AUSTRALIAN
GARDEN
HISTORY
SOCIETY

2012
CONFERENCE PAPERS
BALLARAT

Australian Garden History Society Inc
Gate Lodge
100 Birdwood Avenue
Melbourne, VIC, 3004

Content

1 _____John Dwyer, AGHS Chairman

A brief summation of the challenges for the AGHS implicit in the theme "Gardens are the intersection between the natural and cultural worlds".

Our first challenge is to understand the theme, because it uses one of the most ambiguous and emotionally charged words in the English language, *natural*. When we seek to locate the intersection of the natural and the cultural worlds we find that the task is by no means straightforward, not least because the idea of the *natural* is itself a *cultural* construct; as Simon Scharma put it 'although we are accustomed to separate nature and human perception into two realms …landscape is the work of the mind.'[1] A distinction has sometimes been drawn between natural landscapes (landscapes unaffected by human activity) and cultural landscapes (human modified or managed landscapes), but it may be doubted whether in fact any natural landscapes in this sense exist. The idea (or ideal) of the natural landscape continues however to influence our thinking about gardens.

Gardens require a reciprocal interaction with nature; in the words of the English philosopher David Cooper, gardens 'exemplify the massive but often unrecognized dependence of human creativity upon the co-operation of the natural world'[2]. Despite the fact that we sometimes talk of 'natural' gardens, gardens are *made* not found; indeed the making must be a continuing process if nature is not to overwhelm the garden, so that as Shakespeare had Hamlet say, 'things rank and gross in nature possess it merely.' Landscapes do not involve mastery over nature; such attempts are often futile.

Landscape is often understood in terms of layers laid down by successive occupants over time in the interplay of humans and their habitat. In thinking about the landscapes of Ballarat we can begin with the geology. Dr Stephen Carey's paper *Rocks and landscapes: the context for gardens of the Ballarat* will take us to natural forces which shaped the landscape before and during its occupation by aboriginal people. When in the late 1830s European settlers came to what John Batman had so accurately described as 'land for the taking' in the Port Phillip District, the parklike landscapes they encountered had been made by generations of the Wathaurong people, now known as the Wadawurrung.

The next layer relates to pastoral landscapes represented by the runs in the district taken up in the late 1830s such as William Yuille's 'Ballarat' or Thomas Learmonth's 'Ercildoun.' An enterprising Scot, William Yuille was not yet 20 when he squatted in February 1838 by what he called Black Swamp because of its dense dark reeds. He called his station of 10,000 acres (or 14.3 square miles)[3] 'Ballarat'.[4] The swamp was later called Yuilles Swamp. In late 1851 Surveyor W.S.Urquhart camped there. He renamed it Lake Wendouree, and the river into which it drains, the Yarrowee.

Before there was a gold rush to Ballarat there had been a land rush. Learmonth and Yuille were part of the first rush in Victoria, the unauthorised squatting rush that in a mere 5 years to 1840 took occupation of almost the whole of the vast territory then known as the Southern District of New South Wales[5], all this despite the severe three year drought that gripped much of south east Australia in 1837-39 when the Murrumbidgee ceased to flow and the Murray was almost dry in its bed.[6] When the first land sales were held in Melbourne in 1837 there were already permanent settlements with 100,000 sheep in the Port Phillip District.[7]

Yuille (1819-1894) had a full and eventful life. He sailed from Glasgow to Van Diemen's Land in 1836 and crossed to Point Henry near Geelong in 1837, with a flock of merinos. There he took up a run on the

[1] Scharma, S. *Landscape and Memory,* Harper Collins (1995) p6
[2] Cooper, D. *A Philosophy of Gardens,* OUP (2006) p135
[3] Shaw, A G L. *The Port Phillip District* (MUP 2003 p87)
[4] Thomas Learmonth *Letters from Victorian Pioneers* (1983) p98
[5] Roberts, S. *The Squatting Age in Australia 1835-1847* (MUP 1935) p 200
[6] Roberts, S. pp385-6; Foley, J. *Droughts in Australia* (Director of Meteorology, Melbourne 1957) p55.
[7] Roberts p198

Barwon River with his cousin Archibald Yuille. After exploring a large part of Mitchell's Australia Felix with Learmonth, Aitken and Anderson, he settled at Ballarat in 1838; but by 1840 was in New Zealand acquiring large tracts of land from the Maoris, and fighting in the Maori Wars. Returning to Victoria he acquired several large pastoral holdings and established a mercantile firm with James Denny, whose daughter he married in 1842. In 1852 and 1853 he sold all his stations and took his young family (he was to have in all seven sons and four daughters) to England. In 1858 he returned to Victoria and became prominent in many aspects of horse racing: owner and rider of champion horses, sports writer, founder of bloodstock auctioneering firm, W C Yuille & Co (1872), compiler of the first *Australian Stud Book* (1877), steward of the Victoria Jockey Club, handicapper to the Victoria Racing Club. Yuille died in Melbourne in 1894, two of his sons carrying on the business.[8]

A further layer was imposed on the landscape by the discovery of gold in 1851 and the rush that followed. It is difficult today to grasp the extent of the impact of mining on the landscape, masked as it is by subsequent development or by the regrowth of the bush. 'Wherever the miners have pursued their labours the trees have been cut down' R Brough Smyth, writing in 1869 noted, with the result that 'timber for the mines at Ballarat is now brought from Smythsdale; and in a few years (unless some change be made shortly) it will be impossible for the miner to pursue his labours even in many parts of the richest districts.'[9] We all tend to have images in our minds of what the goldfields looked like, based on the works of artists such as S.T.Gill that depict attractive scenes bathed in sunshine. But the reality could be much less inviting. Here is William Howitt's May1854 description, which emphasised the muddy conditions: '…Ballarat in winter is unquestionably the most dirty place, the most perfect Serbonian Bog, on the face of the earth[10].

[Howitt may have expected that any educated reader in the 1850s would be familiar with the reference, but I needed to consult my copy of Brewer's *Dictionary of Phase and Fable*. Brewer tells us that a Serbonian Bog is 'a mess from which there is no way of extricating oneself, The Serbonian bog was between Egypt and Palestine, 150 miles in length according to Pliny. Whole armies are said to have been lost there, hence the lines from Milton's *Paradise Lost:*

> A gulf profound as that Serbonian bog
> Between Damiata and Mount Cassius old,
> Where armies whole have sunk.[11]]

To continue Howitt's description of Ballarat,

> 'From all the hills round the water is perpetually running down into it; and everywhere along the bottom of the basin it is one deep slough of black mud and water. It is impossible to wade about in it, except in jack-boots.
>
> But where you come to where the diggers are at work, the scene defies all description. The whole surface is thrown into heaps of clay from six to ten feet high – for it appears to be all clay which they throw out here. …Between these muddy mountains thrown up by the diggers, the water accumulates in deep pools, which they avail themselves of to wash their gold out with: and the heaps of clay are trodden by hundreds of men constantly crossing them in all directions into a slippery, adhesive limbo of bird-lime and filth…In other places, where there is a harder substance under, and the surface is only slippery, it requires as much dexterity as courage to prevent you pitching headlong – heaven knows where! For right and left, at the same time, you are menaced by yawning gulfs and what once were diggers holes, but which now have tumbled

[8] Nairn, B. ed *Australian Dictionary of Biography* Vol 6 (MUP 1976) p459

[9] *The Goldfields and Mineral Districts of Victoria* (first published 1869; Queensberry Hill Press 1979 p28

[10] Howitt, W. *Land Labour & Gold* (First published London 1855, Lowden, Kilmore 1972) p380

[11] Brewer, E. *Dictionary of Phrase and Fable* (Cassell, London 1895) ii 592

> in, and present clay pits of some score of feet deep, the bottom and the sides of which are all one tumbling, crumbling, toppling, treacherous mass.'[12]

Unlike most gold mining towns Ballarat did not fade when the miners moved on. This was partly because deep lead mining replaced alluvial mining. We will hear something of the origins and growth of the City of Ballarat from Professor Weston Bate, in his paper *Ballarat: The Lucky City*. We are fortunate to have his learning and authority presented to us.

The main diggings were at Golden Point to the east of the Yarrowee River. Surveyor W.S.Urquhart laid out the town on the flats to the west, with some overlap on the diggings. The first land sales of the town allotments were on 25 August 1852. We can see how the urban layer was imposed on the diggings, and the relationship between the diggings and the town in a map prepared by John Phillips, Assistant Surveyor in late 1856. The alluvial gold workings are indicated by the black dots on a fawn background representing the gold-bearing alluvium. The pink colour is used for the basalt plateau on which the town was situated. In the top left corner the swamp, which was to be transformed into Lake Wendouree, is coloured green. Camp Creek can be seen running from left to right and joining the Yarrowee River at the foot of Soldiers Hill. The Yarrowee is shown running along the edge of Black Hill Flat and then down through Ballarat Flat, past Golden Point and through White Flat. The purple or mauve patches represent outcrops of bedrock, with reefs of auriferous quartz marked in black.[13]

Anthony Trollope (1815-1882), together with his wife Rose, was in Australia for a year from July 1871 to July 1872. The trip was in part to visit their son Frederick, who was established on a sheep station on the Lachlan River in New South Wales.

Trollope's travels included a visit to Ballarat in late 1871, which he found 'a remarkable town'. 'It struck me with more surprise than any other city in Australia.' He was amazed not just that a city should have sprung up in so few years, but that it was in a location so ill favoured.

> '…that a town so well built, so well ordered, endowed with present advantages so great in the way of schools, hospitals, libraries, hotels, public gardens, and the like should have sprung up so quickly with no internal advantages of its own other than that of gold. The town is very pleasant to the sight, which is, perhaps, more than can be said for any other "provincial" town in the Australian colonies…Nature has done for it little or nothing.
>
> It has no navigable river. It is seventy or eighty miles from any possibility of sea-carriage. The land immediately around is not fertile. It is high above the river, and runs in gentle hills which twenty years ago were thinly covered with gum-trees; and here wandered the flocks of a few patriarch pioneers. Then came first one or two rough seekers after gold, then half a dozen, then a score, then a rush – and Ballarat was established as one among the few great golden cities of the young world. I do not think that there is any city equal to it that has sprung from gold alone.' [14]

Professor Bate, in *Lucky City: The first generation of Ballarat 1851-1901* demonstrates just how mistaken Trollop was in this analysis[15], but we cannot go into the details of this now.
Trollope's description of the landscape makes no reference to the aboriginal people who occupied it before the pastoralists, but we may discern their legacy in that 'thin cover' of eucalypts, likely the result of fire-stick management of the country over many generations. Bill Gammage, in *The Biggest Estate on Earth:How Aborigines Made Australia* (2011) mounts a persuasive case for this suggestion. He cites

[12] *Land Labour & Gold* (First published London 1855), p382)

[13] The map and explanation are taken from the *Atlas of Victoria* (1982)

[14] Dow, H. ed *Trollope's Australia* (Nelson, Melbourne 1966) pp48-9

[15] Bate, W. *Lucky City: The first generation of Ballarat 1851-1901* p114

many examples of the description by Europeans of the countryside they encountered as being like a gentleman's park, and demonstrates that it was like that because the aboriginal people had over generations made it so. His quotation from Mossman and Banister's *Australia Visited and Revisited* (1853) both describes the typical pastoral landscape of Victoria and refers to the burning which made it: 'It consisted of undulating open forest-land, which has often been compared, without exaggeration, to the ordinary park-scenery of an English domain; the only difference which strikes the eye forcibly being the dead half-burnt trees lying about.'[16]

Eugene Von Guerard's painting, *Warrenheip Hills near Ballarat* (1854) shows us what Mt Warrenheip looked like when under the care and maintenance of the Wathaurong people. Today it is one of only two *forrested* volcanic cones in Victoria, the other being Mt Bunninyong. Rising 714 metres above sea level, this sleeping giant, inactive for 100,000 years, now has its foothills distinguished by the presence of Kryal Castle as one travels on the Western Highway into Ballarat.

One of the sites to impress Trollope was the Ballarat Botanical Gardens. Gazetted in 1857 and developed from 1858 on the old Police paddock site, the large 40 hectare site is adjacent to Lake Wendouree. In 1858 a design competition was won by Messrs Wright and Armstrong and the inaugural curator, George Longley, was appointed to implement the plans with early plant materials supplied by Baron von Mueller from the Melbourne Botanic Gardens and by Daniel Bunce from the Geelong Botanic Gardens.

Through all of these stages of human engagement with nature in the cultural history of the Ballarat region, water (long regarded as one of the basic elements of the natural world, together with fire, earth and air) has been of critical importance. In the formation of each of the layers as I have called them, water has been significant. Yuille's Swamp was a valuable resource for the aboriginal people. The range of the squatters' merino flocks was tied to the availability of water. The diggers along the Yarrowee River relied on water to pan for gold, and supplemented the water supply as the demands of mining increased. The construction of water races was a characteristic part of alluvial mining. When formed into Lake Wendouree, Yuille's Swamp became the water supply for the emerging city, later to be supplemented by Kirk's Reservoir.

From time to time flood and drought have complicated the management of water. Just a few years ago, Lake Wendouree, not for the first time in its history, was completely dry, and the gardens of Ballarat suffered severe water restrictions. The flats at the Ballarat diggings tended to flood in winter, forcing diggers to drier ground at the heads of the gullies[17]. Floods have been a periodic problem for Ballarat ever since. Attempts have been made to tame the Yarrowee River which passes through Ballarat and is fed by several tributories in the urban area including Gnarr Creek, Gong Gong Creek, Little Bendigo Creek, and Warrenheip in the north eastern reaches and Redan Creek, Canadian Creek and Buninyong Creek in the southern reaches.

Often the problem at the Ballarat diggings was that there was not enough water. Although too much water could make for difficulties in the diggings, a supply of water was essential for puddling, sluicing and washing for gold. Water races were constructed to bring water to the gold fields. Private enterprise was to develop engineering works on a considerable scale. Professor Bate wrote of the involvement of private capital in the construction of a reservoir on Fellmonger's Creek in 1857 by a group led by Kirk, with races constructed to bring the water to the diggings for use in washing for gold. The growing town depended on water from Lake Wendouree, which was drying up, and the water races became an

[16] *Australia Visited and Revisited: A Narrative of Recent Travels and Old Experiences in Victoria and New South Wales* (First published London 1853) p62
[17] Bate 27

important supplement.[18] In 1862 the government acquired Kirk's Reservoir for 4000 pounds to serve as a water supply for Ballarat.[19]

Much of the Yarrowee River was sealed as drains during the gold era to prevent erosion and mitigate frequent flooding. In 1869 a serious flood put most of the lower sections of the city including Bridge and Grenville Street under water. In 1877 the Gong Gong Reservoir was built replacing Lake Wendouree as the main water supply for Ballarat. It was also designed to alleviate flooding on the Yarrowee River.

During the 1960s the river through Ballarat was re-routed, concreted and built over, and is now an underground drain under Grenville Street. Other parts have become wide and deep stormwater drains, but some stretches remain in a bush and parkland setting. There were further episodes of flash flooding in 2010 and 2011.

The management of a supply of water has been important in every phase of the history of Ballarat. The water races constructed to bring sluice water to the goldfields could be adapted to other purposes. The works of the engineer James Fraser Watkin at Belmont (which we are to visit on Sunday) provide an interesting example of the application of goldfields technology in the creation and ongoing management of a garden, and in the restoration of a landscape ravaged by mining. Watkin had been involved in the construction of the Mount Cole to Mitchell's Gully water race commissioned by the Ballarat Goldmining Company to bring sluice water to the head of Mitchell's Gully which lies immediately to the north of the homestead. In 1858 Watkin occupied some six hectares of land next to the water race which had been worked over by diggers. In 1860 he commenced to build the original section of the house and established orchards and vineyards. In laying out the garden Watkin filled the diggers' holes with water to make ornamental ponds. He constructed the Gully reservoir, which still provides water to the garden through a four-inch main, with the ornamental lily pond as an overflow. In the late 1860s the garden was opened to the public as a pleasure garden with fruit and wine sold to the public. Belmont is on the Victorian Heritage Register (HO644). My account is taken from the Statement of Significance.

Much more could be said about the climatic travails of Australian gardens in the Ballarat region in the immediate past and the challenges they have presented. Drought and floods have been recurrent. Unfortunately, my allotted time will not permit me to say more. We have been able to explore some aspects of the intersection between the natural and cultural worlds where gardens and landscapes are to be found. In all of them successful outcomes have been based on learning to adapt to nature's vagaries. As the conference program proceeds you will learn much more about both of the worlds referred to in our theme, in the context of the golden era that has made Ballarat.
John Dwyer

[18] Bate p86

[19] Anon *One Hundred Years: Official Programme and History of Ballarat for its Centenary Celebrations* 1938

2 _____Stephen Carey, University of Ballarat

ROCKS AND LANDSCAPES: The context for gardens of the Ballarat region

Introduction

What is it that first brought people to Ballarat to make it one of the biggest inland cities in Australia? The answers are gold and fertile soils, both of which depend on the geological history of the region. To understand Ballarat's geology, we need firstly to step back a very long time and secondly to take a continental view.

Let me start, though, with a feature that is characteristic of the Ballarat district. Fig. 1 shows Black Hill, at Gordon, or Kerrit Bareet, east of Ballarat. Black Hill is a young, extinct volcano that is unusual in having two craters. A Dreamtime story of the Wathaurung people describes how the creator spirit, Bunjil, brought the first people into being near Kerrit Bareet. A personal connection is that my father used to walk around Black Hill each day to catch the train to school in Ballarat.

Geology: regional

We'll be a little arbitrary where we start with our geological history. Let's go back a 1,000 million years to a time when most of the continents were gathered together into a supercontinent called Rodinia (fig. 2). If we understand Rodinia correctly, Australia was attached to Antarctica to the south and North America to the east. Rodinia started to break up by a process called rifting — that is, stretching of the crust. This stretching caused the formation of rift basins (fig. 3), in which sediment was deposited over hundreds of millions of years, and the rock succession that you see if you visit the Flinders Ranges developed (fig. 4). Eventually, what is now the core of North America separated from Australia along a line, called the Tasman Line, through Broken Hill (fig. 3) and drifted away. Australia was still attached to Antarctica in Gondwanaland and would remain so until about 90 million years ago. So, by Cambrian time 500 million years ago, the east coast of Australia was facing out toward a precursor of the Pacific Ocean, while sitting in the tropics of the northern hemisphere (fig. 5). This was the time when the oldest rocks in the Ballarat district were forming. They are mainly igneous rocks (fig. 6), formed on the sea floor. Distinctive pillow structures indicate eruption into water. Similar oceanic crust is forming today at the mid-oceanic ridges around the globe (fig. 7). The picture is the same for most of south-eastern Australia: younger rocks are sitting on Cambrian oceanic crust.

Fig 1

Fig 2

Fig 3

Fig 4

Fig 1
Black Hill, parish of Kerrit Bareet, a volcanic cone east of Ballarat. Kerrit Bareet is where the creator spirit, Bunjil, formed humanity

Fig 2
Courtesy of http://www.eoearth.org

Fig 3
Outline of the basins of continental Australia

Fig 4
Sedimentary rocks deposited as Rodinia drifted apart. Flinders Ranges near Parachilna, South Australia

Stephen Carey, University of Ballarat

The oceanic crust was the bedrock for thick piles of sand and mud that accumulated to the east of the Tasman line (fig. 8). The sand and mud were converted to sandstone and shale, which we give a name, the Castlemaine Group. The prevalence of graptolites as fossils (fig. 9), and the absence of shelly fossils, we take to indicate that the sediment was deposited in the deep sea. The graptolites of Victoria are a very important means of correlating our rocks of Ordovician age with rocks of similar age from many other parts of the world because an excellent record of their evolution is found in the Ballarat–Bendigo region. Graptolites became extinct over 300 million years ago, but the fossils and some living relatives tell us that they were colonial animals with a tough but unmineralised skeleton which, by and large, lived as part of the marine plankton.

From about 500 million years ago, for a period of over 200 million years, the marine sediments that were being deposited east of the Tasman line were strongly deformed in a series of pulses. Volcanic arcs like the modern Philippines (fig. 10) and even a microcontinent collided with eastern Australia/Gondwanaland to cause this deformation, which involves the tight folding and faulting of the rocks (fig. 11). This process of collision is responsible for the creation of mountains like the Himalayas (fig. 12), where the Indian tectonic plate is colliding with the Asian plate. Collision commonly involves consumption — destruction — of oceanic crust at a subduction zone (fig. 13), where the denser oceanic plate dips away below the less dense continental crust. This happened repeatedly in eastern Australia, and what had formed below the sea as sand and mud was exposed on land as mountains made of deformed rock. Compare with the very peak of Mt Everest whose marine fossils show it formed in the sea. Meanwhile, other processes were operating during the deformation. The more deeply buried rocks, including the Cambrian volcanics and the Castlemaine Group, were subject to metamorphism, meaning that, under elevated temperature and pressure, they reacted to form new minerals. Further, huge quantities of rock in the deep crust melted, migrated and cooled to form the granites that are abundant in south-eastern Australia (fig. 14). In combination, the deformation, the metamorphism and the granitic intrusion thickened and stabilised the crust, and enlarged the region of Australian continental crust. The eastern margin of the continent jumped from the Tasman line to near the present eastern margin (fig. 15). To mark the similarities in history of the ancient rocks across south-eastern Australia, we use the term, Tasman fold belt.

Fig 4 b

Fig 6

Fig 8

Fig 8

Fig 4 b
Bottom: beds of the Humanity Seat Formation, Arkaroola, South Australia

Fig 6
Some of Victoria's oldest rocks: Cambrian oceanic crust. These are igneous rocks, over 500 million years old, of the Maitland Volcanics, South Gippsland. Similar rocks underlie much of Victoria. Rounded features in the lower photograph are called "pillows" and are evidence of the eruption of lava into water

Fig 8
Castlemaine Group (Ordovician, nearly 500 million years old) at Steiglitz, near Ballarat. The rocks formed as horizontal layers of sand and mud on the floor of a deep sea, and have since been tilted

Stephen Carey, University of Ballarat

Crucially for Ballarat, it is this history of deformation to which it owes its gold mineralisation (fig. 16). Compressive stresses opened up fractures that became conduits for fluids that were being squeezed out of deeply buried rocks. These fluids were of varying composition, meaning that they were waters containing a range of dissolved solids. As the fluids migrated through the fractures, some of the dissolved solids precipitated out to form veins (fig. 17). And, sometimes, there was gold in the fluids, and then in the veins. Detailed study of the region in the search for gold permits the construction of three-dimensional models like fig. 18, which shows strongly folded sedimentary beds and major quartz veins in the Ballarat East goldfield, and two-dimensional cross sections like fig. 19, which links the Ballarat West and Ballarat East goldfields.

This geological tempest was part of the construction of a new supercontinent, Pangaea (fig. 20), about 300 million years ago. The continents that dispersed when Rodinia broke up now came together again in a different configuration. The Australian portion was situated partly in the Antarctic Circle. While much of Pangaea was glaciated, this was particularly the case for Australia (fig. 21). People who drove to Ballarat from Melbourne passed through road cuttings at Pykes Creek that expose rocks deposited by glaciers. Ice sheets probably covered the whole region.

But the Earth is dynamic; it is difficult to exaggerate how dynamic. While the northward migration of Australia today is slow by human standards — about the same rate as the growth of a hair —, the expanse of time available is so vast that geological change has been enormous. So, Pangaea, like Rodinia before it, broke up and the modern arrangement of the continents began to take shape. About 150 million years ago, the first signs of the separation of Australia from Antarctica were evident in the intrusion of sills of dolerite in Tasmania (fig. 22) and igneous dykes in Victoria. A rift valley, similar to the modern Great Rift Valley of east Africa, developed progressively from Western Australia to what is now the southern coast of Victoria (fig. 23). Abundant sediment was dumped in the rift by rivers and lakes. While Victoria was still in the Antarctic Circle, this was a time of greenhouse climate, and the evidence of lush vegetation is preserved in the rocks of the Otway and Strzelecki ranges (fig. 24). The cycad-like order, Bennettitales, is particularly well represented, and Coniferales, Filicales, Gingkoales and Sphenopsida can also be found. The last thirty years have shown that small dinosaurs with large eyes — presumably to cope with the winter darkness — were active in these forests.

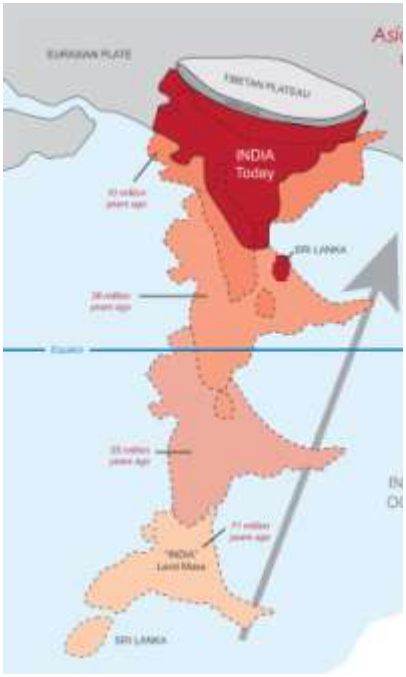


Fig 12

Fig 21

Fig 12
India: migration and collision with Asia. "Collisional tectonics" are responsible for the formation of the Himalayas and the deformation of eastern Australia during the Palaeozoic.After: pubs.usgs.gov/gip/dynamic/graphics/FigS8-2.gif
.

Fig 21
Puddingstone (diamictite) from the Bacchus Marsh Formation, Bacchus Marsh, Victoria. The constituents of this rock were transported by a glacier during the Permian period, over 250 million years ago. Courtesy of N. Cox

Stephen Carey, University of Ballarat

If rifting of the Otway and Gippsland basins had gone to completion, Tasmania would have stayed with Antarctica, and Australia would have drifted northward Tasmanless. Related to rifting was the formation of the Great Dividing Range and the Flinders Ranges (fig. 25), so this was a very important time in the development of our modern landscapes. In Victoria, the Great Dividing Range separates the Murray Basin to the north from the Otway and Gippsland basins to the south. Variations in global sea level mean that these basins, including the Murray, have been flooded to varying degrees in the past fifty million years (fig. 26), producing great inland seas. This was a very important time for the story of gold. Erosion of the new highlands led to concentration of huge quantities of gold in the drainage lines as nuggets. In fact, roughly 60% of Ballarat's gold recovery is alluvial. The major deep lead mines are prominently marked in the modern landscape by large mullock heaps made of alluvial sediment (fig. 27).

Fifty million years old, the rainforests that were preserved at the Anglesea coal mine showed that south-eastern Australia was very wet and warm when they formed. Victoria's oldest fossil flower was found at Anglesea. As the continent has moved north, it has become drier — a process of aridification — and our ecosystems have evolved to reflect that. Eventually, tectonic drift has brought us into collision with Indonesia and, in particular, has seen Timor rise from the sea floor (fig. 28). The stresses of tectonic collision are propagated throughout the Australian plate and are suggested to have manifested themselves in two ways: renewed uplift in the highlands and volcanism. Just a few million years ago, Ballarat was at a low enough elevation that it almost had beach frontage — the coast was only a few kilometres south of Buninyong, as beach gravels and sands tell us (fig. 29). While the coast was much further north than today, the drainage divide was further south — it probably ran through Ballarat whereas today it is 10 km north. Volcanism has had a profound effect on the region. In landscape terms, it has disrupted the drainage of the Western District and resulted in the formation of hundreds of lakes (fig. 30), including Australia's largest permanent water body, Lake Corangamite.

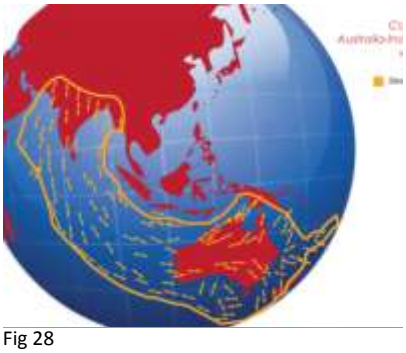


Fig 28

Fig 28
Collision of the Australian-Indian plate with Asia: modern stress distribution. After: M. Sandiford, University of Melbourne, jaeger.earthsci.unimelb.edu.au/ImageLibrary/Raster/Indo-Australian%20Plate/Pages/iap_bound_stress.html

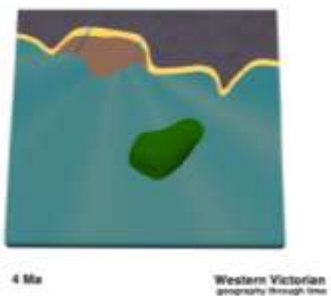


Fig 29

Fig 29

Fig 29
At a time of high sea level about four million years ago, the coast was 20 km south of Ballarat, with the Otway Ranges an island (far left). The coast's former position is marked by beach deposits of gravel and sand (left)

Stephen Carey, University of Ballarat

One of these lakes preserves the finest assemblage of trackways made by megafaunal marsupials known from anywhere in Australia (fig. 31, 32) — a subject dear to my heart because they are the highlight of my research career. Fifteen trackways (and over 700 footprints) were made about 100,000 years ago by the largest-ever marsupial, *Diprotodon optatum*, kangaroos or wallabies, wombats and possibly a marsupial lion. The preservation is exceptional because the host sediment contained a small amount of swelling clay derived from the weathering of the volcanic rocks. This allowed the original sand to hold the form of the feet that were traversing the lake margin. The next step in the preservation process was the precipitation of a lime crust across the surface of the sediment that helped turn the sediment into rock. And, finally, the tracks were covered by a thin layer of limestone that formed as the lake turned saline.

Let's return to the volcanism. Much of it was rather quiet, with lava coming to the surface along fissures and spreading across the plains. In some cases, though, it was violent. Where magma meets water-saturated rock, there is a transfer of heat from the magma to the water, which instantaneously transforms to superheated steam in a process, called flashing. An enormous increase in pressure blasts the affected rock into the air and forms a crater. Superb examples are Tower Hill and Lake Purrumbete, and there are two near Ballarat at Hardies Hill and Cattle Station Hill. In the highland areas, like Ballarat, a lot of the lava flows were confined by valley sides (fig. 33). In flowing down valleys, they blocked the drainage. Streams re-established themselves, not by cutting into the very hard, solidified lava, but by eroding into the soft, weathered rocks adjacent. The resultant landforms are called lateral streams. Another effect of the lava flows was that they buried many gold-bearing alluvial deposits and gave rise to the mining term, deep lead. Finally, there are the volcanic cones, hundreds of which are dotted around the Western District and which include mounts Buninyong and Warrenheip at Ballarat (fig. 34). Volcanic cones are the product of mildly explosive eruptions, due to the present of gas bubbles in the magma. The gas is said to "fragment" the magma into lumps and propel them to the surface and into the air. They cool quickly and typically fall back to Earth to form a pile of volcanic particles, especially scoria. Water drawn from volcanic rocks near Ballarat is a major supply for the bottled-water industry in Victoria; stone cut from dense basalt and called "bluestone" was a staple of the building industry in Victorian Ballarat (fig. 35).

Fig 31

Fig 31
Trace fossils of the Victorian Volcanic Plains: footprints up to 30 cm long of the extinct megamarsupial, Diprotodon optatum

Fig 32

Fig 32
Trace fossils of the Victorian Volcanic Plains: trackway of a species of wombat. Individual footprints ~10 cm long, direction of travel toward camera

Stephen Carey, University of Ballarat

In the background to this history of rifting, drifting, uplift, sea-level fluctuation, sedimentation and volcanism has been the constant of weathering (fig. 36). Australian tectonism has been muted compared to that of most other continents and we have lacked the recent glaciations that many other parts of the world have experienced. This means that, except for the geologically recent volcanism, Australia's land surface has not experienced the renewal seen elsewhere. And all the time, weathering is taking place. Is weathering important? It is what turns fresh rock into weathered rock, and weathered rock into soil, and fertile soil into leached soil. The particular importance of weathered rock in the Australian landscape has led to a particular expertise in its study in this country. Some parts of our landscape have been weathering for hundreds of millions of years, which has produced a weathering profile up to 200 m deep. Fig. 37 shows the main elements of a weathering profile:

- the weathering front between fresh rock and weathered rock
- the regolith, which is the inclusive term for weathered rock and soil, plus unconsolidated sediment
- the saprolith, or weathered rock
- the pedolith, or soil, because it has soil structure.

While I do not want to go deeply into the chemistry of weathering, it is helpful to look at a couple of chemical equations that give some idea of the relation between rock weathering and the fertility of soil.

$$MgSiO_3 + 3H_2O \rightarrow Mg^{2+} + H_4SiO_4 + 2OH^-$$

olivine

$$KAlSi_3O_8 + H_2O \rightarrow K^+ + HAlSi_3O_8 + OH^-$$

K-feldspar

The ions, or nutrients, Mg^{2+} and K^+, are dissolved in water. As a result, they become available to plants and, through plants, to animals. Fresh basalt is full of nutrients in minerals like olivine, so weathering of basalt can produce very rich soils. Fresh granite, though, has few nutrients, so weathering of granite (bearing K-feldspar) produces poor soils. Although the gold-bearing rocks of the Ballarat region are sedimentary, they are rather similar to granite in their chemistry, and also produce poor soils. Land use around Ballarat reflects the variation in soil fertility (fig. 38): the distribution of forest versus cleared land approximately maps to the distribution of granite and marine sedimentary rocks (forest) and basalt (cleared land).

a b c d

Fig 36
Products of weathering. a, Sandstone and slate of the Castlemaine Group (Ordovician), weathered to sand and clay, Ballarat. b, Ancient soil (orange) developed on granite, later buried by a basalt flow (Ballarat). c, Weathering profile, including soil and saprolith, developed on basalt (Ballarat). d, Red volcanic soil (Scrub Hill, near Ballarat). e, Weathering front: light, oxidised regolith above dark, reduced fresh sediment (Anglesea).

Stephen Carey, University of Ballarat

A common feature of many Ballarat gardens in the nineteenth century was the buckshot path, something I learnt from Michael Taffe, who is also in the conference programme. Scientists call buckshot iron-oxide segregations (fig. 39). The iron is leached from iron-bearing minerals like biotite or olivine as soluble Fe^{2+} (ferrous ion). If ferrous ion is oxidised, it converts to Fe^{3+} (ferric ion). Ferric ion is insoluble, so it combines with, say, oxygen, and precipitates to form a nodule, or segregation, or buckshot, in the soil.

$$Fe^{2+} \rightarrow Fe^{3+} + e^-$$
ferrous ion ferric ion

$$Fe^{3+} \rightarrow FeO(OH)$$
ferric ion goethite

If the soil is eroded, the gravel-sized buckshot is concentrated. Such concentrations provided gravel for paths in Ballarat in the nineteenth century, but are now exhausted.

Conclusion

Let us finish by highlighting those features of the geology that are particularly important to the social and economic history of Ballarat. First, the gold that made Ballarat the biggest settlement in Victoria for a time was all ultimately derived from auriferous quartz veins in the sandstone and slate of the Castlemaine Group. Some of it, though, underwent geological processing by weathering, erosion and concentration in streams. As a result, alluvial gold accounted for 60% of the gold recovered from the Ballarat area, with quartz mining responsible for the other 40%.

Second, Ballarat's fertile red soils are derived from geologically very young volcanic rocks. The soils support, among others, the dairy, wool, fat-lamb, beef, potato, berry and walnut industries.

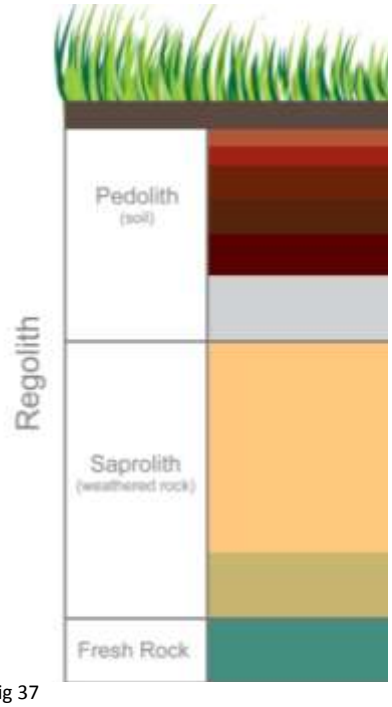


Fig 37

Fig 37
Regolith profile, produced by weathering of parent rock. The weathering front separates fresh rock from saprolith. The saprolith, though weathered, retains most of the structures that occur in the fresh rock. The pedolith, or soil, is distinguished as the zone of mobilisation.

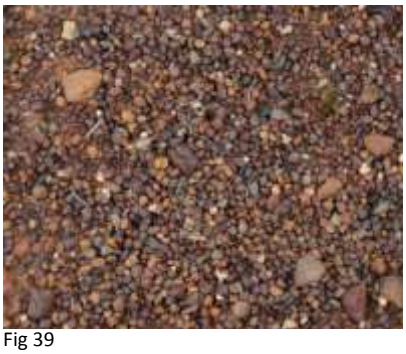


Fig 39

Fig 39
Buckshot, or iron oxyhydroxide glaebules, in Brisbane Ranges National Park (top). Buckshot gravel was commonly used to surface paths in the gardens of Victorian Ballarat (bottom; courtesy of M. & M. Taffe).

Stephen Carey, University of Ballarat

Acknowledgements

I thank Jaimee Berezny and Eamonn Jones of the University of Ballarat for drafting work; A.H.M. VandenBerg of Museum Victoria for suggestions on the manuscript; and N. Cox of the University of Ballarat, T. Fogaty, and R.Stevenson, formerly of Castlemaine Goldfields Ltd, for their assistance with photographs.

Further reading

BIRCH W.D. ed. 2003. Geology of Victoria (3rd edition). *Geological Society of Australia Special Publication* 23, 842 p.

BLEWETT R.S. ed. 2012. *Shaping a Nation: a Geology of Australia.* Geoscience Australia and ANU E Press, Canberra, 571 p.

CAREY S.P., CAMENS A.B., CUPPER M.L., GRÜN R., HELLSTROM J., McKNIGHT S.W., MCLENNAN I., PICKERING D.A., TRUSLER P. & AUBERT M. 2011. A diverse Pleistocene marsupial trackway assemblage from the Victorian Volcanic Plains, Australia. *Quaternary Science Reviews* 30, 591-610.

MITCHELL C.E., MELCHIN M.J., CAMERON C.B. & MALETZ J. 2012. Phylogenetic analysis reveals that *Rhabdopleura* is an extant graptolite. *Lethaia*, DOI: 10.1111/j.1502-3931.2012.00319.x.

TAYLOR D.H., WHITEHEAD J.L., OLSHINA A. & LEONARD J.G. 1996. Ballarat 1:100 000 map geological report. *Geological Survey of Victoria Report* 101, 117 p.

3 _____Professor Weston Bate, Foundation Chair of Australian Studies, Deakin University

LUCKY BALLARAT

Whereas most of the worlds goldfields have been located in barely hospitable landscapes, central Victoria was fertile and Ballarat and its hinterland were exceptional. Their rich volcanic soils and dependable rainfall encouraged farming, and great forests provided timber for buildings, firewood and the mines.

As if those resources were not enough to sustain settlement, there were huge deposits of gold – 18 million ounces, second in Victoria to Bendigo's 23 million. That was the setting for the activity of a god inspired migration of talented people – well educated, skilled, young and entrepreneurial, who used the opportunity to create a mature city in their own lifetimes, a feat probably unparalleled in world history.

Two general points should be made. First, that surface alluvial gold was a democratic mineral. It was cash in hand, which had a levelling effect on society by giving wealth to people who had not had it before. Secondly, it spawned a radical capitalism, by putting money into the hands of talented migrants, who used the opportunity to start factories and large and small businesses that built a strong urban community.

Unusual in possessing those human and material resources, Ballarat was also shaped uniquely by the nature of its gold deposits. Four successive lava flows from the Western District volcanoes reached the site of the city, burying the westerly gold-bearing reefs and stream and forcing a bank-up of clays and gravels, up to fifty metres deep, across what became the easterly Ballarat basin.

After surface deposits of Gold Point were quickly exhausted, miners at the perimeter of the basin began to follow the various streams underground in a puzzling and hazardous quest. Special double-slabbing techniques had to be evolved at great expense, to keep water out of shafts that might take eight months to bottom. This immense operation was a lottery, sometimes revealing 'a jeweller's shop', sometimes nothing at all.

In remarkable alliance, as innovative as their techniques, parties of up to twelve diggers were supported by an array of storekeepers. In formal legal partnerships, the storekeepers offered supplies, food and slabs in return for a share of the gold. This alliance of capital and labour, a great sharing of risk, became a central element of Ballarat's ethos, the basis of its ongoing community spirit.

Unlike Castlemaine and Bendigo, whose equally rich streams were on the surface and worked out in little over a year, Ballarat experienced permanence, evident at first in the basin through which the road ran from Geelong. This Main Road became, by 1856, the most remarkable business centre in Australia, lined for almost two kilometres by hotels, stores, gold buyers, tinsmiths, tent-makers and other trades. It throbbed with activity and produced the energy that drove an even greater venture, mining beneath the basalt plateau on which the town had been laid out in 1852.

Set free from official obstruction and corruption after the Eureka uprising of December 1854, the whole community embraced a democratic mining system. Teams of miners formed companies to tackle the basalt rock that lay over the streams they had been following westwards underground. An open-air stock exchange channelled capital into their ventures.

Much more mechanisation was needed. By 1860, there were ten large metal works at Ballarat helping to supply and repair engines, pumps, boilers and winding gear for the great adventure. It did not pay off fully until the late 1860s, when Ballarat prosperity, already considerable, peaked.

Professor Weston Bate, Foundation Chair of Australian Studies, Deakin University

When mining moved west and the railway reached the town in 1862, the original plan filled out. By then, the Sturt Street stores of LS Christie and David Jones were said to be finer than any in Melbourne. Significantly, in 1871, the English novelist Anthony Trollope, described Ballarat as the most surprising city in Australia, notable for the quality of its buildings, institutions, public gardens and other amenities.

From 1870 to 1905, the Phoenix Foundry produced over 300 locomotives (a signature of the age) for the Victorian railways; and Ballarat agricultural implement makes were in the forefront of supplying equipment for the expansion of farming within and beyond Victoria. They were so strong and diverse that the young inventor, HV McKay, was attracted to Ballarat to manufacture his cheap and efficient Sunshine Harvester.

With a population of 47,000 in 1871, Ballarat was a mighty marketplace for its productive hinterland. This amplified a largely self-contained and diversified economy. Locally grown hay fuelled the horses of the transport system, and firewood fed the boilers of mines and factories. The forest also supplied cheap timber for houses, many of them built on the quarter acre residence areas allotted to holders of miners rights. As a result, in 1870, 89% of miners at Ballarat West owned their own houses. Overall, home ownership (abysmal in Britain) was an extraordinary 69%.

The city's experience bred civic-mindedness, quite apart from a general gamble on the mines. In 1859, Sturt Street received generous plantations and the Botanic Gardens were established. Soon afterwards, Yuille's Swamp was converted to Lake Wendouree, which filled gradually with rowing boats, large yachts and paddle-steamers. Wealthy citizens and public subscriptions provided impressive sculpture along Sturt Street and in the Gardens. The Fine Art Gallery, the Mechanics Institute and the Ballarat East Free Library were notable, along with the South Street Society and strong Mutual Improvement Associations as part of a cultural tradition described by the editor of the Ballarat Courier in 1890.

> The go-aheadism of the Ballarat people is proverbial…… The gentlemen who have made their fortune in mining or other pursuits all seemed imbued with the one spirit, that of adding to the beauty of the Golden City.

He added;

> If the successful men of the metropolis showed proportionate generosity and public spiritness, the Victorian capital would be 'Marvellous Melbourne' indeed….. surely it marks a very desirable development that the most famous goldfield that the world has known should become the 'city of trees', and then achieve a nobler title still, the 'city of statues', and pictures.

And song! The important Sun aria competition was associated with South Street for many years. For many years too, Ballarat was known as the 'Band Capital' of Australia. It boasts one of the finest statues (by Bertram McKennal) of Queen Victoria, major Boer War and Prisoner of War Memorials and a walk in the Botanic Gardens lined by the busts of Australian prime ministers.

Ballarat also had a strong social welfare tradition. The Old Colonists' Club was committed to looking after destitute miners, the Queen Elizabeth Home for the general population. The draper, LS Christie, announced in 1870, that having made his fortune, he was happy to turn his shop into a cooperative, offering goods at cost. Banker James Oddie, as well as founding the Gallery, allowed land selectors to borrow at rates below those usually charged.

Professor Weston Bate, Foundation Chair of Australian Studies, Deakin University

'Beautiful Ballarat', they shouted. As well as community parks and gardens, many residents had colourful and productive gardens. Miners' residence areas were fruitful, while wealthy citizens, especially along Sturt Street West, Webster Street and around the lake had splendid gardens. Supplying plants as early as 1856, Alfred Ronalds had a nursery of over six acres. Among Ballarat's self-images of 'Golden City' and 'City of Statues', 'Garden City' emerged. It was important for tourism. When mining began to fade, early in the twentieth century, the Ballarat Progress Association published an annual brochure entitled 'Beautiful Ballarat', emphasising the lake, gardens, sculptures, gallery and South Street's Band Competition. From 1938, in March each year, the Begonia Festival became a highlight. At the Gardens, the joint curators, Rooney and Lingham, put on marvellous displays especially after a hothouse was added in 1911.

In the hinterland, also, activity was strong. From 1854, Thomas Bath, butcher then prosperous hotel owner, had 600 acres beside Lake Learmonth, 500 were under irrigation in 1871. In May 1890 the Ballarat Hunt met at his property, 'Ceres'. It was reported that a large Ballarat contingent joined local farmers and squatters for breakfast after an inspection of the gardens. The Scotts and Fiskens, near Mt Buninyong, the Russells at Carngham and Mawallok and Learmonth then Currie at Ercildoune, were just a few of the pastoralists with impressive estates. Ballarat was their centre and many of them were members of the Ballarat Club. Some, like the Learmonths, invested strongly in mines, while some, who made fortunes in mining, bought pastoral properties. Keeping their gardens has been a challenge, so, how fortunate is the community that in the Ballarat spirit, Andrew and Robin Ferry have ensured Narmbool's future by giving it to Sovereign Hill. Robert Sim, saw-miller, with a large farm at Mount Hollowback would probably have rivalled the squatters. His sheds full of farm machinery were likely to make implement firms envious.

As well as the large properties, there have been many berry farms, orchards, and vineyards; the cottage gardens in front of potato paddocks. The native garden was a source of wonderful colour when Eady Hart, a 73 year old widow, experimented successfully with the production, on her kitchen stove, of dyes extracted from native plants found near her home on the worn-out diggings of Ballarat East. Soft greys, glowing yellows, a strong black and a magical henna inspired great interest, but in the end local support failed her, unlike the success of the mobile steam kitchen of Sergeant Wiles of the local volunteers. It became standard for the Australian army in World War 1 and later.

A significant contemporary achievement is David Glen's dry garden at Lambly Nursery near Ascot, with his artist wife Chris Canning, noted for flower paintings, he has also created a beautiful setting for their home.

4 _____Paul Fox, Historian and Author

THE SENSE OF THE LANDSCAPE COMES TO TOWN OR FOUR MEN, FOUR LANDSCAPES AND AN IDEA

Introduction

In England the countryside is shaped by established social and political arrangements between the landed gentry and local communities. Other narratives make sense of the New World. The gold miners of Ballarat brought a radical, democratic temper to Victoria after gold was discovered in 1851. Yet in the countryside beyond the gold towns other values made sense of the land. To understand the beliefs that were at play in the vicinity of Ballarat, the paper looks at four landscapes: Thomas Bath's farm at *Ceres* Learmonth, William Clarke's *Dowling Forest*, William Henry Bacchus' *Peerewur Station* Warrenheip, and the Ballarat landscapes described by an hitherto unrecorded gardener, John J. Johnstone.

Thomas Bath: the hotelier who became a model farmer

Before coming to the colony Thomas Bath (1820–1901) had been a butcher in Cornwall. Arriving in the colony before the gold rushes he settled in Geelong where he continued his trade, and married Janet Vaughan in February 1851. When gold was discovered, Thomas tried his luck at Hiscock's Gully, Buninyong and Fryer's Creek near Castlemaine. In 1853 he returned to Ballarat where he opened a hotel in Lydiard St on the site of the present–day Craig's hotel. The following year he obtained Ballarat's first hotel licence, and purchased 560 acres of land several miles to the west of Ballarat – near the present–day Learmonth – at the first government land sales held in the district.[20]

Thomas named his farm *Ceres* after the Roman goddess of agriculture. He grew oats and straw for the many horses his guests stabled at his Ballarat hotel. Given horses were the only way of getting around until the railway arrived in Ballarat in 1862 this was a shrewd move. While business considerations played their part in Thomas' decision to buy a farm, *Ceres* also offered him an opportunity to follow the well–worn path to respectability for people with 'new money'. So at the age of thirty-seven Thomas sold his pub and went to live in the country.

Infected by the spirit of the English agricultural revolution, Thomas delighted in making agricultural improvements. He acquired the latest threshing machine manufactured in the colony, irrigated his land, and imported rams from Cornwell to improve his breeding stock. He also laid out an orchard, and an ornamental garden where he and his wife enjoyed 'every species of flower, shrub and plant'. Keen to share the fruits of his labour this model farmer not only joined the Ballarat Horticultural Society but also served as secretary to the Ballarat Agricultural Society for forty years.[21]

In the early 1860s Thomas' sympathies lay with the land reformers who challenged the right of the squatters to hold the runs they had taken up before gold was discovered. He supported the president of the Victorian Board of Land and Works James Service who in January 1860 introduced a bill to allow land–hungry miners to buy four million acres of Crown Land occupied by the squatters. While this bill was defeated, subsequent Selection Acts were more successful in breaking the squatters' land monopoly.[22]

Thomas remained at *Ceres* until his death in 1901. This was highly unusual. Overcropping, the 1860s Selection Acts, and the extension of the railway from Ballarat to Stawell in 1876, encouraged Ballarat farmers of small means to abandon their farms and start afresh.

[20] *Age*, 30 July 1901, p. 3.
[21] *Ballarat Star*, 14 November 1859, p. 3; *Timaru Herald*, 5 May 1879, p. 2.
[22] *Ballarat Star*, 21 July 1862, 30 July 1862, p. 7.

Paul Fox, Historian and Author

At a time when the Australian frontier was ever–shifting, gold towns like Ballarat were relatively settled places whose citizens took pride in seeing a sheep run transformed into a golden city. As one of the many citizens who had witnessed this change Thomas was deeply attached to Ballarat where he continued to own land. Like many of his contemporaries he practised philanthropy. He gave away his Sturt Street property, where he had once sold hay to miners, to the town council who transformed it into the city oval. And he made provision in his will for the town's institutions, including the Art Gallery and the School of Mines.[23]

William Henry Bacchus' *Peerewur station*

At the same time Thomas Bath was developing *Ceres* into a model farm; local squatters used the money they had made from selling their livestock to hungry goldminers to purchase their runs. Among these squatters was William Henry Bacchus of *Peerewur* station near Warrenheip. William's history was very different to Ballarat's gold miners. His father Captain Bacchus' had arrived in the colony in the 1830s and gave his name to the town of Bacchus Marsh on the Lerderderg River. So he remembered the rhythms of pastoral life before the discovery of gold diggers. How in winter stock was moved to the dry northern runs of the colony so as to rest the home runs.

Gold transformed the countryside. William recorded these changes in an article published by the Victorian government in 1874. Gold had stopped the wintering of stock on northern runs. With native grasses no longer rested, they were being eaten out and replaced by sedges, ferns, rushes, and other plants. William observed how bracken and sedges were far less nutritious than indigenous grasses. In his opinion it made economic sense to work with the land rather than destroy it.

William had little time for horticulture. In his opinion it was reprehensible that 'some portion of the attention that is devoted to the cultivation of new varieties of flowers, such as pansies, verbenas and the like, was not applied to raising new varieties of grasses'. To remedy the situation he recommended readers follow his example and keep seed in their pockets that they could scatter here and there.

To identify these grasses William read botanist Robert Browns' *Prodomus Florae Novae Hollandiae et Insulae Van-Diemen*. His daughter also shared her father's interest in botany, providing her drawings of grasses to illustrate her father's essay. And while this was the pastime of many a genteel nineteenth–century woman, it also needs to be asked what drawing the plants of your husband's or father's property meant in an age when married women were unable to inherit their spouse's estate? Is botanical art a way – however fleeting – of owning what can never be your property? [24]

All this reading, writing and illustrating took place at *Peerewur* station, a stone's throw from Ballarat. *Peerewur* was also near Lal Lal Falls where Aboriginal people believed their ancestral being *Bunjil* lived. Yet William, and his neighbour Archibald Fisken who named his run *Lal Lal*, appear to have been oblivious to the existence of this sacred landscape.[25]

Although observant of the natural world, William however fails to mention in his essay how the Aboriginal practice of firing the landscape had created the grasslands he so admired. While this might be wilful forgetting on William's part, it should be remembered that in the 1860s some Victorian squatters were attributing the environmental changes they were witnessing to the removal of Aboriginal peoples from their lands. Edward Wilson, who arrived in the colony in 1841, was an exponent of this view. A friend of Charles Darwin, Wilson used Darwin's *Origin of Species* in 1861 to argue the

[23] *Ballarat Star*, 14 August 1863, p. 3; *Australian Women's Weekly*, 11 October 1972, p. 69.
[24] *Town and Country Journal* (NSW), 22 August 1874, p. 14.
[25] Ian D. Clarke, 'The ebb and flow of tourism at Lal Lal Falls, Victoria: tourism history of a sacred Aboriginal site', *Australian Aboriginal Studies*, September 2002, passim.

European removal of Aboriginal people from their land had contributed to the environmental changes in the landscape.[26]

Neither Edward Wilson nor Henry's ideas however persuaded Ballarat's stock and station agents to see the landscape differently. When Henry sold some of his station in 1869, they highlighted the English pasture grasses on the property while merely referring to the indigenous grasses William so valued as 'other grasses'.[27]

While Henry recalled the indigenous grasslands of Australia, his wife remembered England. So when Henry died in the colony in 1887 Emily and her daughter, Annie Elizabeth returned to England. In 1891 Annie married an Anglo–Irish gentleman Beaufoy Andrew Greene in a fashionable London church. One can only speculate if Annie preferred the grasses that grew on her husband's ancestral estate *Cloonlough* County Sligo Ireland to the Australian grasses her dead father so loved.[28]

William Clarke the landlord of *Dowling Forest*

The memory of England also shaped the country around Ballarat. Among those who felt the pull of England was William Clarke (1831–1897). William was the son of Big Clarke (1805–1874), a butcher who amassed £2,500,000 from the time he arrived in Australia in 1829 until his death in 1874. The Victorian properties of the estate, worth about £1,500,000, were left to William. Among these was *Dowling Forest* whose 160,000 acres ran all the way from Lake Learmonth and the Ercildoune boundary to the mining town of Creswick beyond Ballarat.

William was born in Australia. So he had experienced frontier life before gold was discovered in Victoria. In 1851 he was sent by his father to manage *Woodlands*, a sheep station in the Wimmera where in earlier times Aboriginal people had been numerous and troublesome enough to require the employment of additional shepherds to protect flocks of sheep.

When Big Clarke died, William determined to distance himself from his rumble–tumble father, and frontier life. He built *Rupertswood*, a grand house on Jackson's Creek near Sunbury, and engaged Taylor and Sangster to design its gardens. The house allowed William and his new wife Janet (they were married in 1872) to entertain local and overseas dignitaries royally. Among the guests was the English Cricket Team whose visit to *Rupertswood* began *The Ashes* competition between Australia and England.[29]

William also transformed the Dowling Forest run. He turned it into a model agricultural estate farmed by tenant farmers, and inaugurated an annual prize for the best tenant farm administered by the Ballarat Agricultural Society.

The transformation of *Dowling Forest* had many advantages. William was no longer a member of the hated squattocracy but as a model landlord. Now he could imagine himself in terms of the British landed gentry. Indeed his employment of new agricultural ideas on his estate parallels the interest British landlords took in improving their estates in the 1860s and 1870s until the agricultural depression, caused by the flood of cheap American grain onto the British market, put an end to that.

[26] For full discussion of Wilson and his mileau's circle reasoning about the relationship between the destruction of Aboriginal people and changes in the landscape see 'Exhibition review. Eugene von Guerard: nature revealed', *Australian Historical Studies*, 43, 2, June 2012, pp. 303–311.
[27] *Ballarat Star*, 26 February 1876, p. 2.
[28] *Age*, 16 November 1891.
[29] Sylvia Morressy, "Sir William Clarke', *Australian Dictionary of Biography*, vol. 3, Melbourne University Press, 1969.

William played his part to perfection. In 1876 he employed the agricultural chemist R. E. McIvor a decade before the Victorian government made such an appointment. And he made sure Ballarat was kept informed about what McIvor was thinking. In the year of his appointment, McIvor gave a lecture to the Ballarat Farmers Club on 'the nutrition of plants, the general nature of soils, the chemical exhaustion of land, the means of preventing the exhaustion and the necessity of adopting a system of rotation of crops'.[30]

William also played to other audiences. *Dowling Forest* was just the backdrop he needed to show titled English guests he was, at the very least, the equal of any titled landlord in the old country. Indeed the whole world knew the rents from *Dowling Forest* were to provide income for William's second son when he came into his father's inheritance. What with a town house in East Melbourne – where a tapestry designed by Prince Leopold hung – a country house named after his oldest son Rupert, and a tenanted estate at Dowling Forest, William cut the figure of an old world grandee. Queen Victoria agreed, conferring on the *Dowling Forest* landlord, and his heirs, a baronetcy.[31]

In an age when the 1860s Selection Acts had challenged the squatters' social and political legitimacy, *Dowling Forest* served another purpose. While the likes of Josiah Mitchell, the gardener turned journalist, could reveal how ignorant selectors had ruined good agricultural land around Ballarat, this was something a rich squatter like William could never do so publically. Yet William could develop a model farm at Dowling Forest, encourage his tenants to become the very best of farmers by awarding annual prizes, and employ an agricultural chemist out of his own pocket to educate farmers throughout the colony. At the same time William needed to distance himself from the having anything in common with rack–renting landlord made famous in the satiric novel *Castle Rackrent* penned by the Anglo–Irish novelist Maria Edgeworth. This was an astute move given how many selectors in the colony had bitter memories of the landlords of Ireland.[32]

With William cutting the figure of a model farmer, it is not surprising the squatters' most vehement critics were willing to say a good word (or two) about him. Among them was agricultural reporter for David Syme's *Leader* and Victorian parliamentarian John Lamont Dow (1837–1923). In 1876 Dow addressed the Ballarat's National Reform League on 'Our Land Acts and Land Tax' where he displayed all the lands remaining in the squatters' hands. Six years late he agreed to judge Clarke's annual *Dowling Forest* competition. And it was Dow, as Minister for Agriculture, who saw to it that the government appointed an agricultural chemist.[33]

John J. Johnson a landscape gardener visits Ballarat

If William Clarke illustrates how Englishness served the purposes of a major landholder within a stone throw of a city which was antagonistic towards squatters, the life of landscape gardener John J. Johnsone tells another story about how memory of Home shaped perceptions of Ballarat's landscape.

John was born in Scotland in 1858. He served his apprenticeship in gardening and forestry at Gordon Castle. Then he went to Edinburgh where he worked at Thomson's nursery laying out gardens and plantations. With his knowledge and experience John next went to work at Lord Belnap's Derby estate in northern England.[34]

[30] Paul Fox, *Clearings: six colonial gardeners and their landscapes*, Miegunyah Press, Carlton, 2004, pp. 167–68.
[31] Terence Lane and Jessie Serle, *Australians at home: a documentary history of Australian domestic interiors from 1788to 1914*, Oxford University Press, Oxford, 1990, p. 236.
[32] *Argus*, 18 July 1891, p. 4.
[33] *Argus*, 2 December 1882, p. 12, 13 May 1890, p. 3.; Hume Dow, 'John Lamont Dow', *Australian Dictionary of Biography*, vol. 4, Melbourne University Press, 1972.
[34] *Bacchus Marsh Express*, 19 March 1887, p. 2.

John migrated to Victoria in the 1880s(?). In Melbourne he worked for the seedsmen Law Somner. This firm was instrumental in gaining John employment with one of South Australia's most successful drapers, John Hodgkiss who owned Lawn House in the Adelaide suburb of Brighton. In 1887 John returned to Victoria. For the next twelve years he was to be the curator of Maddingley Park, Bacchus Marsh where he designed many of the features of the park. His next appointment was laying out a garden and a lake – said to be the largest in Victoria – for the Stawell Borough Council.[35]

John also wrote a column for the *Bacchus Marsh Express*. Recollections of Scotland inform many of these articles. For instance his 1888 account of visiting *Greystones* near Ballan evoked memories of native glen in the Scottish Highlands. This was in spite of Richard Molesworth Greene, the owner of the property who was also one of the trustees of Maddingley Park, being of Anglo–Irish descent.[36]

The following year John paid a visit to Ballarat, a town known to him since his school days in Perthshire Scotland when he and his schoolmates had first heard the cry 'Gold!' and learned the whereabouts of Bakery Hill. After a lifetime of imagining Ballarat John had at last arrived in the golden city where many of his schoolmates have already gone to live. Ballarat was not like what he imagined it to be. The buildings looked strange. To make the foreign familiar John reverted to familiar tropes about Britishness, writing: 'they are the homes of Britons, designed and executed by Britons, with British architectural features'.[37]

Ballarat's botanic gardens also challenged the Scottish gardener. Instead of English lime and beech walks, pines and sequoias, planted thirty years ago by the gardens' curator George Longley, formed an unfashionable pinetum. According to John the gardens were 'a strange place'. They were nothing like his dreams of the fairy dells of 'old England'. To make sense of what he sees, he turns to the Adelaide botanic gardens, where India rubber trees and Australian *ficus*, and massive gums grew. This however gives John no solace. So to regain his bearings locate himself in this strange, foreign place he turns to the gardens' statue of William Wallace, the Scottish national hero who died fighting the English.[38]

An idea

In a colony where pre–and post– gold colonial sensibilities jostled with Scottish nostalgia and English memories, the Ballarat botanical gardens provided a space where men and women of diverse backgrounds and opinions found common ground in the idea of a productive landscape. In nineteenth–century Australia this was an extremely powerful idea. In thirty years what was perceived to be a barren landscape had been transformed into a garden. In a contested and sometimes alien landscape, a garden, like the Ballarat botanic garden, allowed colonists, whatever their background, to tell endless stories about nature's abundance. Even the Scottish gardener John J. Johnstone wanted to tell his readers that story.

[35] *South Australian Register*, 24 June 1897, p. 6; *Bacchus Marsh Express*, 10 June 1899, p. 2.
[36] *Bacchus Marsh Express*, 11 February 1888, p. 3. Paul de Serville, *Pounds & pedigrees: the upper class in Victoria 1850–80*, Oxford University Press, 1991, p. 158.
[37] *Bacchus Marsh Express*, 26 October 1889, p. 4.
[38] *Bacchus Marsh Express*, 25 January 1890, p. 7.

5 _____John Patrick, Landscape Architect, Heritage Consultant, Author and Lecturer

PRIVATE GARDENS, PASTORAL AND TOWN

Western District, Victoria

- Nearly flat, volcanic plain
- Soils variable –areas surrounding extinct volcanoes tend to be of fertile, volcanic soils which are claimed to produce the best grazing land in Australia while others are sandy and of moderate to low fertility
- Climate is generally mild to warm. Summer rainfall is rarely heavy whereas rainfall over winter is frequent and reliable
- Average annual rainfall ranges from 550mm near Lake Bolac to 1100mm around the Portland, Port Campbell area
- Greatest concentration of large country gardens in the state

http://www.majormitchellexpedition.com/maps

Australia Felix

- The area was first settled by the Henty brothers in 1834 when they sailed from Launceston in Tasmania (then known as Van Diemen's Land) to Portland in search of suitable grazing country
- They were soon followed by fellow Tasmanians
- In 1836 Major Thomas Mitchell stumbled across the Henty's during his explorations and told them of the vast grass plains inland.
- He also relayed his findings of the area he called 'Australia Felix', or Happy Australia upon his return to Sydney
- His words influenced many sheep owners in NSW to make the journey south, resulting in the 'Overlanders' taking up vast tracts of country during 1937,38 and 39

Kiddle, M (1967), Men of Yesterday

Squatters

- Meanwhile as the squatters from Tasmania became better established they pushed out to occupy country further inland whereas the Overlanders followed Mitchell's track down to meet them and establish stations along the way
- Most runs covered tens-of-thousands of acres
- At first the NSW Government refused to sell the land to the squatters, instead leasing it to them
- Without secure tenure houses were mostly restricted to small huts or humpies and any gardens limited to vegetables and fruit trees

http://nla.gov.au/nla.pic-an10267866-50

Kiddle, M (1967), Men of Yesterday

The Building of Wealth

- 1851 saw the discovery of gold in Victoria
- Squatters took advantage of the swelling population through considerably increased prices for cattle, sheep and horses
- Once the gold started to peter out, many of the newcomers challenged the rights of the squatters to the vast areas of land they leased
- The government decided to sell up much of the land the squatters believed they had a long lease over
- Squatters turned this to their advantage by using dummy bidders to buy up much of the better land sold thus greatly increasing their freehold
- With tens-of-thousands of acres now being owned by them and a much increased supply of labour, due to the numerous unsuccessful gold diggers, squatters could make greater profits than ever before
- Station holders now found themselves wealthy enough and with enough secure tenure to build substantial homes

Watts, P (1983), Historic Gardens of Victoria

Watts, P (1983), Historic Gardens of Victoria

Grand Homesteads

- The 1850's, through to the beginning of the twentieth century saw a building boom of grand homesteads in the Western District
- As the squatters homes grew in size and grandeur, so did the gardens surrounding them
- The garden no longer had to be utilitarian but instead was created to reward the owners for their past toil
- Gardens created in the mid nineteenth century had a tendency to be tight and compact in design, as can be seen here at The Union, Woolsthorpe and Merrang, Hexham

http://museumvictoria.com.au/collections/items/766590/negative-ercildoune-homestead-ballarat-victoria-1879

http://homes.ninemsn.com.au/houseandgarden/advice/8179305/true-romance-ercildoune-victorian-goldfields-garden

'Ercildoune'

- However as the homesteads were extended, many of these gardens were cleared and replaced with the more open 'picturesque' and 'gardenesque' styles which were popular towards the end of the nineteenth century
- Likewise gardens of homesteads built during the late nineteenth and early twentieth centuries tended to be more park-like, with sweeping lawns and gravelled paths winding through pockets of trees and garden beds and often with viewlines to vistas beyond the garden.
- Many of these were designed by the squatters and their families,
- Such as Thomas and Andrew Learmonth at Ercildoune,

Kiddle, M (1967), Men of Yesterday

'Murndal'

- Samuel Pratt Winter at Murndal, who planted natural-looking groups of trees in the grazing paddocks around the homestead to give it an English-Style park-like appearance rather than plant a significant garden in the immediate vicinity of the house

Watts, P (1983), Historic Gardens of Victoria

John Patrick, Landscape Architect, Heritage Consultant, Author and Lecturer

V. Lang, AGHS Conference Proceedings 2009

V. Lang, AGHS Conference Proceedings 2009

http://emmanuel-en-australie-pour-5mois.over-blog.com/article-23122326.html

'Titanga'

- Alexander Buchanan at Titanga, Lismore
- This garden is of particular interest because when it was first developed in the earlyn1870's it was believed that the available surface water was unsuitable for plants, therefore a dryland garden was designed
- The original garden consisted of 2.5 acres mainly to the side and rear of the house with the front of the house being left clear to take advantage of the distant view across the plain to Lake Tooliarook and extinct volcanoes
- Paths and flower beds were laid out under native trees which were also inter-planted with a collection of conifers and introduced Eucalypts. Many of these original trees and shrubs still survive today
- Tree plantations were planted as shelter belts in the front paddocks and single, specimen trees were planted in the house paddock to give a park-like appearance
- This resulted in an effective contrast between the broad landscape features of the paddocks and shelter belts and the more intimate landscaping around the homestead
- In the early days, the garden contained no lawn due to the lack of water, however when in 1938 water in a nearby dam was found to be suitable, a small lawn and lily pond were added
- Many of the original design elements including the path layout, fencing, gates, edging tiles and outbuildings still exist today
- It is unusual in its extensive use of Australian plants, both remnant and introduced including over 200 different varieties of Eucalypts, which are accurately documented in family records

'Glenara'

- Walter Clark at Glenara, Bulla, possibly in conjunction with Charles Swyer who was one of the architects that designed the homestead.
- Walter Clark had some horticultural experience

Mooleric, http://nla.gov.au/nla.pic-an23001032

Talkeith, http://www.weeklytimesnow.com.au/article/2008/10/08/12861_property.html

http://www.gardenhistorysociety.org.au/branches/victoria

http://nhsaustralia2009.blogspot.com.au/2009_10_01_archive.html

'Mooleric' and 'Talkeith'

- Other owners engaged professional designers.
- Perhaps one of the most noted was William Guilfoyle, designer of the Royal Botanic Gardens
- Upon retirement from the botanic gardens, Guilfoyle spent a lot of time in the Western District and is credited for either the design or input into a number of gardens in the area including:
- 'Mooleric' and 'Talkeith' at Birregurra; 'Newminster Park' and 'Renny Hill' at Camperdown; 'Carranballac' and 'Mooranmong' at Skipton; Werribee Park at Werribee, 'Dalvui' at Noorat and 'Mawallok' at Beaufort. These last two are perhaps his best know works.

'Dalvui'

- Unlike many gardens that have been altered to different extents over the years, these garden have largely retained the original Guilfoyle concept
- Dates from 1898 when Mr Niel Walter Black commissioned Guilfoyle to advise on the planting and layout of the garden
- Many aspects of the garden are typical Guilfoyle's style – the contrasts of foliage type and colour; avenues of trees to act as a backdrop to the garden; interesting tree groupings; and open, sweeping lawns surrounded by curving shrubberies.
- The original garden was about 2.5 hectares in size, however unlike many gardens that have shrunk in size; an extra hectare of garden was added to the ornamental garden in the late 1980's.
-

'Mawallok'

- The original house was built mid 50's, extended 1860's,
- The building still exists in the grounds today

http://vhd.heritage.vic.gov.au/places/large_image_carousel?context=places&index=2&place_id=1888

Watts, P (1983), Historic Gardens of Victoria

http://nla.gov.au/nla.pic-vn4660686-s160

- In 1907-08, the existing Arts and Crafts house was built and Guilfoyle was commissioned (in 1909) to design the garden
- Around 1927 General Sir John Monash was commissioned to extend an existing small dam into a 22 acre lake with an island. This lake is fed by a natural spring.
- This opened up the view to the distant Pyrenees Ranges and Mount Cole
- Other changes from Guilfoyle's original plan include removal of palms from the lawn in front of the lake in the 1930's as well as various modifications for ease of maintenance

John Patrick, Landscape Architect, Heritage Consultant, Author and Lecturer

Watts, P (1983), Historic Gardens of Victoria

- 'The plan, which is still in existence today is thought to be the only surviving plan of a private garden and shows…….
- Enclosed garden based on the English landscape tradition with Edwardian overtones

6 _____Michael Taffe, Historian and Author

A NEW NATION - A NEW LANDSCAPE
Victoria's Great War Avenues of Honour

'Let those who are in the forefront of national administration see that something more than monuments of words or granite be created'. [i]

In 2004 historian Damien Powell posed the question, 'How do we, as Australians, remember our wars?'[ii] In the first instance, these first European Australians remembered the Great War 1914 – 1918, by planting Avenues of Honour. Only the one small war memorial in the form of a fountain at Balmain pre-dates the earliest of these Avenues of Honour.

Victorians in particular, created a landscape that was for its time, unique in its type and 'universal' spread. Plantings were proposed and started in NSW, SA and Victoria throughout 1916 and by the end of 1918 there was not a region in the State of Victoria without multiple Avenues of Honour and not a state in the nation without its own representative avenues. The existence and symbolism of the avenues has, until recently, been little researched and remains open to misinterpretation. Today we live with a legacy often invisible to us, as much because of our own world view as well as the ubiquity of the subjects.

In her *History of Gardening in Victoria*, Mary Ellis writes of an Avenue of Honour in every town.[iii] Twenty-five years ago Janine Haddow in her Master of Landscape Architecture thesis revealed that immediate post WW1 Victoria officially had a total of ninety two Avenues of Honour.[iv] As is so often the case, the reality falls somewhere between these two extremes and for such avenues to the Great War the Victorian tally is closer to two hundred and fifty.[v] The number throughout Australia for this war is yet to be determined but would probably number three hundred and fifty. These avenues form communal and individual memorials. Taking the trees individually as memorials I believe that it is fair to state that Australia has raised individual memorials for most of its serving men and women, certainly more than any other nation on earth, in so doing making a major social, historical and landscape statement for the era.

Two letters to the editor in the Melbourne Argus in April 1918 set me on a quest that has revealed over three hundred arboreal war memorials planted in Victoria for the Great War, more than two hundred of which were in the form of Avenues of Honour. Following the first anniversary of the Gallipoli landings head teacher of the Eurack School, Leslie George Pentreath planted an Avenue of Honour as 'a living memory to our heroes' for the school's Arbour Day in May of 1916.[vi] In performing this rite, Pentreath introduced what was to become Victoria's most personal and notable form of identity with this war. Mr. E. J. Hughes, hon. secretary Anzac Avenue Sassafras wrote in the Melbourne Argus in 1918 'the idea of having an avenue of honour originated at a public farewell to one of our boys at Sassafras in July 1916.'[vii]

These avenues were a reflection and fulfilment, of the needs of a community. Sadly as the Ballarat North image demonstrates, even at Avenue conscious Ballarat, the full value of this legacy fails to be understood. It was here in my own neighbourhood, that my interest was confirmed with a tree planted in honour of my great uncle, John Francis Taffe 23rd Battalion.[viii] This tree has been removed in recent years and the avenue planted with a cluster planting thereby breaking up the nature of the avenue and destroying yet another memorial, another heritage landscape.

Australia is often hailed as having the only volunteer army in the field in the World War of 1914 – 18! These were the sons and daughters of our citizens, our people, Australians. They are embodied in a life form (trees) that can be perpetuated so that the community has an everlasting focus for expressing

solidarity, living, honour, love, and respect for those of its number, living or dead whom they regarded as heroes. Speaking of those who volunteered and were still absent from their community in 1917 Tilly Thompson of Ballarat called on her band of volunteers 'the Lucas Girls' to 'honour each absent hero with a laurel wreath as had been bestowed on Greek heroes of old'. The following year at Brighton, Professor Ernest Scott of the University of Melbourne spoke saying 'The association of heroes with trees is so entirely appropriate that one would venture the suggestion that a tree should be planted in honour of every soldier who has gone from Australia to take part in the war'.

Social historians must decipher and make better known what Janine Haddow calls these 'War Memorials of the New Age'.[ix] Too often people pass by and through these memorial avenues without seeing them, or having the slightest interest or knowledge of them. That they are little researched and misinterpreted is illustrated by the loss of the Eureka Stockade Memorial Avenue of Honour in Ballarat following a heritage landscape assessment that failed to note the avenue's existence.

Although Horsham in Victoria had planted a memorial avenue in 1901 and other places planted memorial trees, this was a new nation and a new era. Following the push for recruitment and as enlistments grew; the new nationals felt the pain and anguish of separation in a way not felt since the first Europeans were isolated in New South Wales in the closing stages of the 18th century. News of the events of April 1915 in remote Turkey separating loved ones in an unfathomable death in an unfathomable place created a new upsurge from the wellspring of grief. How to grieve, how to share, how to connect – How to overcome?

There was a worldwide movement to plant trees including memorial avenues following World War I and these were largely lost to history within eighty years. Early in the 21st century a twelve-year-old boy was awakening American consciences to this heritage in Tuscaloosa Alabama.[x] In Australia, the Ballarat Avenue of Honour Committee, and nationally, people like Dr John Dargavel were doing the same.

Today however, these Avenues of Honour form a more significant cultural landscape in Australia than in any other nation. From 1916 they proliferated across the Australian landscape, a landscape crossed by myriad roadways stripped of trees. These roadways had served as stock routes and carried bullock drays. For over sixty years the stock driven along them had destroyed all the trees in their path, leaving a stark landscape, arteries criss-crossing a living map. With the spread of the internal combustion engine these arteries were freed from stock drives and bullock drays, war did the rest.

War served Australia well in this perverse way. A land devoid of monuments, Australia was a land where the story, the myths and legends had always held sway, first through the aboriginal and then the European. This was a land of storytellers peopled by the spoken not the written word. With this war it seemed that it was to and by the common folk that monuments should be raised and so in a manner ordained by the natural forms around them, people chose to honour their fellows with arboreal symbols. Not only does this sanctify nature as had been done back to the Dreamtime, but as John Dargavel noted, it also 'permits the grieving to raise a symbol permitting both of life and of forgetting'.[xi]

In Victoria, avenues were planted from Murrayville in the Malley to Orbost in East Gippsland. On the opposing axis they stretch from Dartmoor in the south west to Corryong in the north east. The longest of them was planted at Ballarat in Victoria between 1917 & 1919. The Ballarat Avenue of Honour driven by the Lucas sales organization, proved however, to be the greatest and most influential such memorial planted in Australia. One Shire Secretary in thanking the City of Ballarat for its leadership signed off with, 'this form of memorial is being adopted throughout the country.'[xii]

Michael Taffe, Historian and Author

At Ballarat in May 1917 Police Inspector Alexander Nicholson was the first to publicly propose that an avenue be planted at Ballarat along the Burrumbeet Rd commencing at the shire and city boundary to commemorate the achievements of 'our soldiers at Bullecourt'.[xiii] He lamented that "very little sentiment had been shown although we were proud of their gallant deeds."[xiv] Bullecourt, the final battle of which was under way as this proposal was being contemplated by the Ballarat Progress Association cost Australia 10,000 lives. Nicholson's motion caught the imagination and the mood of the day and he went on to guide the subsequently formed Avenue of Honour Control Committee through its early years.

It was from this avenue that the movement to create Avenues of Honour received its impetus throughout Australia. Within a month of the commencement of The Ballarat Avenue of Honour promoted so heavily by the Lucas Company, Sebastopol's avenue was inaugurated, followed in quick succession by six other local avenues lining the streets and forming a tree lined streetscape that is now a part of Ballarat's heritage. Within four years of 25th April 1915, Ballarat had no fewer than nine World War I memorial avenues.

A study of Melbourne suburban newspapers reveal that many of these close knit communities sought such a way to console themselves while honouring their heroes dead and alive. Industrialist H. V. McKay wrote to his old contacts at Ballarat in 1918 for assistance in organising an avenue for Sunshine where he had earlier relocated his factory and workers. Some organisers were detailed in their planning and yet others hasty to the ultimate detriment of the resultant avenues. The Shire of Corryong undertook soil analysis and examined rainfall and temperature readings before planting its beautiful avenue of cedars *Cedrus atlanticus*.

The massive sugar gums *Eucalyptus cladocalyx*, guarding the entrance to the original avenue at Eldorado may have passed their use by date. They are however, a reminder of that day when hundreds of people came home to Eldorado to join the townspeople and plant forty six trees, 'one for each valiant Anzac'.[xv] This avenue was planted out with celebrations amounting to a 'Back-To' a matter of days after Ballarat's first planting. Unlike most later war memorial dedications, the ceremonies surrounding the planting or dedication of many of these avenues, took on a celebratory nature as at Eldorado (*Eucalyptus cladocalyx*). Across in the state's north-west, Murrayville (*Eucalyptus cladocalyx*) had street races and activities involving every segment of the community.

In the Mallee, many sugar gums *Eucalyptus cladocalyx,* have survived unrecognized such as those on the north of the Mallee Highway at Danyo. Unlike their tall counterparts on the opposite side of the highway, these trees were coppiced many years ago and today only their massive trunks bear witness to the district's glory days. Sometimes an Avenue of Honour remains where there is no longer a town community as at Cowangie North (*Eucalyptus cladocalyx*) and Danyo in the Mallee or Dobie (*Ulmus*) in the west near Ararat. In other instances, researching contemporary newspapers reveal personalities and Avenues of Honour of which today there is no recollection despite the survival of trees.

The Melbourne *Age* of 5 August 1918 reported in detail on the planting of the Brighton-Caulfield Avenue of Honour by the State Governor on the previous Saturday. Thousands had attended the ceremony and the combined efforts of two city councils were similar to those at Ballarat North where four councils co-operated to plant the *Ballarat North Sailors and Soldiers Avenue of Honour* through their suburban municipal divides. The reports in the *Age* also highlight the role of the media in promoting the concept of these Honour Avenues. On the same page as the Caulfield/Brighton article, the paper reports on the planting of Avenues of Honour at Benalla, Buangor, Daylesford, Hobart and the proposal to follow suit at Hampton as well as the memorial tree plantings at St Arnaud.[xvi]

Michael Taffe, Historian and Author

Australians were left pondering their place after WW1 in regards to Empire and self- identity. There was confusion and deep questioning, so that with the onset of World War II a little over twenty years later, the response was more measured in relation to Empire and defence. These memorial avenues to the Great War remain a unique form of war memorial in that Australia planted hundreds of them, in what amounted to a movement that was never again repeated in the same degree of intensity and numbers. This quite apart from the individuality of memorialisation already mentioned.

Recent research raises doubts in the commonly held belief that the majority of plantings were exotic trees as opposed to natives. The problem with Australian natives is that they have not stood out in the landscape as have the exotics and have therefore been overlooked. At Danyo the truncated, coppiced Eucalypts blend with the Mallee surrounds to the highway traffic. Many natives don't last, the Eucalypts at the Kiewa Valley Avenue of Honour have all gone yet some of their companion walnut trees survive. Similarly at Cowangie in the Mallee, the Eucalypts have gone yet the peppercorns, *Schinus arcirca* remain, some with their memorial crosses and plaques. One of the most beautiful avenue of natives is probably the avenue of Kurrajongs *Brachichiton populneus*, at Nathalia while the oddest, the Moreton Bay figs, *Ficus macrophylla* at Drik Drik..

Ken Inglis comments in his landmark history *Sacred Places: War Memorials in the Australian Landscape* 1998 that 'monuments missing from the landscape can be as significant as those erected'.[xvii] Even Inglis clearly failed to see the full meaning embodied in these avenues. In his wonderful study of over 4000 monuments he refers to four avenues only, and then as 'a novelty'. Far from being a novelty they are numerically and socially far more significant as memorials than previously credited and they must be seen as living – not stone or carvings or anything else that is petrified and dead.

Not only are these avenues and trees monuments to the volunteers who went to WW1 and to those who died, but more than any other form of memorialisation they stand as monuments to those who planted and nurtured them individually and communally. They link the living community at home to their fellow community members serving at the front and now remain a living link between past and present generations. In some ways they form a more complete record than that of the AWM or RSL by including Australians who enlisted in overseas armies, to defend the Empire and who were often rejected by our own services. Highlighting this bureaucratic metaphorical blindness, the official survey of Australian Memorial Avenues in 1920 accounted for only 121.[xviii] Victoria alone had more than two hundred at that time.

When Trooper David Pearce was killed in Afghanistan in 2007 his body was repatriated and this has been repeated ever since right up to last week. Families have their loved one's remains to bury and a focal point for their ongoing grief at a graveside supported by loved ones, friends and the wider community. In all such processes, communities from the nuclear family to the nation state are able to express feelings and emotions and have a focus for all they experienced. This is far from the 1918 experience.

Largely because of the fulfilment of our needs following such deaths we, in this day and age, fail to appreciate all that is represented in the Avenues of Honour planted throughout Australia during and immediately after WWI. Through these memorials those on the home front could express themselves in a way that later built monuments never provided for. Many people were empowered to continue on with life while still grieving separation and or death. Despite this, as recently as October 2007 the *Age* cited 'those who still live with the memory of their parents' grief and unanswered questions and conflicting emotions.[xix]

Michael Taffe, Historian and Author

At the planting of one 1918 suburban avenue in Melbourne this was written "The attachment of sacredness to old trees lingered long after the primitive religions died.' And speaking further of the trees in this avenue that has long given way to eight lanes of traffic the writer concluded that,

> "some would often gather, and look up to the bronze plaque, and read the name and record respectfully; a tree wherein the birds would sing his praises from season to season down the long avenue of time."

Following the research of the past six years we know that there were over two hundred of these avenues planted, most remaining in whole or part. A similar picture of lost avenues, lost memory, lost heritage and lost identity is being discovered in other states. Although the majority of the avenues consisted of exotic plantings, we now know that at least one third were planted with native species many of which proved unsafe and were removed. Many had a shorter life than other species and have disappeared due to natural causes and many are simply 'invisible' to us because of their place in both the natural landscape and the landscape in our mind.

Happily today another of Ballarat's 'Lost Avenues' the Ballarat Orphanage Avenue of Honour, is being formerly recognized with a re-discovery dedication ceremony. The opening address will be given by Major General Haddad. With this event one hour from now I invite you all to become actively aware of our avenues as a heritage roadside landscape with a place in our personal heritage, memory and identity as Australians.

NOTES: -

[1] W. H. Moule, "Appreciation", *Avenues of Honour: Public Demonstration*. Brighton: Brighton City Council, 1918.
[1] D. Powell, "Remembrance Day: Memories and Values in Australia since 1918.," *Victorian Historical Journal* 75, no. 2 (2004). p.165.
[1] M. Ellis, *People and Plants: A History of Gardening in Victoria* (Fish Creek: Mary Ellis, 2003).
[1] J. Haddow, "Avenues of Honour in Victoria." (Master of Landscape Architecture, University of Melbourne, 1987). p.95.
[1] M. Taffe, "Victoria's Avenues of Honour to the Great War Lost to the Landscape," (Bachelor of Arts Hons . University of Melbourne, 2006). p. 57-59.
[1] Argus, 1918, p.
[1] Lucas Scrap book, Ballarat Historical Park Association.
[1] Taffe family archive.
[1] J. Haddow, "Avenues of Honour in Victoria,"(Master of Landscape Architecture. University of Melbourne, 1987). p.83.,
[1] *American Forests*, Spring 2003.
[1] J.Dargavel, 'Trees age and memories change in the Avenues of Honour and Remembrance.' Paper presented at the Fourth National Conference of Australia's Forest History, Canberra. 1999. p. 10.
[1] Taffe. "Victoria's Avenues of Honour to the Great War Lost to the Landscape," p.29.
[1] *Ballarat Courier*, 17 May 1917.
[1] Ibid.
[1] *Ovens and Murray Advertiser*, 25 July 1917.
[1] "In the Country", *Age*, 5 August 1918, p. 7
[1] Inglis, *Sacred Places: War Memorials in the Australian Landscape.* p. 21.
[1] Haddow, "Avenues of Honour in Victoria," p.95.
[1] 'The Dargo 10, a sacrifice forged on Flanders fields', *The Sunday Age*, Melbourne, October 14, 2007. p. 14.

7 _____Richard Barley, CEO, Open Gardens Australia

THE DEVELOPMENT OF BOTANIC GARDENS IN REGIONAL VICTORIA

Abstract

Melbourne is known internationally for its historic Royal Botanic Gardens (originally known as Melbourne Botanic Garden). Established in 1846 on its current site, its development was strongly influenced by the two key figures: Ferdinand Mueller (later Baron von Mueller), and the master landscaper William Guilfoyle. The young state of Victoria however also quickly gained many more botanic gardens, boasting a staggering 21 by 1870. In that period, other states and territories generally had only one or two apiece. It is likely that there were several reasons for the proliferation of botanic gardens in regional Victoria – including the zeal for scientific discovery and display of the world's botanical (and zoological) curiosities in the nineteenth century, the regional towns' own aspirations for development of the perceived elements of civilized society,

the influence of Mueller himself (in promoting the aims and ideals of botanic gardens, in physical supply of plant stock for the public gardens and associated plant acclimatization studies), and the inflow of wealth to the regional communities through the discovery of gold and pastoral prosperity. The majority of regional botanic gardens were established in the central goldfields area and the south-west of the state, with fewer gardens in the east and north. The result is that 21st century Victoria has inherited a legacy of botanical diversity and garden wealth, which in spite of the erosive nature of developmental incursions through the 1950's, 60's and 70's (such as caravan parks, car parks and sporting facilities) still provides a fascinating and rich cultural landscape for our current community.

8 _____Timothy Hubbard, Heritage Architect & Planner, and Annabel Neylon, Horticulturalist & Heritage Consultant

GARDENS OF A GOLDEN ERA
Assessing the significance of cultural landscapes

Introduction

Our European sensibility towards landscape in Australia has deep roots in the Arts and Sciences over the last four centuries, at least. Today, there is an increasing awareness of an Indigenous sensibility which is paralleled by a concern for the environment.[39] And, for twenty-five years at least, there has been awareness in Australia that significant landscapes of all types should be identified, protected, managed and interpreted. In this paper we will focus on the European sensibility; largely because the division of the three types of landscape has led to a separation of legislative frameworks. We will focus on the state of play in Victoria which, along with New South Wales, arguably has the most advanced legislative framework for identifying significant landscapes.

As a word, 'landscape' dates from about 1600 and was adopted from Dutch as a painter's term. Landscape painting and garden design were, for the most part, grand and formal for the next 150 years. In the early eighteenth century several great philosophical debates produced the theory of Associationism, the aesthetics of the Sublime and the Beautiful and, finally, the picturesque aesthetic at the end of the eighteenth century. A new informality emerges in the later eighteenth century, first in landscape painting and garden design and then in architecture. The English taste in landscape gardening was the international fashion. It certainly swept across the Australian colonies after its introduction by such curious characters as Thomas Shepherd, William Archer, Edward Latrobe Bateman and William Guilfoyle. Guilfoyle's design for Mawallok is one of our case studies.

By the early nineteenth century Romanticism imbued everything, balanced by plenty of earnest scientific endeavour. By the mid-nineteenth century, following the Battle of the Styles, the Picturesque aesthetic had triumphed and it still affects us today. By the late nineteenth century the beginnings of heritage conservation had emerged. We cannot look at and consider a landscape today without reference to this past. Australian landscape painting, drawing and photography may now be abstracted, informed by an Indigenous sensibility and a concern for the environmental but it still has roots in the Grand Tour and British conservation efforts dating from the late nineteenth and early twentieth century.

Towards a Definition of 'Cultural Landscapes'

In 1992 the World Heritage Convention became the first international legal instrument to recognise and protect cultural landscapes.[40] The World Heritage Committee acknowledges that cultural landscapes are cultural properties and represent the 'combined works of nature and of man'. The Convention states that:

> They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal.[41]

[39] See, for example, Deborah Bird Rose, *Nourishing Terrains: Australian Aboriginal Views of Landscape and Wilderness*, Australian Heritage Commission, Canberra, 1996 and Bill Gammage, *The Biggest Estate on Earth, How Aborigines Made Australia*, Allen and Unwin, 2011.

[40] It was based on the 1972 'Convention concerning the Protection of the World Cultural and Natural Heritage' developed from the merging of two separate movements: the first focusing on the preservation of cultural sites, and the other dealing with the conservation of nature.

[41] Clause 47, Annex 3, *Operational Guidelines for the Implementation of the World Heritage Convention,* UNESCO 2012.

Timothy Hubbard, Heritage Architect & Planner, and Annabel Neylon, Horticulturalist & Heritage Consultant

According to the Committee, cultural landscapes fall into three main categories:

1. Clearly defined landscape designed and created intentionally by man.
2. Organically evolved landscape, either relict, i.e. fossilized, or continuing.
3. Associative cultural landscape.

International research and discussion has continued since 1992.[xx] There are now eighty-six properties on the World Heritage List included as cultural landscapes. Uluru-Kata Tjuta National Park is the only Australian property although the Carlton Gardens are included in the World Heritage Listing of the Royal Exhibition Building, Melbourne. Much of the research and discussion is through the ICOMOS International Scientific Committee on Cultural Landscapes (ISCCL).

The expanded definition of cultural landscapes has been adopted generally in Australian theory and practice.

The Heritage Victoria Landscape Assessment Guidelines (2009) are accepted as the standard guidelines for the assessment of cultural landscape within Victoria. They are are based on current assessment practices developed by Heritage Victoria, practices undertaken by other relevant bodies in Australia and beyond, and respond to precedents wherever these are available and are relevant.

The terms of definition and reference of the Guidelines (2009) closely follow those of the Convention:

In Victoria, which closely follows the UNESCO WHC model, a cultural landscape or culturally significant landscape is defined as “a geographical area that reflects the interaction between humans and the natural environment.”

All landscapes show a human-environment interaction. Those protected by the *Planning and Environment Act* 1997 or the *Heritage Act* 1995 through planning schemes or the Victorian Heritage Register are those landscapes which are predominantly significant as typically post-European settlement places and which meet certain criteria and thresholds.

Returning to those three cultural landscape categories, we would like to explore the Victorian model a little bit further:

The first type: Clearly defined landscape designed and created intentionally by man.
HV — Guidelines states “Designed landscapes (includes trees, avenues, parks, gardens, cemeteries, plazas, etc., and places constructed for aesthetic reasons), often designed or implemented at a distinct point or points in time.
Examples: Botanic, municipal, and other public Gardens, Cemeteries, homestead and other residential gardens etc.

The second type: Organically evolved landscape.
HV — Victorian guidelines “Organically evolved landscape, developed over time often through incremental changes brought about by patterns of use. This will typically include designed landscape elements
Examples: The Stony Rises, areas of farm land showing the impact of agricultural practices and the consequences

The third type: Associative cultural landscape.
HV — Victorian guidelines "Associative landscape, primarily based on powerful religious, artistic or cultural associations of the place and can be in relation to natural elements as well as more typically associated material cultural evidence, i.e. often intangible (and can be largely 'natural', apparently unmodified landscapes with associated cultural values). Documents relating to association are especially important.
Examples: Eureka Stockade, Mount Elephant scenic reserve, Nigretta Falls Reserve (Wannon River)

Most Recent Australian Work
There is now a substantial body of work across the country, sometimes overlapping, concerning Indigenous, natural and cultural, that is European landscapes.

Australians have contributed much towards a better understanding of significant cultural landscapes. The Australian Garden History Society has been a major supporter. There is now a substantial body of work created by academics, public servants and professionals in the field. Many of them are members of the AGHS.

Joy McCann sums up the status quo in her article in *The Oxford Companion to Australian Gardens* and concludes that "Conserving them may involve retaining significant features or associations within a dynamic physical and social setting, and balancing competing land uses to ensure that the landscape and its history continue to enrich or inform the lives of present and future communities".[xxi]

Australia ICOMOS is working well at both a national and international level promoting cultural landscapes. Many Australians are active members of the ICOMOS International Scientific Committees on Cultural Landscapes and Cultural Routes. These international committees will be meeting in Canberra in October 2013 in association with the ICOMOS conference celebrating the centenary of Canberra and just after the AGHS conference in Armidale.

The most recent research and publication is by Ken Taylor and Jane Lennon who co-edited *Managing cultural landscapes*, 2012 — so recent that we haven't been able to include it as an image in this PowerPoint presentation.

But before exploring the assessment of significant landscapes in Australia, with a particular emphasis on the European variety in Victoria, we need to understand how they came to be appreciated and identified.

Early British Stirrings
The first stirrings of concern for the British countryside were in the later nineteenth century.[xxii] Various new societies expressed sufficient concern for rights-of-way, birds, 'ancient' buildings and landscapes to trigger legislative controls in the early twentieth century. The idea of a National Trust was born in England in 1884 to save a garden. It was established in 1895 (1931 in Scotland) and its first nature reserve was purchased in 1899. It is now one of the largest landowners in Britain.[xxiii] As well as managing significant and sometimes vast landscapes, it is also an advocate for conservation.[xxiv] In 1926 Sir Patrick Abercrombie published *The Preservation of Rural England* which led to the establishment of what is now called the Campaign to Protect Rural England. In 1929 Clough Williams-Ellis published his book, *England and the Octopus*, a plea for better protection of the British countryside against metropolitan sprawl through planning. The *Town and Country Planning Act* 1947 and the *National Parks and Access to the Countryside Act* 1949 provided the first substantial legislative framework for identifying and protecting significant landscapes. William George Hoskins published his influential book *The Making of the English Landscape* in 1955 and went on to write many more. In 1957, England's first

motorway was lowered into a cutting to avoid spoiling the heart of Charnwood Forest in Leicestershire. By the 1960s there were tighter controls on advertising hoardings. Laws to protect hedgerows finally came into force in 1997. In 2005 English Heritage published *Wind Energy and the Historic Environment,* which 'presents an approach for evaluating the direct and indirect impact of both onshore and offshore wind turbine projects on the historic environment, covering historical sites, setting and visual impact". All these British steps in the assessment of significant landscapes have parallels at least somewhere in Australia.

Early Australian Stirrings

One of the first and best informed people to appreciate the Australian landscape must have been Major Sir Thomas Mitchell, Surveyor General of NSW. His famous account of his three major explorations in the early nineteenth century is filled with references to the Sublime and the Beautiful and imbued with the Picturesque aesthetic.[xxv] Julia Horne, in her book *The Pursuit of Wonder*, has explored how Australians in the nineteenth century went into the bush in NSW, Victoria, Queensland and Tasmania to discover nature and marvel at it.[xxvi] Landscape painting, drawing and photography disseminated the imagery of a vast continent which was supported by a rich literature at all cultural levels. James Bonwick extolled the beauties and scientific interest of Tower Hill, Victoria after he passed by it in 1856 and Eugene von Guérard painted it soon after for the squatter, James Dawson. On the strength of public opinion, Tower Hill became Victoria's first national park in 1892 and a game reserve in 1961 when its long term conservation really started, based on von Guérard's painting.[xxvii]

Brigid Hains, noting that the evaluation of cultural landscapes has become much broader and more eclectic in the past two decades, sums up the last sixty years thus:

> Early attempts at landscape conservation, particularly by the country's National Trusts in the 1960s and 1970s, tended to analyse the landscape in picturesque terms, rating rural scenery as though it were a three-dimensional painting. The best were orderly, yet organic, full of pleasing sweeping lines, a harmonious continuum of the wild and the cultivated. This approach reached back to the ideal of the Picturesque landscapes of the eighteenth century—an ideal that has indeed shaped some of our most important public and private gardens. Conservation in Australia via the Heritage movement has ranged from radical action symbolised by the Green Bans, to more measured registers and legislative frameworks, such as those of the Australian Heritage Commission.[xxviii]

Victorian Heritage Planning Controls

As it always seems to be, town planning was politically contentious in the late 1960s and early 1970s when the first heritage legislation was passed under Victoria's progressive Hamer Government. This was largely triggered by the dramatic loss of significant buildings, both public and private, but also addressed Indigenous, natural and archaeological concerns.[xxix] Many local groups sprung up campaigning against the losses. The first was the East Melbourne Group which fought to save the elms in the suburb's wide streets. The National Trust of Australia (Vic), founded in the mid-1950s, was a driving force behind the legislation and it turned its attention to the identification of landscapes. The Trust's 'A' List and most of the 'B' list became the basis of what is now the Victorian Heritage Register set up under the *Historic Buildings Preservation Act* 1976. Cultural landscapes were not identified in the process, not even the gardens associated with grand homesteads.

One serious brake impeded this progress. The spectre of compensation for a decrease in listed property values threatened. (Sir) James Gobbo QC prepared a report for the Government and gave some credence to the claim but balanced it with the potential for a betterment tax. The Melbourne and

Metropolitan Board of Works, the planning authority for the metropolitan Melbourne at the time, declined to act unless indemnified by councils against possible claims. The new Cain Government legislated to rule out compensation in 1982. Work done earlier on cultural landscapes by the Mornington, Cranbourne and the Dandenong Ranges municipalities was brought forward. Area-based heritage studies went ahead in central Melbourne and the inner suburbs. The City of Melbourne and the City of Fitzroy were among the first to act. Several country towns declared 'notable' by the Trust were also given planning protection for their heritage assets. The famous 1975 report on Port Fairy by Cox, Tanner Pty Ltd was the first, soon followed by reports on Maldon, Beechworth and Yackandandah. The Cox Tanner report acknowledged the importance of Port Fairy's setting and highlighted the importance of the views out of the town across the Moyne River flood plain and the sand dunes surrounding the town.

Also in the mid 1970s, the Hamer Government issued 'Statements of Planning Policy' for the Macedon Ranges, Yarra Valley and Mornington Peninsula. These recognised the mixed values of what would now be called cultural landscapes and the problems they faced. Giving his opening address to a seminar on the Mount in 1976, the Minister for Planning promoted the Macedon Ranges Policy and said, using terms which reach back to the late 18th century:

> I used to come here for weekends and one of my great pleasures, one I'll never forget, was to ride a horse up to the lookout and back on a day when the pines were just settling to snow. It was beautiful. And it was similarly beautiful this morning with Athol Guy. It was pleasant to meet him at the cock-crowing hour before the fog had lifted, and by about nine o'clock we had the feeling we were coming to the end of a long car trial. Mount Macedon was beautiful this morning - just beautiful.[xxx]

The policies were formalised by inclusion in the appropriate planning schemes. Notwithstanding changes in the controls when the *Planning and Environment Act* 1987 replaced the *Town and Country Planning Act* 1961, the statements have more or less endured.[xxxi] The Planning Panel which considered amendment C21 of the Macedon Ranges Planning Scheme in 2004 acknowledged the importance of the policy which covered 80% of the Shire.[xxxii] It is now included in the Planning Scheme at Clause 22.1 with its history referred to directly.

In 1982, the Yarra Valley and Dandenong Ranges Regional Strategy Plan prescribed a regime of strict subdivision and development policies and controls to protect the rural landscape, environmental values and agricultural capability of the area. A key input to the strategy Plan was the recognition of scenic rural landscapes that had been classified and recorded by the National Trust.

So, with that overview, let's go back to the beginning and look more closely at how far we have come.

Firstly the National Trust was a strong advocate for the identification and protection of cultural landscapes.

Secondly the *Town and Country Planning Act* 1961 recognised 'Areas of natural beauty or interest or of importance'. However, municipal councils had only limited tools to protect significant landscapes as we can today. Rather they used a variety of techniques to protect important places, including the limited use of specific zones, policy and 'statements of planning policy'. They were relatively blunt instruments with little theory and less substantiation notwithstanding some strong public campaigning.

Thirdly, urban conservation areas could be declared. Urban conservation areas introduced in 1983 by Amendment 224 to the Melbourne and Metropolitan Planning Scheme (MMPS) were the first overlays to protect "historic" heritage areas and they could include landscapes.
The great change came with the new *Heritage Act* 1995 which introduced the notion of cultural landscapes as a heritage place. The new Heritage Council soon established a Cultural Landscape Advisory Committee which included representation by the Australian Garden History Society.

Then the Planning and Environment Act 1987 was changed to introduce 'Heritage Overlays' and 'Significant Landscape Overlays', as formal planning tools to protect and manage heritage places which are cultural landscapes and other types of landscape. These were rolled out progressively between 1997 and 2000

Assessing Cultural Landscapes

Values

Cultural significance in landscapes may be aesthetic, archaeological, architectural (for structures in the landscape), historical, scientific or social.

***Category or Type* (the WHC and HV definitions)**

Important to determine the type of landscape you are assessing, as it assists in considering exactly what is significant and why it is significant and how the fabric is expressing important values of place.

Boundaries

Boundaries determine the practical limits of the landscape site and its heritage protection. For practical purposes, a delimiting 'line' must be able to be drawn around the area being assessed. Some places are easy to define a boundary — it has a naturally occurring boundary created by a ridgeline, a waterbody, perhaps a clearly defined planting or wall, or even a clear title boundary. Some places may have useful historical boundaries which can be obtained from historical documentation, and are still relevant.

Others are not so easily defined. Particularly when undertaking assessments of cultural landscapes in rural areas. In particular sites, the boundary may extend to include an area below ground (mining sites for instance) or effectively and sometimes intentionally limitless boundaries.

In establishing the boundary, it is usual to consider the views and vistas which form part of the experience of the landscape. Internal views within the boundaries of the place and external views beyond the boundaries should be considered. If these are included, they must be clearly articulated in the justification for protection, be able to be mapped and be practicable.

Criteria

The criteria for assessment are used to prepare a statement of significance, a succinct expression of what vegetation is significant, how it is significant and why. It should be written with reference to the assessment criteria and based on the survey results and, if relevant, reliable secondary data. It should not restate the survey or documentary evidence but be cross-referenced to it. The level of significance will enable the development of appropriate policies.

The Significant Landscape Overlay is assessed differently. It is currently assessed one dimensionally, only for its aesthetic value. The function of an SLO is to conserve the character of a significant landscape when vegetation is primarily of aesthetic or visual important in the broader landscape and contributes to its character.

Timothy Hubbard, Heritage Architect & Planner, and Annabel Neylon, Horticulturalist & Heritage Consultant

Comparative analysis
Comparison of one place with another of similar features and values allows the level of significance to be determined, ranging from national to State, to regional or local significance, although in Victoria, only local or state significance is recognised.

So what is protected? AGHS NMC Research 2011 & 2012
We have just completed a national review of the existing inventories of Historic Gardens, Trees and Landscapes for the NMC of the AGHS. Our work was closely based on a pilot project in Queensland completed by Catherine Brouwer and Nissan Associates.

Specific Findings of AGHS NMC Research 2012
Our report found that existing statutory and non-statutory lists across the states and territories of Australia could be used by AGHS as the basis of an adequate list of significant places. There is, in fact, a very large amount of diverse information available.

However, the report also found that there are various limitations and constraints, which are discussed further in the various state and territory sections.

In regard to the further work which must be done to ensure that the list is adequate for AGHS purposes, this report returns to the key issue. The AGHS must determine exactly what the purpose of the list is.

General Findings

- Existing listings are quite disparate as to age, scope, quality and quantity of information, sophistication of process, etc.
- Best existing electronic database appears to be HERMES, owned and managed by Heritage Victoria
- HERMES is available for use under licence with substantial benefits for using it
- There are other databases owned and managed by other state and municipal governments
- Nationally, there is an increasing combination by municipalities of databases and GPS/cadastral information, a facility not available through HERMES
- Beyond existing database listings, there is a very large amount of information about significant gardens, trees and cultural landscapes
- There is almost complete uniformity for heritage themes, criteria and thresholds across Australia under the HERCON system
- There is good but not perfect or universal agreement as to types of gardens and there is some agreement as to styles.

How do existing planning tools complement each other?
The planning scheme provides a range of tools aimed at protecting vegetation and or landscape which has significant values – these are discussed in more detail in the online paper.

The relevant tools are really the overlays, although zones can be used, and as we have discussed previously, were an early tool used for protection of significant landscapes.

The Victorian Planning Provisions contain four overlays that can be used to protect and manage vegetation in urban areas; the Vegetation Protection Overlay (VPO), the Environmental Significance Overlay (ESO), the Significant Landscape Overlay (SLO) and the Heritage Overlay (HO). Each overlay includes a schedule that is used to specify how the overlay applies to land within a particular municipality.

Choosing the correct overlay or combination of complementary overlays is important and the principles used should be applied consistently throughout the planning scheme. The following questions should be asked when choosing an overlay to protect vegetation:

1. What is to be protected *(individual or group of trees, area of habitat, etc.)*?

2. Why is it being protected *(heritage, scientific, cultural, landscape or habitat value)*?

3. How should it be protected *(protection of the root zone, requirements about buildings and works, subdivision)*?

4. What other requirements apply to the land and are there any gaps *(zone provisions, other overlays, and native vegetation provisions)*?

The overlay selected should accurately reflect the identified objectives. In other words, there should be transparency in the application of planning policy and requirements. The online paper discusses the use of appropriate overlays in further detail.

Golden Plains – SLO2

SLOs now support heritage overlays in the Southern Grampians, Glenelg and Golden Plains Planning Schemes. This slide shows a planning scheme map of the Russell's Bridge Significant Landscape area surrounding two heritage places protected under HOs. The Russell's Bridge area represents a significant landscape, with notable topographic features including the Moorabool River valley, ridgelines and river plain

- HO59 Former Clyde Flour Mill and Managers Residence
- HO150 Russell's Bridge State School No. 530 (former)

The Problems We Face

- Are the current planning tools adequate?
- Do we need a national database of significant gardens, trees and landscapes?
- What thresholds should be set for levels of significance?
- There is still much to decide about types and styles of historic gardens.
- It can be very difficult to establish workable boundaries for landscapes.
- Some landscapes could include large numbers of owners.
- Overlays in Victoria (and their interstate equivalents) which control development are not planning zones which control land use.
- Present planning law requires formal and usually detailed consultation with property owners including the right to object to if not reject identification.
- The continuing problem siting wind farms (ABC Radio National comments, *The Science Show*, Saturday 20 Oct 2012. Only rich people with views and neurotics with hypochondria!)

[1] http://whc.unesco.org/en/culturallandscape#1 , accessed 20/10/2012, provides an excellent list of meetings, references and other useful links as well as a list of places on the World Heritage List which include cultural landscapes.
[1] Joy McCann, 'Cultural Landscapes', *The Oxford Companion to Australian Gardens,* pp. 168-9.
[1] John Ratcliffe, *An Introduction to Town and Country Planning*, 1974, p. 217ff.
[1] The National Trust owns about one third of the land in Great Britain including vast stretches of coastline under its 'Enterprise Neptune' campaign. The Forestry Commission, established in 1919 'to rectify the appalling rape of forest during the First World War' is the largest landowner by the later twentieth century.
[1] The National Trust, *Rooted in History, Studies in Garden Conservation*, The National Trust Enterprises Ltd, London, 2001.
[1] Mitchell, T L, *Three Expeditions into the Interior of Eastern Australia*, Vols. 1 & 2, first published in 1839, facsimile of the second revised ed. published, Eagle Press, Maryborough, Vic., 1996.

[1] Julia Horne, 'How Mountains Became Sublime' and 'How Ferns became Beautiful', *The Pursuit of Wonder*, The Miegunyah Press, Carlton, 2005.

[1] http://parkweb.vic.gov.au/__data/assets/pdf_file/0007/315547/Heritage-story-Tower-Hill-Reserve-history-and-heritage.pdf, accessed 20/10/2012.

[1] Brigid Hains, 'Conservation', *The Oxford Companion to Australian Gardens,* pp. 157-8.

[1] These were the *Archaeological and Aboriginal Relics Preservation Act*, the *Victoria Conservation Trust Act*, the *Environment Protection Authority Act*, the *Historic Shipwrecks Act*, the *Historic Buildings Preservation Act*, and the *Government Buildings Act*. For a simple timeline from 1921 to 1991, see McLoughlin, John Brian, *Shaping Melbourne's Future?: Town Planning, the State and Civil Society*.

[1] Speech by the Hon. G P Hayes, MP Minister for Planning, 1st May 1976, Braemar College, Woodend; http://www.mrra.asn.au/archive1/arc1-snts/Keep%20Macedon%20Ranges%20Rural/Attachments/Hayes%20Speech%20SPP8.pdf accessed 25/10/2012.

[1] See a table of the changes prepared by the Macedon Ranges Residents Association at http://www.mrra.asn.au/archive1/arc1-snts/AA%20Features/2006%20SP%20Presentation/Protection%20Comparison%20Chart.htm, accessed 25/10/2012.

[1] Ball, Rowland, Chair, 'Macedon Ranges Planning Scheme, Amendment C21, Rural Areas Review, Report of a Panel Pursuant to Sections 153 and 155 of the Act', Planning Panels Victoria, Melbourne, 2004.

9 _____Ursula de Jong, Senior Lecturer Deakin University. Member of the Heritage Council of Victoria

FROM GARDENS TO LANDSCAPES: personal and professional reflections

This short paper is in three parts
1. an autobiographical beginning: the evolution from the micro to the macro
2. from registered trees and gardens to understanding holistic cultural landscapes
3. Landscape Assessment Guidelines for cultural heritage significance - a preview.

1. An autobiographical beginning

Oak Park … 1950 … a new Melbourne suburban subdivision between Essendon and Broadmeadows … brand new two bedroom weather board houses on bare quarter acre blocks with little or no infrastructure. I remember the long hot dry summers when the black volcanic earth cracked open and threatened to swallow you; the wet winters when the unmade roads turned into a quagmire, the creeks that reformed assuming their natural courses despite building works, and the white faced blue herons returning to the temporary wetland-suburbs.

I had a wonderful innocent childhood growing up in the paddocks of Oak Park (what a misnomer!) on the vast basalt plains to the north-west of Melbourne - totally oblivious to the struggles of my immigrant parents. I grew up with 'chooks', my very own strawberry patch, time to daydream or escape up my huge walnut tree, which Dad had planted in our front garden. It was Dad who allowed me to share his love of growing things, and I can still picture the substantive orchard, the vegetable garden and the loganberry patch in the wildest corner of the enormous backyard. Endless adventures were possible! I realise now that it was here where my love of growing things, of 'gardening', of connecting to the earth, of observing the seasons, of appreciating the little things was nurtured. I saw the hard work, I saw and harvested and ate the rewards!

Fifty years later in 2000 – the Commonwealth Government wished to divest itself of defence land at Portsea, Point Nepean. Point Nepean is a tiny sliver of land at the end of the Mornington Peninsula, Victoria, Australia.

I worked with the community to 'save Point Nepean'. My innate understanding of place enabled me to work with the community and begin to articulate what it meant to so many disparate people. We tried to define what this place meant to us all – as individuals and as a broad community. I witnessed the concept 'sense of place' uniting a diverse community and becoming a real estate slogan. One of the biggest issues we – the community – grappled with was how to protect the significant natural values at Point Nepean and simultaneously support creative adaptive re-use to create an exciting vibrant place into the future.



Ursula de Jong, Senior Lecturer Deakin University. Member of the Heritage Council of Victoria

The draft community plan (2006) stated:
"The future vision for the Portsea Defence site is to create a public park managed as a whole and integrated with the Point Nepean coastal and marine environment to enhance its special sense of place. … The future use should recognise the diverse relationships of people with this place over time."

In 2006 the Commonwealth divided the defence land into two parcels: the larger parcel encompassing much of the former Quarantine Station to be administered by the Point Nepean Community Trust (appointed by and answerable to the Commonwealth), and a smaller parcel given to the Mornington Peninsula Shire (MPS) for use as a public park. Thus Point Nepean became governed under three jurisdictions: Commonwealth, State and Municipal. It was not until December 2009 that the Commonwealth land was handed over to the State of Victoria and Point Nepean National Park (PNNP) was formed, with the Police Point Shire Park (PPSP) adjacent. Significant issues surrounding natural and cultural (indigenous and historic) heritage remain as the community, Parks Victoria and the MPS work towards a holistic understanding, interpretation and development of Point Nepean.

2. From registered trees and gardens to understanding holistic cultural landscapes

The Victorian Heritage Database search for all gardens produced 40 pages of listings. Botanic gardens on their own, result in 12 pages of listings. There are thousands of significant trees on the National Trust Register. There are 36 pages of cultural landscapes.

2.1 Significant Tree Register

The National Trust's Victorian Register of Significant Trees recognises individual trees, avenues and important stands as valuable community assets that must be preserved. The Register aims to raise awareness by assisting local government and the wider community to identify and appreciate significant trees, as well as secure protection against activities such as poor management practices, inappropriate planning and development. The Register is a valuable source of information on many of the rarest and finest trees in the state. It contains a mixture of native and exotic trees, planted and remnants. The London Plane, Moreton Bay Fig, Cedar, Cypress, Eucalypt and Olive are just some of tree species listed. The largest single entry is for the Ballarat Avenue of Honour which is made up of approximately 3700 poplar and elm trees.

Ballarat Avenue of Honour

2.2 DPCD South West Landscape Assessment Study

The department is undertaking a Landscape Assessment Study of south-west Victoria. The study will assess the visual character and significance of the landscape leading to the preparation of planning scheme policy and guidance to ensure its protection and management into the future.

The south-west region of Victoria has a wide range of landscape types from the volcanic plains and cones that dominate much of the area, to the Great Dividing Range in the north, and the Grampians in the central west. Understanding, mapping and describing landscape character and significance is an important component of regional planning and supporting appropriate development, economic growth and investment. The study will inform the development of a number of regional growth plans currently being undertaken by the department.

The NTAV has been an advocate for landscape protection in Victoria for many years. The NTAV maintains a register of classified landscapes, and while these provide no statutory protection, they have been used to identify landscapes for designation and protection. The NTAV response to the DPCD study is an important piece of work by a number of volunteers who have critically scrutinised the material, documented new and further evidence and research, and questioned a number of underlying assumptions (the submission team included Robin Crocker, Juliet Bird, Bernie Joyce, Rob Youl, Gordon Stokes, Jennifer Bantow, Tim Hubbard, June Driscoll and Sue Hughes).

The NTAV made the significant observation that this project is at the forefront of research about and documentation of landscapes and therefore should be pushing the boundaries to gain better understanding. Some landscapes are not yet included on the NTAV register, while others require urgent updating as information comes to hand and landscapes change and adapt to development pressures.

The NTAV submission's section on Significant Landscape Overlays (SLOs) makes the point that SLOs 'identify landscape values and objectives to be achieved, as well as schedule provisions to encourage appropriate management'. Further is argues that 'while different tenures may be assessed differently, the landscape values remain the same', thus SLOs should include both private and public land.

The NTAV submission also highlights the fact that 'SLOs vary in their definitions, scale, application and relevance to actual landscapes', and that it is critical to use the appropriate planning tool(s) as well as strengthening 'existing local planning scheme SLOs to manage the landscape into the future'.

Questions were also raised in relation to boundaries; landscape size; landscape character assessment; the relationship between character units and significance; and sources of significance assessment. It was recommended that generic or generalised discussions should be avoided. A holistic approach to landscapes should encompass the specifics and detail of each distinct area/ parcel while acknowledging broader relationships.

Ursula de Jong, Senior Lecturer Deakin University. Member of the Heritage Council of Victoria

In my research on place I have been inspired by a number of scholars and practitioners. They challenge us to think about place in different ways, to consider landscape holistically and understand different cultural frameworks. Indigenous perspectives should be embedded in the study. Perhaps we should also define "values" in relation to landscape as being not just people values, but place values that are inherent in the landscape itself.

The landscape architect, Anne Whiston Spirn in *The Language of Landscape*, Yale University Press, New Haven/London, 1998, pp. 25-26 argues that 'The language of landscape prompts us to perceive and shape the landscape *whole*. Reading and speaking it fluently is a way to recognize the dialogues ongoing in a place, to appreciate other speakers' stories, to distinguish enduring dialogues from ephemeral ones and to join the conversation. The language of landscape reminds us that nothing stays the same, that catastrophic shifts and cumulative changes shape the present. It permits us to experience pasts we cannot otherwise experience, to anticipate the possible, to envision, choose, and shape the future.'

Harriet Edquist, in H. Edquist & V. Bird [eds], *The Culture of Landscape Architecture*, Edge Publishing Committee, Melbourne, 1994, introduction, p. 1, argues that in Victoria one sees an aspect of the Australian landscape '... marked and scarred by historical and continuing contestations of competing "rights", by ancient song lines and Aboriginal practices of land ownership and by waves of migration that have inscribed upon it intricate patterns of occupation...'

From an Aboriginal perspective, Deborah Bird Rose, in *Nourishing Terrains: Australian Aboriginal Views of Landscape and Wilderness*, Australian Heritage Commission, Canberra, 1996, pp. 35, 40 and 42, explains that 'the Australian continent is crisscrossed with the tracks of the Dreamings: waking, slithering, crawling, flying, chasing, hunting, weeping, dying, giving birth. … making relationships … These multi faceted relationships are holistic. … [I]n the context of nourishing terrains … holistic systems are open to accommodation of that which is new … Aboriginal systems of philosophy and ecology accommodate the new according to the logic of country.'

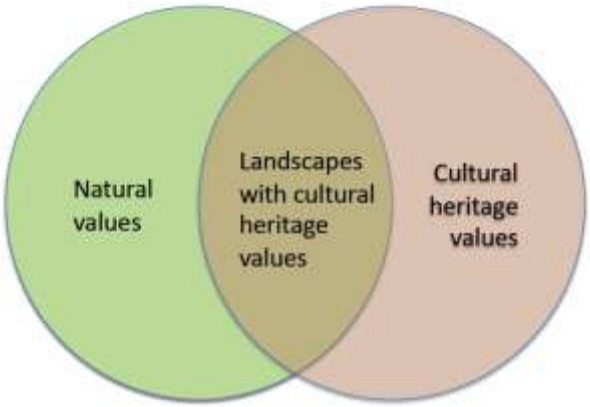
The philosopher, Jeff Malpas, in *Place and Experience A Philosophical Topography*, Cambridge University Press, Cambridge, 1999, p. 173, observes that 'We are often led to view places as if they were just the static backdrop to action and experience, rather than being the very ground and frame for such'.

These diverse perspectives informed the discussion and development of the Heritage Council's Landscape Assessment Guidelines for cultural heritage significance.

Ursula de Jong, Senior Lecturer Deakin University. Member of the Heritage Council of Victoria

3. Landscape Assessment Guidelines for cultural heritage significance
Heritage Council / Heritage Victoria Landscape Assessment Guidelines: a preview

The terms 'cultural landscapes' or 'landscapes of cultural heritage significance' are used to distinguish places which are a product of the interaction between people and nature, from relatively unmodified natural landscapes, whose values derive mainly from their physical and biological characteristics.



Interaction of natural and cultural heritage values in landscapes

3.1 Purpose of Landscape Assessment Guidelines for cultural heritage significance

The purpose of the Landscape Assessment Guidelines is to improve the understanding, identification and assessment of landscapes of cultural heritage significance in Victoria.

This document:

- Clarifies definitions and terms.
- Describes the range of landscape categories that are assessable under the *Heritage Act* 1995 and other statutory mechanisms.
- Sets out a methodology for identifying, documenting and assessing landscapes of cultural heritage significance.

The work is being undertaken by the members of the Landscape Advisory Committee of the Heritage Council. Permission to preview the document for this 2012 AGHS conference is gratefully acknowledged.

3.2 Scope of Landscape Assessment Guidelines for cultural heritage significance

The Guidelines relate to all places that have landscape elements or components. As well as dealing with designed landscapes, such as gardens, parks and reserves, which are well represented on the Victoria Heritage Register, the Guidelines clarify the assessment needs for some landscape categories that do not fit so readily into established cultural heritage frameworks. A cultural heritage landscape assessment focuses on the way in which people have used and interacted with the physical environment over time, to produce a particular combination of remnant natural features, introduced living elements and structures.

In 'Describing Landscapes of Cultural Heritage Significance' three general landscape categories have been developed and applied by heritage organisations to assist in understanding cultural heritage landscapes. These are:

- Designed landscapes.
- Organically evolved landscapes.
- Associative landscapes.

It has been found that the category of designed landscapes is very well represented in the Victorian Heritage Register. Fewer associative landscapes have been added to the Register, but they are beginning to be recognised. The most significant gap is in the area of organically evolved or vernacular landscapes. Some landscapes may reflect more than one type.

3.3 Values of Cultural Heritage Significance

Cultural heritage significance means aesthetic, archaeological, architectural, cultural, historical, scientific or social significance for past, present or future generations (Heritage Act, Burra Charter). The Planning and Environmental Act uses the terms *scientific, aesthetic, architectural or historical interest or otherwise of special cultural value*.

3.4 Principles for Understanding the Cultural Heritage Values of Landscapes

The process described in the Guidelines is based on the following principles:

- A holistic understanding of the place is necessary, including the natural processes that have shaped the landscape, the history of human use of the area and interaction of people with the environment over time.
- Understanding the cultural heritage values of landscapes requires more than assessment of their scenic or visual quality. The full suite of cultural heritage values should be considered in investigation and evaluation, that is aesthetic, social, historical, scientific and spiritual values.
- Communities that value a place or a landscape should have input to the assessment process. A dialogue between professionals and interested communities is the best way to articulate what is valued and to determine how widely these values are held.
-

3.5 Structure of the Guidelines

The Guidelines set out a logical sequence of investigation and evaluation, through two stages and a series of steps. However, the process can be entered at any stage. Steps can be omitted or combined to suit the needs of users, or they can run concurrently. Community engagement, in particular, may happen in various forms and at various stages. The investigation and evaluation stages and the steps within them are:

- *Stage 1 – Understanding the Landscape*
- *Stage 2 – Assessing Cultural Heritage Values of the Landscape*

The Guidelines will conclude with a number of case studies which are intended to be short and snappy and illustrate particular steps in the Guidelines.

Point Nepean

Ursula de Jong, Senior Lecturer Deakin University. Member of the Heritage Council of Victoria

Work is currently underway on Bell's Beach, Mawallock, Bickleigh Vale and Castlemaine Diggings National Heritage Park. This work includes an assessment of the existing statement of significance against the re-drafted Landscape Assessment Guidelines. The examples have been chosen for the following reasons:

- Bell's Beach: associative, ostensibly 'natural' landscape
- Mawallock: designed landscape with significance also relating to surrounding landscape setting
- Bickleigh Vale: designed landscape, landscaped village of approximately 10ha created in the 1920s by leading Australian landscape gardener and designer Edna Walling (1895-1973).
- Castlemaine Diggings National Heritage Park: organically evolved, multi-layered, broad scale, complex cultural landscape

The finalisation of the guidelines will be influenced by the Heritage Council Planning and Protocols Committee work on the State heritage protection of large areas of land, as well as the review of the criteria/ threshold guidelines currently being considered by the Heritage Council. The completion of the guidelines, in association with this work will result in an excellent suite of information for the general community.

Bell's Beach

Mawallock

Bickleigh Vale

10 ___**Harriet Edquist, Professor of architectural history and Director of RMIT Design Archives**
Christine Reid, Author

COLONIAL PASTORALISM IN WESTERN VICTORIA: A Design History 1830-1910.

1. Beginnings

Origins of the project lie in the Stony Rises Project – a collaborative project involving a group of artists and designers who worked together at a 4-day artists camp which covered numerous aspects of the cultural landscape of the Western District and then came back together for an exhibition at RMIT Gallery which toured around Victorian galleries.

It was accompanied by a book called *Designing Place*. This was both a catalogue of the exhibition and a book comprising a number of commissioned essays – Ruth Pullin, Bernie Joyce, Heather Builth for example. The publisher wanted me to do something on material I had been collecting for some time on the homesteads so I put together a so-called 'atlas'.

While this was in train Christine suggested I give a paper to the AGHS conference in Geelong in 2009 and out of our subsequent conversations we decided to embark on this vast project together.

2. The Project

We gave ourselves four years and so are at about the half-way mark. At an early stage we decided that the landscape of the Western District was the key to our approach. We divided the District into portions that seemed to comprise distinct landscape areas – grasslands, volcanic lakes, riverine areas, stony rises and so on. This has worked out surprisingly well and gives us a framework for clustering the homesteads and also thinking about them in the broad terms suggested by the idea of the cultural and designed landscape.

Cultural Landscapes *have been defined by the World Heritage Committee as distinct geographical areas or properties uniquely "..represent[ing] the combined work of nature and of man..".*
The World Heritage Committee has identified and adopted three categories of cultural landscape, ranging from (i) those landscapes most deliberately 'shaped' by people, through (ii) full range of 'combined' works, to (iii) those least evidently 'shaped' by people (yet highly valued). The three categories extracted from the Committee's Operational Guidelines, are as follows.
(i) "a landscape designed and created intentionally by man";
(ii) an "organically evolved landscape" which may be a "relict (or fossil) landscape" or a "continuing landscape";
(iii) an "associative cultural landscape" which may be valued because of the "religious, artistic or cultural associations of the natural element"

The Western District is interesting of course because it combines all three meanings. Our focus is on the designed landscape – both the land itself and the artefacts created on it.
A ***designed landscape*** *is an area of land which has been modified by people for primarily aesthetic effect. The term is used by historians to denote various types of site, such as gardens, parks, cemeteries, and estates. Such sites are often protected for their historic or artistic value. A designed landscape may comprise landform, water, built structures, trees and plants, all of which may be naturally occurring or introduced.*

Many designed landscapes take advantage of existing geographical features, emphasising them through the planting of woodlands, or the creation of artificial lakes. For example, the parklands created by landscape gardeners such as Lancelot "Capability" Brown, are designed landscapes.

They may also be more subtle, resulting from the enclosure of land, and the planting of functional woodlands such as shelter belts. Patterns of such features may be of use to historians in identifying the extent of country estates, and in dating agricultural improvements.
This definition gives a good idea of the way we are approaching this project.

This means that we are looking at the entire property and the relationship between the homestead, farm buildings, infrastructure and landscape. The latter we have roughly divided into hard and soft landscaping. Hard includes dry stone walls, ha has, weirs, wells, garden paths, driveways and the soft landscaping is the plant material which includes pinetums, kitchen or productive gardens including orchards, ornamental gardens, Chinese gardens, avenues.

3. Process

3.1 Data collection

Primarily what we have been doing is data collection. This takes a number of forms.

- Site visits are the most important. This involves both becoming familiar with the history of the property through the owners and photographing it for our files.

-Sighting Primary documents – from owners, etc. These take form of old photos, estate maps, sale notices, architectural plans, correspondence, and so on

- as an architectural historian I am particularly interested in the homestead plan. For some reason the history of the homestead has never reached the mainstream architectural history of Victoria. While Alan Willingham is well known for his research on practices, particularly Davidson and Henderson, the architectural history of the west is basically unwritten.
Similarly, garden historians have dealt with the associated gardens of these homesteads as singular entities rather than as part of a broader understanding of the designed landscape.

I was interested for example to find if there was a homestead typology – if the plans conformed with one or a few basic ideas. But what I found was great diversity. This has to do with the nature of the building campaigns which followed the flow of income…….usually built in two or three campaigns.

What I had discovered in an earlier work, Pioneers of Modernism, was the extraordinary extent to which homesteads were rebuilt, in the early years of the 20th century in the Arts and Crafts style. In fact it is a hidden history of the Arts and Crafts in the best examples such as Dalvui, Purrumbete and so on.

In both house and garden all through the period we're investigating there is evidence of a willingness to experiment with new types and a desire to be fashionable both in interiors and in the gardens and finding a regional expression of international ideas. .

Harriet Edquist, Professor of architectural history and Director of RMIT Design Archives Christine Reid, Author

3.2 Analysis

After a year of collecting we embarked on some analysis. Here Harriet is fortunate to be able to call on the expertise of architectural students at RMIT who, in a series of electives, have been analysing sites and plans.

Three types of investigation around the areas we had designated.

- Data collection- historical records, in spreadsheets
- Analytical drawings
-Art works …Clark, von Guerard, Chevalier.

Last year the AGHS gave us a grant to pursue this work and with it we employed Ashley Mackey to undertake a large-scale mapping project. We gave him our list of homesteads – by now over 200 – and asked him to map them on Google earth. When he had done this we then asked him to render this map in drawing.

These present us with good data but also with a range of possibilities as to how we will present our material in our final publication.

11 ___Robin Ferry- Narmbool

NARMBOOL: Changing Times, Changing Needs

I thought I would first of all explain my rather unusual title of 'Honorary Protector' that is being used at this conference. When Sovereign Hill, who are the owners of Narmbool, were first approached with regard to you all visiting Narmbool, they were also asked, as was I, if I would speak today, and what I was to be called. Mawallock has a gardener, Mt. Boninyong has a descendant of the first owner, Musk has an owner, but what was I.

A range of suggestions were made, but as was appropriate, Jeremy Johnson, the CEO of Sovereign Hill made the final decision. He had been to Denmark, and met the Queen at a museum that they were both visiting. She told him, that one of her official titles was Protector of the museum, which meant that she had the responsibility of seeing that nothing untoward happens to it, and I readily agreed that I was very happy to be given that sort of title for Narmbool.

When a garden goes from being a private place, which Narmbool was until the year 2000, to being a public place, subtle and not so subtle things have to happen. The Narmbool homestead has a long wide verandah, on which sat a number of faithful chairs, one with a leg with the raffia unravelling, and two with suspect backs, but we all knew about this, and how to live with these hazards . But suddenly there people who have had Sunday lunch in the restaurant, sitting there to digest their lunch, unaware of the hazards, and this all becomes a health and safety issue. So, new ones are needed.

The same goes for the summer house. My husband Andrew and his tennis mates all sat there to have their after tennis beer and chat, but the chairs were tatty director chairs of mixed colours, and the table was definitely past its prime, and suddenly there are couples having their marriage ceremonies there, and these pieces of furniture did not by any stretch of the imagination give a good wedding look. So a purchase from a Cotswold catalogue was required. The Summer house now looks smart and appropriate for weddings, but not a look that would have worked for the farmers after tennis beer and chat.

The path from the verandah across the lawn was paved with enough space between the pavers to grow seaside daisies and miniature daffodils and other bits and pieces, but a wedding or two on the lawn soon trampled the daisies to death, and again health and safety was an issue with the female guests getting their high heels bogged in the gaps, So this path is now gravel.

A private garden usually has a number of plants that one tends to know by the name of person who gave them to you, rather than the botanical name, and these plants are cherished for these personal reasons, thus Yvette Hiscock has been flowering since October 1st, and Nicole Bodman is on track to brighten Dec. and Jan. and my Mother pops up all over the place, and so on and so forth.
So one of my duties, as I see it, with my Honorary Protectors hat on, is to protect my friends, and if some of you are here today, who have given me plants; rest assured none of you will be replaced by a punnet of petunias on my watch.

It has been a wonderful challenge for me to be allowed to have the say in how the garden moves up to the next level, and meets the needs of the people who now spend time there, and I am continuing to love every minute of it.

Of course, as all you gardeners will know only too well, with a garden you never quite get there, and there is always next year to plan for.

Robin Ferry- Narmbool

One of the areas I am especially having fun with is the flowerbed beside the path that leads to the Garden Room Restaurant. This must look good all the time, but I feel it also needs a bit of 'wow' factor. A public garden can very often gradually become largely annuals that are colourful but not much else.

The restaurant border for me is like a three dimensional painting. This is its third summer after a major makeover, and the fun of planting together colours and textures that do things for each other in an ongoing process.

With a painting you know as soon as you put paint to paper whether your idea works or not, but with plants you have to wait for up to 12 months and then sometimes the plants you planned to look really good together end up with one coming out just as the other one is going over.

We have had a winter dig up and move around of the plants the last two winters, and I think another one will see it come close to the vision that I have in my head.

When Sovereign Hill took over Narmbool in 2000 they made the garden a bit larger and removed the tennis court, so some of the areas still look a little bit raw, but are starting to provide more backdrops for the amazing number of photographs that wedding couples seem to need these days, and that is another area that is satisfying to work on.

To provide backdrops for wedding photographs is not something that one generally plans for in a private garden.

The other use that the garden has these days is for the environmental science students who are staying down at the environmental learning centre. They spend most of their time in the science or art rooms, also walking beside the creek or through the bush, but they also pay a visit to the garden, mainly because the small pond is a particularly rich habitat for a range of different species of frogs, and they can observe all that goes on for frogs really easily. The garden is also a rich habitat for birds, butterflies, and bees and again these can be observed very easily.

When you come to Narmbool shortly you will, I gather, have the opportunity to see the garden and the environmental learning centre, so I do hope very much that you enjoy both. There is also a two room bluestone cottage behind the homestead, which contains an interpretation of the history of Narmbool. This is brand new and was only finished yesterday, so you will be the first people to see it.

You have, I gather, received a brochure about Narmbool in your show bags, so I won't waste your time now going through facts and figures that are in the brochure. But – I will be at Narmbool if you have any questions that you would rather ask me than the gardener, who will also be there to answer your questions.

I look forward to seeing you at Narmbool shortly.

12 ___Celia Burnham - Mt. Boninyong

MT. BONINYONG

In 1837 Andrew and Celia Scott (of Glasgow) felt that there were few prospects for their sons to establish themselves in good professions in Scotland, so they decided to emigrate to Port Phillip, with their 3 sons and a daughter. Before leaving Scotland they reportedly took some plant cuttings. Two of these a camellia and a holly are still in the garden. They also purchased some garden seeds for New South Wales. Unfortunately these were not recorded.

After arriving in Australia at the end of 1838, it took the family several months to find a suitable run. Finally they settled at" Mount Boninyong" in September 1839. As the Colony was very young they had to be very self sufficient, therefore a garden was very important and no doubt vegetables and fruit trees would have been established as soon as possible.

The first mention in the diaries of a 'formal' garden being laid out was in March 1845, when they started putting up the fence and breaking up the ground for Mammas garden. A quote by Peter Watts in his book – Historic Gardens of Victoria, states "Mt. Boninyong is possibly the oldest surviving domestic garden in Victoria. He described the design as a type common in the mid – nineteenth century, consisting of a concentric semicircular path system. Some parts are bordered with box hedge, others with small rocks and others again with thick terra cotta edging tiles".

A notebook in the possession of the family and dated 1845, lists plants that they planted in the garden at that time, and some of these still exist, the most prominent being the two *Magnolia grandiflora*. They also planted rhododendrons, salvias, fuchsias, geraniums, roses etc. Some of these plants and seeds we know were purchased from Daniel Bunce Nursery in St. Kilda. The family also purchased his Manual on Horticulture.

Although the present homestead wasn't built until 1884, the garden is the same as that shown in photographs surrounding the original slab hut that occupied the same site from the 1840's until 1883. When the present house was built, the terraced croquet lawn was added to the garden, and surrounded by an iron fence imported from Scotland. A larger scale of the fence was built around the perimeter of the garden. The driveway once swept passed the house, and then continued through the park like area to another entrance onto the main road. When this area became too extensive to maintain its boundaries were reduced by drawing in the fence line.

In 1893 an article in the Ballarat Courier reported on a trip to "Mt. Boninyong" by members of the Ballarat Horticultural Society. The article stated that it was questionable whether there was a finer collection of conifers in Victoria, comprising of some forty varieties. It also mentioned that there was a wonderful collection of hollies, camellias, elms, oaks and tillias. Unfortunately over the years a lot of conifers have been removed due to old age, drought, storm damage or being too large, and too close to the house.

In 1989 a severe storm hit the garden and destroyed approximately 20 large trees. Although we lost a lot of trees, it actually helped the garden, as it opened it up and let a lot more light in enabling us to replant with smaller varieties such as viburnums and more camellias.

The back part of the garden has always been the domestic area. It was originally mainly fruit trees and the vegetables were grown in the park area. But over the years a lot of the fruit trees became unproductive and were removed, and they decided to grow the vegetables closer to the kitchen. One such area is where the rose garden is now. This was planted in 1989 to celebrate 150 years of the family being at "Mt. Boninyong".

Celia Burnham - Mt. Boninyong

"Mt. Boninyong" has always been cared for by the family with very little outside help. Thanks to modern equipment Graeme and I manage to maintain the garden by ourselves (at the moment.) Eight generations of the family have now loved and enjoyed this garden, so a new sculpture has been erected to remember those that have gone before and those that are still here.

Finally. Hopefully, "Mamma" (my great, great, great grandmother Celia) would still love her garden nearly 175 years later.

Additional references

[i] W. H. Moule, "Appreciation", *Avenues of Honour: Public Demonstration*. Brighton: Brighton City Council, 1918.
[ii] D. Powell, "Remembrance Day: Memories and Values in Australia since 1918.," *Victorian Historical Journal* 75, no. 2 (2004). p.165.
[iii] M. Ellis, *People and Plants: A History of Gardening in Victoria* (Fish Creek: Mary Ellis, 2003).
[iv] J. Haddow, "Avenues of Honour in Victoria." (Master of Landscape Architecture, University of Melbourne, 1987). p.95.
[v] M. Taffe, "Victoria's Avenues of Honour to the Great War Lost to the Landscape," (Bachelor of Arts Hons . University of Melbourne, 2006). p. 57-59.
[vi] Argus, 1918, p.
[vii] Lucas Scrap book, Ballarat Historical Park Association.
[viii] Taffe family archive.
[ix] J. Haddow, "Avenues of Honour in Victoria,"(Master of Landscape Architecture. University of Melbourne, 1987). p.83.,
[x] *American Forests*, Spring 2003.
[xi] J.Dargavel, 'Trees age and memories change in the Avenues of Honour and Remembrance.' Paper presented at the Fourth National Conference of Australia's Forest History, Canberra. 1999. p. 10.
[xii] Taffe. "Victoria's Avenues of Honour to the Great War Lost to the Landscape," p.29.
[xiii] *Ballarat Courier*, 17 May 1917.
[xiv] Ibid.
[xv] *Ovens and Murray Advertiser*, 25 July 1917.
[xvi] "In the Country", *Age*, 5 August 1918, p. 7
[xvii] Inglis, *Sacred Places: War Memorials in the Australian Landscape.* p. 21.
[xviii] Haddow, "Avenues of Honour in Victoria," p.95.
[xix] 'The Dargo 10, a sacrifice forged on Flanders fields', *The Sunday Age*, Melbourne, October 14, 2007. p. 14.
[xx] http://whc.unesco.org/en/culturallandscape#1 , accessed 20/10/2012, provides an excellent list of meetings, references and other useful links as well as a list of places on the World Heritage List which include cultural landscapes.
[xxi] Joy McCann, 'Cultural Landscapes', *The Oxford Companion to Australian Gardens,* pp. 168-9.
[xxii] John Ratcliffe, *An Introduction to Town and Country Planning*, 1974, p. 217ff.
[xxiii] The National Trust owns about one third of the land in Great Britain including vast stretches of coastline under its 'Enterprise Neptune' campaign. The Forestry Commission, established in 1919 'to rectify the appalling rape of forest during the First World War' is the largest landowner by the later twentieth century.
[xxiv] The National Trust, *Rooted in History, Studies in Garden Conservation*, The National Trust Enterprises Ltd, London, 2001.
[xxv] Mitchell, T L, *Three Expeditions into the Interior of Eastern Australia*, Vols. 1 & 2, first published in 1839, facsimile of the second revised ed. published, Eagle Press, Maryborough, Vic., 1996.
[xxvi] Julia Horne, 'How Mountains Became Sublime' and 'How Ferns became Beautiful', *The Pursuit of Wonder*, The Miegunyah Press, Carlton, 2005.
[xxvii] http://parkweb.vic.gov.au/__data/assets/pdf_file/0007/315547/Heritage-story-Tower-Hill-Reserve-history-and-heritage.pdf, accessed 20/10/2012.
[xxviii] Brigid Hains, 'Conservation', *The Oxford Companion to Australian Gardens,* pp. 157-8.
[xxix] These were the *Archaeological and Aboriginal Relics Preservation Act*, the *Victoria Conservation Trust Act*, the *Environment Protection Authority Act*, the *Historic Shipwrecks Act*, the *Historic Buildings Preservation Act*, and the *Government Buildings Act*. For a simple timeline from 1921 to 1991, see McLoughlin, John Brian, *Shaping Melbourne's Future?: Town Planning, the State and Civil Society*.
[xxx] Speech by the Hon. G P Hayes, MP Minister for Planning, 1st May 1976, Braemar College, Woodend; http://www.mrra.asn.au/archive1/arc1-snts/Keep%20Macedon%20Ranges%20Rural/Attachments/Hayes%20Speech%20SPP8.pdf accessed 25/10/2012.
[xxxi] See a table of the changes prepared by the Macedon Ranges Residents Association at http://www.mrra.asn.au/archive1/arc1-snts/AA%20Features/2006%20SP%20Presentation/Protection%20Comparison%20Chart.htm, accessed 25/10/2012.
[xxxii] Ball, Rowland, Chair, 'Macedon Ranges Planning Scheme, Amendment C21, Rural Areas Review, Report of a Panel Pursuant to Sections 153 and 155 of the Act', Planning Panels Victoria, Melbourne, 2004.