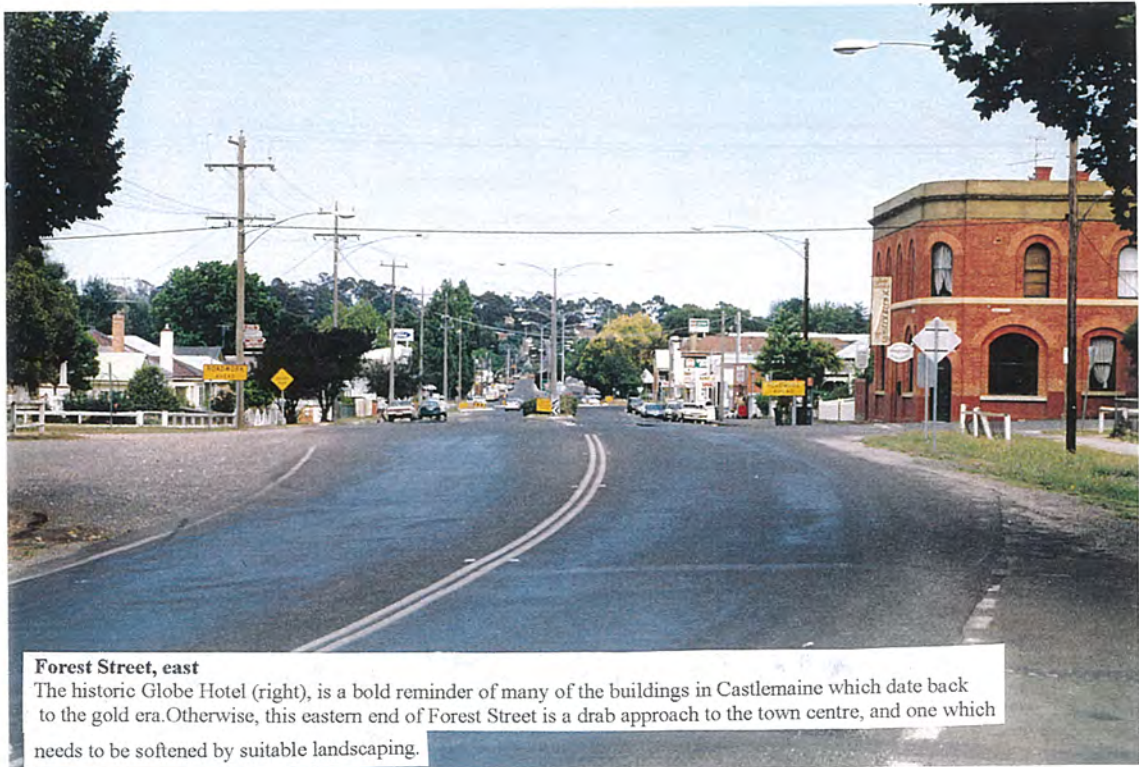

Pyrenees Highway at Wesley Hill
…… what a shame, then, that here, further along, the effect is lost. The natural bushland, (centre of photo), is a constant reminder of the landscape which Castlemaine inhabits.

Forest Street
The long axis of Forest Street.

Forest Street, east
The historic Globe Hotel (right), is a bold reminder of many of the buildings in Castlemaine which date back
to the gold era.Otherwise, this eastern end of Forest Street is a drab approach to the town centre, and one which
needs to be softened by suitable landscaping.

the landscape from days-gone-by. Perrott Lyon Mathieson (1981) regard this locality as historically significant in that its unsurveyed pattern of organic growth is characteristic of the early goldfields development. The highway landscape is, in fact, recorded by the National Trust of Australia. Reaching the section from Murphy Street to Railway Avenue the roadside environment then changes dramatically. There is virtually no street planting, save for two severely pruned *Platanus sp.*, two Ulmus sp. and a *Eucalyptus tricarpa.* Otherwise the roadside is made up of grass verge and a gutter. The housing is similarly undistinguished and largely hidden behind native and exotic garden vegetation.

At this point, in the absence of roadside plantings and as a result of the highway dipping down towards Forest Creek, the visual reference for the approach to the town boundary becomes the distant band of Eucalypt bushland, a motif straight ahead of drivers on many occasions around the town.

No sooner have you reached the historic Forest Creek – with its rather inappropriate "modern" bridge and creek infested with noxious weeds, than you meet a series of remnant roadside plantings, suggesting ad. hoc. additions to the streetscape: some 1970's Melaleucas, a few Elms and Planes, a couple of Poplars and some Prunus sp. – all with gaps in between and giving no particular sense of place.

You then turn the corner at the Castlemaine Primary School (with its frontage of native trees) and enter the wide eastern end of Forest Street. What greets you is a streetscape almost devoid of anything. The left side of the street contains four *Prunus x blireiana* and the long median strip a horrible collection of Euonymous and Berberis shrubs, either falling apart or over-pruned into topiary balls. On the right-hand side there's a solitary Oriental Plane outside the Globe Hotel. The overall effect is one of total landscaping neglect.

If the journey is reversed and the approach made from the west there is a similar experience of *sectional* streetscaping where one passes from dusty Eucalypt roadsides around the Camp Reserve to the Claret Ash , *Prunus x blireiana* and *Populus* environs of Victory Park and the recent Plane and Ash plantings around the new Rainbow IGA supermarket.

Analysis

The total impact of these streetscapes is one of visual confusion. There is no particular sense of arrival into Castlemaine and the plantings all seem to come from different eras with their different styles and varying plant failures (the gaps suggest either loss of trees or incomplete planting).

The sense of arrival will soon be provided by a large new sculpture of a gold miner which is to be placed in the middle of the new roundabout at the Hargraves Street intersection with Forest Street. At the moment the median strip would provide a poor lead-in to this important structure.

The section under particular scrutiny at the eastern end of Forest Street currently has a meaningless visual impact. The buildings which border it are largely recent and thus provide no historical character (with the notable exception of the Globe Hotel). In this sense the "cultural landscape" is so modern as to be almost non-existent. There has been very little impact made by human beings on the urban *landscape*, beyond the pouring of concrete and the planting of a failed landscape. In this situation the canvas is bare enough for the horticutural designer to *establish* that cultural landscape. Or, put another way, to recognise that the natural landscape can, in fact, provide determinants for the use of urban space. (Laurie, I. ed.,1979)

The road treatments are fairly contemporary and were probably carried out in the 1970's when a number of Castlemaine's streets were altered (an exercise which in itself lead to large-scale tree removal).

The presence of significant numbers of light poles and power lines means the opportunity for landscaping is necessarily compromised.

Given that no existing plantings or architectural quality provides a visual character for the area, the visual reference is twofold: firstly the modern, bland road treatments and adjoining commercial businesses and secondly the band of distant Eucalypt bushland which again lies directly in front as one travels along Forest Street, providing a reminder of Castlemaine's place in the natural environment.

This point is made more significant by the fact that Forest Creek (previously lined with these trees) once flowed along part of the street. In the late 1860's the creek was realigned and sealed by a stone wall (resembling that of a canal). This resulted in the historically significant creek being set back from the street. If Castlemaine is to recognise its historical past this part of the creek certainly needs to be made more accessible to visitors. At present a link road/path exists from the eastern end of Forest Street to the creek, an area landscaped with native trees in 1994 – an initiative of the, then, Castlemaine City Council and the Australian Trust for Conservation Volunteers. With very little follow-up care, the area has struggled to become established but it nonetheless represents both an attempt to reclaim a neglected municipal site for landscaping and one of the few examples of local natives being used within the urban area.

Apart from the four *Prunus x blireiana* which are spaced at varying intervals along a typical, thinnly grassed nature strip the median strip is the only other place for vegetation along the eastern end of Forest Street. The strip is narrow and ugly, its shrub mass neither providing colour, interest or context. Where loss of plant material has lead to grass taking over, that in itself is well worn (often being driven over by vehicles doing 'U' turns). Given that Forest Street (particularly when viewed from west to east) forms a notable axis all the way up to Andrew Street, the median strip can be seen to detract quite visibly from this effect.
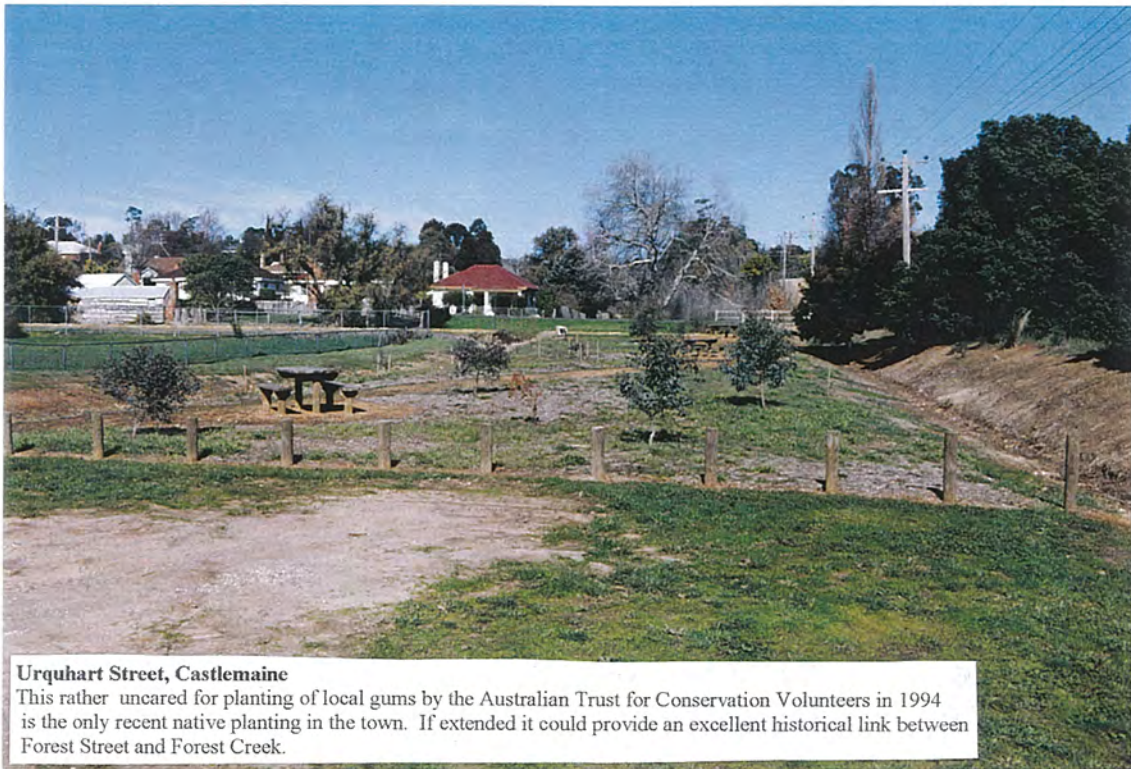
Urquhart Street, Castlemaine
This rather uncared for planting of local gums by the Australian Trust for Conservation Volunteers in 1994 is the only recent native planting in the town. If extended it could provide an excellent historical link between Forest Street and Forest Creek.

Condon Street, Bendigo
Grey Box planted along the roadside and Yellow Box on the median strip. The latter is underplanted with Rhagodia, Leucopogon and Dianella – an excellent example of natives used effectively in an urban setting and providing a visual relationship to the nearby bush.

Forest Street, east
Median plantings that have no meaning. The presence of too many deciduous trees along the street also creates a bare winterscape.
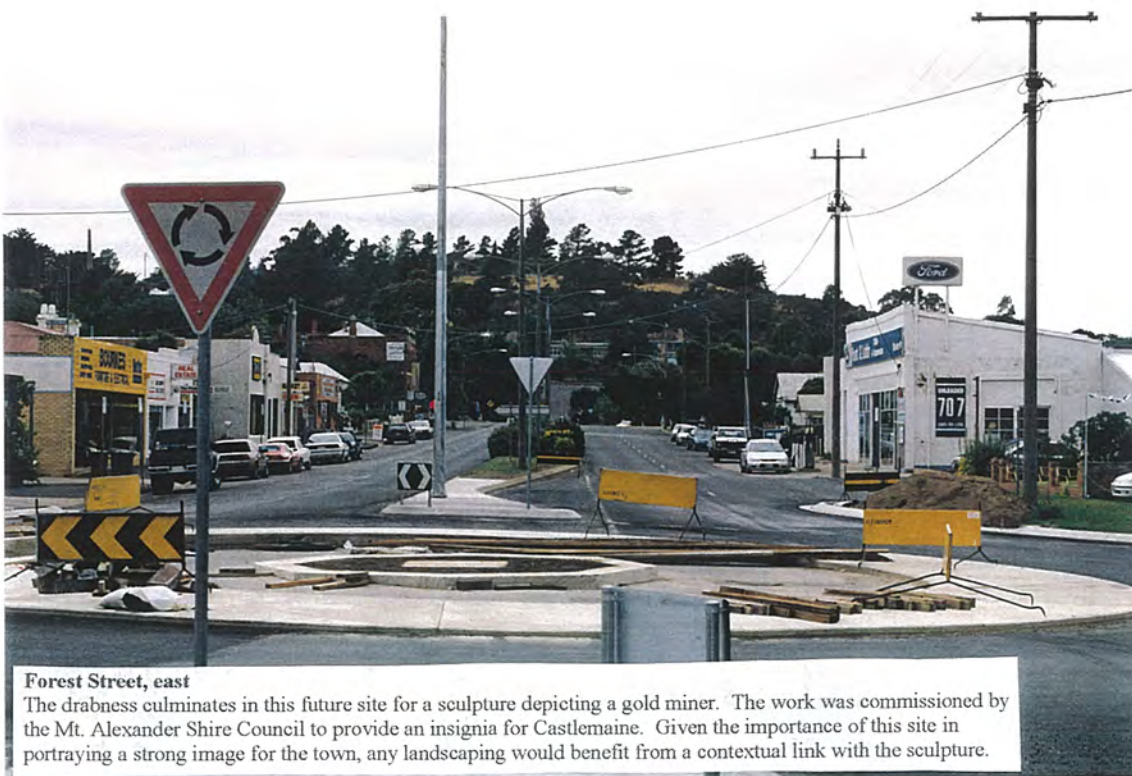
Forest Street, east
The drabness culminates in this future site for a sculpture depicting a gold miner. The work was commissioned by the Mt. Alexander Shire Council to provide an insignia for Castlemaine. Given the importance of this site in portraying a strong image for the town, any landscaping would benefit from a contextual link with the sculpture.

Recommendations

◆ That the eastern end of Forest Street be treated, in visual terms, as a continuum of the highway routes into town, rather than as a separate urban site, particularly given its lack of visual appeal.

◆ That consideration be given to the removal of the median strip. This would allow for the road axis to be better highlighted; for the impending sculpture of a gold miner at the Hargraves Street roundabout to be more clearly seen, and to allow for the provision of plant material to be made along outer separators as both an alternative to a median strip and in order to provide more of a visual screen to offset the bland nature of the adjoining buildings.

◆ That the selection of new planting material take into account the proximity of the street to Forest Creek and its historic associations with it. The Urquhart Street link road (already planted with local Eucalypts) could be brought into much better connection with Forest Street and serve as an important visitor entry point to the Creek. In this way a number of important visual links could be made:

    i)   Between the natural bushland at the head of the street and potential roadside native plantings.

    ii)   Between those plantings and the new sculpture depicting a gold miner.

    iii)   Between those plantings; the original route of the Creek and its existing proximity.

◆ The *Bendigo Highway Entrances and Boulevards Study* (TBA Planners etc, 1994) identified a number of issues regarding the appropriate selection of planting material within Bendigo's boulevards which are relevant here. These included historical context; compatibility with overhead utilities; shade and solar receipt; safety and botanical context. It's possible for local species to fulfil all these criteria for planting in Forest Street and as the Bendigo study pointed out, the use of local planting material, apart from being able to meet technical requirements relating to plant establishment, screening etc, also provides subtle character definition.

◆ That the use of local species be allied to the need to create a visual context (or "meaning") for the eastern end of Forest Street. Four of the eight local tree species listed in Table 5 have been tried and proven as street trees in various areas and could be used along the outer separators.

◆ With additional planting space available within the outer separators further links could be made with both the creek and the impending sculpture, thereby enabling the establishment of a cultural landscape where none really existed previously. Plants such as *Acacia acinacea* (or perhaps more significantly, the Gold Dust Wattle), Lomandra longifolia, Carex sp., Dianella sp. and a range of Poas, not to mention

Forest Street, west
The eucalypts provide a suitable relationship with the historic Camp Reserve nearby.

Kennedy Street, Castlemaine
This roadside planting of Eucalypts (which dates back to the early part of the century) is in the same vicinity. Further along the street the planting, inexplicably, becomes ashes and elms.

others which would have had a relationship with the creek and which have also been proven performers in an urban setting could be used at varying intervals along the roadside. As one writer put it: "The symbolic expression of nature 'in addition' to its full physical presence is a worthwhile objective of design." (Laurie, I ed., 1979).

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