

The Adelaide Hills Face Zone as a Cultural Landscape [revised]

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As early as 1837 the first Surveyor-General to the new colony of South Australia, Colonel William Light, referred to the Mount Lofty Ranges as ‘these enchanted hills’ and since that time the symbiotic relationship between the Mount Lofty Ranges and the city of Adelaide has been highly valued by the people of Adelaide. One aim of the recently completed Adelaide Hills Face Zone Cultural Heritage Project¹ was to document and interpret cultural changes to the landscape of the western face of the Mount Lofty Ranges following European colonisation in the late 1830s.

Now, following three years of archaeological and historical research, it is asserted that Adelaide’s Hills Face Zone is one of the best preserved relict landscapes representing the era of European/English expansion and colonisation during the eighteenth and nineteenth centuries². There are two main reasons for this outcome. First, the close proximity of essential natural resources to the colony’s capital city meant that the valleys along the western face of the Mount Lofty Ranges made a significant contribution to the economic development of the new colony and were cleared of natural vegetation and settled within the first decade following the declaration of the new colony. Second, the western face of the ranges has been protected from subdivision and intensive agriculture and horticulture for almost forty years by the Hills Face Zone provisions under the 1962 Metropolitan Development Plan. An objective of that legislation was to protect the natural heritage values of the zone, however, a second and until now unsuspected outcome has been the protection of the zone’s colonial cultural heritage values.

A further outcome was the recognition that public perceptions of the landscape of the Hills Face Zone following European colonisation altered through time. The aim of this paper is to present evidence for the emergence of this significant landscape both as a highly constructed cultural landscape and as a natural landscape.

Adelaide’s Hills Face Zone is defined by the western face of the Mount Lofty Ranges and extends for approximately 90 kilometres from Sellicks Hill south of Adelaide to Gawler, north of Adelaide (figure 1). The central region of the zone has distinct geomorphic characteristics that differentiate it from the ranges to the north and south and, largely as a consequence of this topography and of its close proximity to the city, the steep, fertile valleys of the central Hills Face Zone were the first to be colonized by horticulturalists and market gardeners. The northern and southern regions, where the terrain was not as steep, were colonized instead by farmers engaged mainly in sheep and wool production, with small areas of intensive horticulture such as vineyards and orchards.

¹ This project was supported by the Australian Research Council and ten Industry Partners. See <http://ehlt.flinders.edu.au/archaeology/hfzchp/index1/htm>

² See Smith, PA, Pate, FD, Martin, R. (in prep.) *Valleys of Stone: The Archaeology and History of Adelaide’s Hills Face*.

Figure 1. A map showing the location of the Hills Face Zone, South Australia.
(Source: Planning SA)

Theory and Methodology

Landscape archaeology is a recent approach employed in the practice of Australian Indigenous and historical archaeology that addresses the interaction of cultural and environmental variables associated with human landscape use (Jacques 1995; Plachter and Rössler 1995 ; Yamin and Bescherer 1996; David and Lourandos 1999). This theoretical paradigm was derived from earlier systems-based approaches to human landscape use developed in relation to settlement pattern and human ecology studies (Clark 1952; Willey 1953, 1956; Steward 1955). Whereas many of these earlier approaches to landscape analysis emphasised the role of the environment in shaping the cultural landscape, landscape archaeology focuses on both the strong interactions between culture (i.e. learned behaviour, norms and symbolism) and natural environments.

In applying this theoretical approach to interpret the cultural landscape of the western face of the Mount Lofty Ranges we were primarily concerned to understand the cultural “baggage” that the colonists brought with them, their settlement patterns and how they viewed, interpreted and transformed the landscape by introducing new land management practices and technologies.

The methodology to undertake this project is summarised in Figure 2. The field work and research were undertaken over three years by students and staff from the Department of Archaeology, Flinders University and by community volunteers³ (Renfrew and Bahn 2004).

Figure 2. A flow-chart illustrating the Hills Face Zone Cultural Heritage Project Methodology

The construction of a Geographic Information Systems database was central to the interpretation of the data and over nine hundred archaeological sites and objects were entered into the Hills Face Zone Cultural Heritage GIS (Johnson and North 1997).

The interpretation of the archaeological data revealed that the colonial transformations of this landscape were complex and were determined by the environment, the economic imperatives of the time and by the symbolic and social mores the colonists brought with them.

The Nature/Culture Dichotomy

The meanings underlying these spatial changes in the landscape of the Hills Face Zone through time represent the dichotomy between nature and culture and reflect changing public perceptions of the hills landscape following the founding of the British colony of South Australia in 1836.

³ See Hills Face Zone Cultural Heritage Project Reports. 5 volumes. See www.milnwalker.com.au

The first cultural landscape

The valleys and ridges of the western face of the Mount Lofty Ranges are the traditional land of the Kaurna people, although both the Permangk and the Ramindjeri have interests within that region⁴. The peaks of Mount Lofty and Mount Bonython are the ears of a reclining giant mythical being and the Kaurna name for the peaks is Yur-e-billa, meaning ‘the place of the ears’. One version of this story is that this is the body of an enemy whose body was transformed into the Mount Lofty Ranges after being killed by the Kaurna.

Information given to Tindale (1976) by Invaritji in 1930 described how the Kaurna visited the lower slopes of the ranges in autumn and spring to collect gum resin from the golden wattle (*Acacia pycnantha*) for binding tools and weapons, the bark of the Stringybark (*Eucalyptus obliqua*) and animal skins for cloaks. They also collected the larvae of the Cossid moth that bored into the golden wattle together with numerous other plant and animal species (Martin 1996:9-11). Today we are able to understand only a little of the significance of the hills face from stories told by the Elders, from archaeological evidence and from accounts of the early colonists. For example, the watercolour by Skipper (figure 3) was painted in 1837 and is one of the earliest representations of Aboriginal people in the Mount Lofty Ranges.

Figure 3. *Near Mount Lofty*, November 1837. Watercolour by John Michael Skipper. Art Gallery of South Australia, Adelaide. Morgan Thomas Bequest Fund 1942.

The existence of an Australian Indigenous ethic of landscape management utilizing a mosaic burning pattern and knowledge about how fire affects the landscape has been well documented (Jones 1969; Singh et al 1981; Flannery 1994:217-236). Fire regimes were used to cleanse the country, to allow easy access for hunting and gathering and to promote the regeneration of grasses and other plants - which in turn encouraged animals into the area to graze on the new growth. Flinders, Tolmer, Hawker and other colonists reported on fire events in the colony of South Australia (Flinders 1814; Tolmer 1882; Hawker 1899). Fire was also used as a weapon against the colonists and, as described by O’Halloran, fire became the Achilles’ heel of the colonists:

...in all directions during the late months of hot weather, the natives have done much injury to the settlers by firing the grass around them. The sheep and cattle have thus been dispersed...These fires likewise destroy all traces of the country Surveys and render it nearly impossible for purchasers of land to examine or even find out the sections they may be disposed to select...I am much afraid that unless some measures are taken to prevent the natives from burning grass, that a warfare will be established between them and the settlers (quoted in Clyne 1987:54).

The colonial cultural landscape

The cultural uses of the region by Indigenous peoples were subtle but, after 1836 the newly arrived colonists perceived the rugged ranges and steep valleys simply as a wild landscape and an unproductive wasteland waiting to be cultivated and civilised

⁴ The authors are not sufficiently well informed to comment on these boundaries, but refer readers to references in Tindale, N.B. 1974 *Aboriginal Tribes of Australia*, pp. 25, 133, 213, 217. Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, and in Walker, J. 1983 *Cleland Conservation Park Management Plan, Mount Lofty Ranges, South Australia*, p.2. Department of Environment and Planning, Adelaide.

into their 'ideal' - the cultivated and productive landscapes of their English or European homelands.

Before the land could be cultivated, however, the Eucalypt forests and bushland had to be cleared. There was such a high demand for timber by the late 1830s that the South Australian Company sought to manage and control the highly profitable supplies from the upper slopes, known as the Tiers, although with little success. The Tiersmen, or sawyers and splitters who felled the Eucalypt forests had a justified reputation as being skilled at working with stringy bark (figure 4). Many had gained their skills in the stringy bark forests of the eastern states and in van Diemen's land as prisoners or convicts and it was well known in Adelaide that many Tiersmen were 'Vandermodians', who cared little for the new regulations (Schmaal 1999:19; Tolmer 1882).

Figure 4. Timber Cutters on the Tiers. *W.A.Cawthorne*. Mitchell Library, N.S.W., Watercolour

By the end of the nineteenth century the largest trees had been felled from across the ranges and the timber industry had virtually ceased, although farmers continued to supplement their incomes by sawing and splitting timber well into the twentieth century⁵. Today little evidence of this logging industry remains apart from the occasional sawn stump and a few hills walking trails that follow the tracks made by the Tiersmen and their bullock teams.

Unlike the colonists' counterparts on the east coast of America who were predominantly tenant farmers, the British colonists who migrated to South Australia came with the expectation of owning their own land and that they would be able to earn a sufficient income for their families to live comfortably (Mascia 1996). The South Australian Company's Waste Lands Act ensured that the land would be cleared and cultivated. This was enacted under the South Australia Foundation Act and stated that land considered to be waste, ie unused by Aboriginal people, could be acquired in 80 acre lots at 12 shillings per acre. The Scrub Lands Act ensured the complete clearance of land for agricultural development and landowners had to clear something like 90% of their land in order to circumvent the Waste Lands Act.

Encouraged by these two Acts almost all the steep slopes behind the Adelaide plains were transformed into farms, orchards and market gardens by colonists who applied European agricultural techniques to this unfamiliar landscape⁶. They had arrived with high expectations of the productivity of the land based on earlier favourable reports publicized by the South Australia Company. For example, Dutton reported in 1846 that:

On the face of many hills, of moderate elevation, a fine brown loam is abundant, of more or less depth, in some case three feet, in others as much as five feet, and is a most admirable soil for the growth of fruit trees... With a boundless extent of wood for every purpose which may be required by the settler, the forests are on the one hand confined to the mountain districts, and in the agricultural parts, the trees are dispersed in the form of a park... (Dutton 1846:199-200).

⁵ It was at this time that the tall straight timber to satisfy the new demand for telegraph poles became expended and the iron and cement Stobie pole was invented.

⁶ Several examples of the extent to which these new technologies were inappropriate were investigated through this project. See Piddock et al. 2005.

Similarly, those who took up land on the hills face also had an expectation that the supply of water would be well in excess of their needs. John Morphett, who accompanied Colonel William Light, the Surveyor-General, in 1836 reported more than favourably on the water resources of the western hills face:

Mount Lofty bears nearly east, and the whole of this side of the range is intersected with gullies, ravines and water courses, of the deepest kind, bearing evident marks of being acted on by powerful torrents. All of the hilly country along the coast has a similar character, but in no place is it so conspicuous as here. The facilities for damming up, and the creation of water power, are greater than I have seen in any country in an equal area... (Morphett 1837:12, cited in Martin, R. 1996: 17).

Eighteen small rivers and creeks flow from the hills face across the Adelaide Plains. At the time the first colonists arrived most of these were supplied by permanent springs and flowed all year; all carried more water than today. For example, the village of Mitcham was sited on the banks of Brownhill Creek because it provided an adequate and permanent supply of water all of the year (Smith et al 1994:1-5). Similar reports came from the many owners of properties with wells surveyed by this project, they also reported that their wells had provided a reliable supply of water until recent years.

It was quickly recognized by the colonists that these permanent springs and fertile valleys provided environments suitable for market gardens and nurseries and the archaeological evidence of several nineteenth century market gardens and nurseries was documented by this project (Smith et al 2004: 8-15; 16-22; 35-46; Piddock et al 2005a). A common practice was the construction of stone retaining walls to channel and control water prior to the availability of metal pipes for irrigation. The natural streams in most valleys were straightened and confined to narrow stone channels on one side of the valley, thus freeing up the fertile floor of each valley for crop production. Irrigation systems that used stone or timber water races were also recorded, together with terraced hillsides supported by stone retaining walls.

Two examples of terraced hillside and stone water races were reconstructed using GIS modelling. One is adjacent to the Eagle Quarry and the other is the Newman's Nursery site in Water Valley, now the Anstey Hill Recreation Park (figure 5). Both models demonstrate the complexity of early colonial land management systems and the extent to which the landscape of the nineteenth century was reconstructed.

Figure 5. A GIS reconstruction of Water Gully and Newman's Nursery as it would have appeared in the late nineteenth century. Source: R. Keane, GIS consultant, HFZCHP.

By 1837 the first bullock tracks were being blazed through the hills and it is likely that the following lines from a Kurna song is a statement about the Great Eastern Road (then a bullock track over the top of Gleeson's Hill) which followed a Kurna track: 'Adelaide no more good since the white men came – now the road has tired me – throughout Yeona there is a continuous road – what a fine road is this for me winding between the hills' (*Register* 16th March, 1844). The Chief Surveyor, Colonel Light, also noted a Kurna trail that ran to the south of Adelaide on his earliest survey of the southern region and an early section of the South Road is thought to have followed that route (Kennedy et al 2005).

With the advance of transport technologies and the advent of steam trains and motor vehicles the steep Mount Lofty Ranges presented challenges both to nineteenth century road engineers and to railway engineers, see figure 6 (Stacy et al 2005).

Figure 6. A GIS generated map showing the seven routes of the Great Eastern Road, now the Southeast Freeway, through the steep topography of the western face of the Mount Lofty Ranges. Source: R.Keane, GIS consultant to the HFZCHP.

The Chief Engineer of the hills railway was brought from Switzerland to design the seven tunnels and the viaduct (figure 7) and to negotiate the steep gradients (Callen et al. 2005).

Figure 7. The viaduct along the hills railway at Eden Hills. Source: Tanya Lehman Postcard Collection.

Archaeological and historic evidence from the time when these major transport corridors were constructed provide fascinating insights into the lives of the colonists. For example, archaeological evidence of two camp sites used by the men who spent over two years constructing the tunnels through the Adelaide Hills were identified in the Belair National Park. An Irish Orangeman murdered an Irish Catholic at the Seven Mile camp and from the subsequent inquest and newspaper reports it was possible to reconstruct their camp site and obtain detailed social information about the men living in the camps (Tamblyn et al 2005).

The close proximity to the city of accessible deposits of quality building stone also contributed significantly to the economic development of Adelaide - and left the most tangible evidence of human impacts on the landscape. The stone was used for housing, shelters, drains, kerbing and road guttering in the first instance and was later crushed for the construction of Macadam roads, tram tracks, railway ballast and breakwaters at Outer Harbour.

It was the bluestone from the Glen Osmond, Mitcham and Tapley's Hill quarries that gave a distinctive character to many of Adelaide's public buildings and homes and its greater hardness and durability over limestone, which was readily available on the plains, made it especially suitable for external load-bearing walls (Jack 1923; Bender 2004; Bender 2005b)¹.

The quarrying techniques also reflected the origins of the quarrymen. This was particularly true of the Cornish quarrymen and miners who applied their skills at Magill, Glen Osmond, Montacute and Willunga (Fenton et al. 2005; Piddock et al. 2005b). One of the first commercial quarries was the Magill Stone Quarry situated in the lower Hills Face Zone. This quarry, now on the State Heritage List, is believed to be the only example of the traditional Cornish 'pillar and stall' quarrying method in Australia – and possibly outside of Cornwall, see figure 8 (Bender 2005a).

Figure 8. The Magill quarries c.2002. (Source: HFZCHP 2002).

Slate suitable for splitting into roof shingles was an essential element in the colonial building industry. It was first quarried in 1840 in the hills face close to Willunga,

40km south of Adelaide and by 1850 there were five slate quarries operating in the area. Slate production reached its peak in the 1880's with 2 ships sailing each week from Port Willunga to Port Adelaide, Melbourne and Sydney. The roofs of public buildings and houses around Australia were clad with slate shingles from Willunga, but by the end of the nineteenth century galvanized iron had replaced slate as a roofing material and the slate industry declined.

Today the red pisè ruins of the former Cornish village on the steep hillsides of the Delabole quarry site are a stark reminder of mid-nineteenth century life in the colony (figure 9). They represent a rare example of a Cornish landscape in which the symbolism of 'Chapel' and the traditional hierarchical values of the nineteenth century Cornish village were maintained in the colony of South Australia. The Chapel was constructed on a hill overlooking the valley and the Foreman's house was located in a similar position from which surveillance of the village and mine was possible at all times (Foucault 1977).

Figure 9. A view over the ruins of the Cornish village of Delabole, Willunga. c. mid-1990s. Source: P. O'Malley.

Despite the economic activities described above, the steep valleys of the western hills face were also valued by the people of Adelaide for their environment, for recreation and as an escape from the oppressive heat of summer. It is from this time that the public appreciation of the natural values of the hills face originate and which are perpetuated today within a sub-culture that is uniquely Adelaidean.

During the nineteenth century the 'picnic' had become a fashionable outing and in the hot summer months the population of the plains flocked to the cool valleys of the hills. Waterfall Gully, Brownhill Creek, Third and Fourth Creeks and the Morialta Falls were among the favourite picnic spots and the beauty of the hills and the joys of 'picnicking' were frequently reported in *The Register* (Warburton 1979).

The popularity of picnicking and the appreciation of the quiet valleys of the hills no doubt encouraged South Australian leaders to be among the earliest governments to set aside reserves for recreation and conservation, although the emphasis was on the former. The first public reserves to be officially gazetted by the State Government for recreation and conservation were Morialta (1886), Waterfall Gully (1888) and Brownhill Creek (1889).

In 1891, the National Park Act provided for the reservation of over 2,000 acres at the Government Farm, Belair, for public recreation. Areas set aside included the most pristine areas of bush to protect the flora and for those with an interest in natural history and bush walking and recreation areas, such as ovals, tennis courts and refreshment kiosks, in the valleys where the flora was already highly disturbed.

The foresight of those responsible for establishing these parks protected what is now one of Adelaide's most valuable natural assets and sowed the seeds for the transformation of the region from a cultivated landscape to a significant natural landscape.

The transition to back nature

Ultimately, however, it was the changing local economies and later, public pressure that led to the environmental transformations of the twentieth century. The opening of large market gardens on the plains, the emergence of modern transport and the ability to pump water from underground aquifers resulted in the collapse of the small market gardens and orchards that had been confined to the narrow valleys. The extent to which land clearance and the use of deep ploughs had eroded the top-soil was also beginning to be understood as the fertility of the land declined.

The Australian environment and in particular the drought and flood cycle that occurs every 20-25 years were also having an impact on the small market gardens and nurseries. For example, when Newmans Nursery, illustrated in Figure 5, was destroyed by flood for the second time in 70 years the family made the decision to abandon their extensive business enterprise in Water Gully.

The analysis of GIS data revealed that 94% of houses constructed in the region during the nineteenth century were within 150 m of a stream and 65% were within 50 m. of a stream (figure 10). This settlement pattern reflected the colonists' expectations of the environment and their previous experiences. Water was essential to settlement, but houses inappropriately located too close to streams were soon abandoned and today only faint archaeological evidence remains of many of the small nineteenth century market gardens and orchards that had existed in the narrow valleys of the hills.

Figure 10. GIS generated slope map showing the locations of house sites within the Brownhill Creek catchment during the nineteenth century.

Most of the quarries that provided the bluestone and sandstone for Adelaide's buildings were also forced to close. Again, this was an outcome of economic change. Few buildings are now built of stone and the many small quarries across the western face of the hills have now been incorporated into parks and reserves.

The timely introduction of the Hills Face Zone legislation following the decline of these major industries served to preserve archaeological elements of each industry, together with many examples of domestic environments. The interpretation of the data entered on the Hills Face Zone Cultural Heritage GIS Database revealed that many of the nineteenth century temporal and spatial changes in settlement patterns were outcomes of new technologies, new economic demands and of detrimental environmental impacts.

The 21st Century

Now, in the early years of the twenty-first century, much of the landscape on the western face of the Mount Lofty Ranges is again considered to be a 'natural' environment, although this is also a cultural construction of the later half of the twentieth century and an outcome of the Hills Face Zone provisions of the 1962 Metropolitan Development Plan. It is, in fact, also a contested landscape in which the interests of environmentalists and horticulturalists compete (Planning SA 1994). The sweep of parks and open space occupies only 25% of the Hills Face Zone and is located mainly in the central region behind the city of Adelaide. Here the network of parks has expanded from those founded in the nineteenth century and protects a diversity of ecosystems and rare and endangered species of flora and fauna. The parks

also provide the people of Adelaide ready access to eco- and cultural-tourism destinations and passive recreation opportunities adjacent to urban areas. Although contemporary descriptions of the Hills Face Zone emphasize these natural heritage values, the region remains a complex landscape where small family businesses and large companies continue to operate side by side and represent a diversity of economic endeavour.

This emerging natural landscape differs from former 'natural' landscape of the colonists and it is probable that we are now witnessing the regeneration of a truly natural environment in some central areas, despite the proliferation of exotic weed species. In 1839 Hawker (1899) described grasses over 6 feet high and the sketches and paintings of the lower ranges by colonial artists such as S.T. Gill (*Mount Osmond Mine* 1841), Skipper (*Near Mount Lofty*, November 1837, George French Angas (*Waterfall Gully* 1847) and unknown (*View of Adelaide from the Hills* n.d. – W.L. Crowther Collection, Art Gallery of Tasmania), confirm the open nature of the woodland on the lower slopes of the ranges at the time of European colonisation. The regenerating Eucalypt woodlands of today have a strong under-storey dominated by Acacia and the difference between the early colonial environment and the regenerating forest today is thought to arise from the absence of burning by the Aboriginal people.

Conclusion

Adelaide's Hills Face Zone now protects both the natural heritage values and the cultural heritage values of the region. It also provides a model through which to interpret changing human perceptions of a landscape. The three phases of landscape change identified through the Hills Face Zone Cultural Heritage Project are: (1) an Indigenous cultural landscape that was perceived to be a natural landscape by the English colonists, (2) a cultural landscape that responded to the economic demands of the population for over one hundred years and (3) a natural landscape, that is an outcome of the forces of nature, changing economic demands and public appreciation of the aesthetic amenity that the western face of the Mount Lofty Ranges give to the city of Adelaide.

References

- Bender, C.C. (2004) *Rock of Ages: The Stonyfell Quarry*. An archaeological investigation into Stonyfell Quarry's contribution to a changing South Australian landscape. Unpublished Honours thesis, Department of Archaeology, Flinders University.
- Bender C. 2005a *The Magill Stone Quarry*. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: Stonyfell to Tea Tree Gully*. Hills Face Zone Cultural Heritage Reports. Volume V. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Bender C. 2005b *The Stonyfell Quarry*. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: Stonyfell to Tea Tree Gully*. Hills Face Zone Cultural Heritage Reports. Volume V. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Callen, J., Stallard, N., Smith, P.A. and James, D. 2005 *The hills railway*. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: The*

- Mitcham Hills*. Hills Face Zone Cultural Heritage Reports. Volume II. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Clark, J.D.G. 1952 *Prehistoric Europe: The Economic Basis*. London: Methuen.
- Clyne, R. 1987 *Colonial Blue. A History of the South Australian Police Force. 1836-1916*. Wakefield Press, Netley, South Australia.
- David, B. and Lourandos, H. 1999. Landscape as mind: Land use, cultural space and change in north Queensland prehistory. *Quaternary International* 59:107-123.
- Dutton, Francis 1846 *South Australia and its Mines with a Historical Sketch of the Colony under its Several Administration*. T. and W. Boone, London.
- Fenton, G. and Fenton, D. 2005 The Montacute District. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: Stonyfell to Tea Tree Gully*. Hills Face Zone Cultural Heritage Reports. Volume V. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Foucault, M. 1977 *Discipline and Punish. The Birth of the Prison*. Translated by Alan Sheridan, Allen Lane. Penguin, London.
- Flannery, T. 1994 *The Future Eaters. An Ecological History of the Australasian Lands and People*. Reed Books, Kew, Victoria
- Flinders, Matthew 1814 *A voyage to Terra Australia: undertaken for the purpose of completing the discovery of that vase country and prosecuted in the years 1801, 1802 and 1803 in His Majesty's ship the Investigator*. G. & W. Nicol, London.
- Hawker, J. 1899 *Early Experiences in South Australia*. E.S.Wigg & Son, Adelaide.
- Jacques, D. 1995 The rise of cultural landscapes. *International Journal of Heritage Studies* 1(2):91-101.
- Johnson, I. and North, M. (eds) 1997 *Archaeological Applications of GIS*. Proceedings of Colloquium II, UISPP XI11th Congres, Forli, Italy, September 1996. *Sydney University Archaeological Methods Series 5*. Archaeological Computing Laboratory, Sydney University, Sydney.
- Jones, R. 1969 Fire-stick farming. *Australian Natural History* 16(7):224-228.
- Kennedy, M.A., Yanner, A. and Collins, S. 2005 The settlement at the top of Tapley's Hill. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: The Southern Hills – Marion, Onkaparinga and Willunga*. Hills Face Zone Cultural Heritage Reports. Volume IV. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Martin, R. 1996 *Under Mount Lofty: A History of the Stirling District in South Australia*, 2nd edition, District Council of Stirling, Stirling, South Australia.
- Mascia, S.F. 1996 'One of the best farms in Essex County': The changing domestic landscape of a tenant who became an owner. In R.Yamin and K.Bescherer Metheny (eds) *Landscape Archaeology: Reading and Interpreting the American Historical Landscape*, pp.147-174. University of Tennessee Press, Knoxville.
- Morphett, John 1837 *South Australia: Latest information from this colony*. London.
- Piddock, S., Smith, P.A. and Keane, R. 2005a Water Gully and Newman's Nursery, Anstey Hill. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: Stonyfell to Tree Gully*. Hills Face Zone Cultural Heritage Reports.

Volume V. Department of Archaeology, Flinders University. K_pi Books, Adelaide.

- Piddock, S., Dunstan, M. and O'Malley, P. 2005b. Willunga slate quarries. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: The Southern Hills – Marion, Onkaparinga and Willunga*. Hills Face Zone Cultural Heritage Reports. Volume IV. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Plachter, H. and Rossler, M. 1995 Cultural landscapes: Reconnecting culture and nature. In von Droste, B., Plachter, H. and Rossler, M. (eds) *Cultural Landscapes of Universal Value*. Gustav Fischer Verlag Jena, Stuttgart and New York, in cooperation with UNESCO.
- Planning S.A., Hills Face Zone Review Steering Committee (2004) *Hills Face Zone Review Implementation Strategy, February 2004*. Planning S.A., Adelaide.
http://www.planning.sa.gov.au/Hills_Face_Zonereview/publications/Hills_Face_Zone_review_web.pdf
- Register* (Adelaide), 16th March, 1844
- Renfrew, C. and Bahn, P. 2004 *Archaeology: Theories, Methods and Practice*. 6th Edition. Thames and Hudson, New York.
- Schmaal, J. 1999 *Tales of the Troopers*. Wakefield Press, Adelaide.
- Singh, G., Kershaw, A.P. and Clarke, R. 1981 Quaternary vegetation and fire history in Australia. In Gill, A.M., Groves, R.H. and Noble, I.R. (eds) *Fire and the Australian Biota*. Australian Academy of Science, Canberra.
- Smith, P.A., Piddock, S. and Pate, F.D. 2004 *Historic Sites and Landscapes: The Brownhill Creek Catchment and Waite Reserve*, pp.1-7. Hills Face Zone Cultural Heritage Project Reports, Volume 1. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Stacy, W., Arthur, D., Wimmer, M and Smith, P.A. 2005 The Great Eastern Road. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: The Great Eastern Road and the First Creek Catchment*. Hills Face Zone Cultural Heritage Reports. Volume III. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Steward, Julian 1955 The concept and method of cultural ecology. In Steward, J. (ed.) *The Theory of Culture Change*, pp. 3-42. University of Illinois Press, Urbana.
- Tamblyn, P., Smith, P.A., Chisholm, S. and Rose, M. 2005 The Government farm and Belair National Park. In Smith, P.A., Piddock, S. and Pate, F.D. (eds) *Historic Sites and Landscapes: The Mitcham Hills*. Hills Face Zone Cultural Heritage Reports. Volume II. Department of Archaeology, Flinders University. K_pi Books, Adelaide.
- Tindale. 1976 Some ecological bases for Australian tribal boundaries. In N.Petersen (ed.) *Tribes and Boundaries in Australia*. Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra.
- Tolmer, A. 1882 *Reminiscences of an adventurous and chequered career at home and at the antipodes*. Sampson Low, Marston, Searle and Rivington, London.

- Yamin, Rebecca and Karen Bescherer Metheny (eds) 1996. *Landscape Archaeology: Reading and Interpreting the American Historical Landscape*. University of Tennessee Press, Knoxville.
- Walker, J. 1983 *Cleland Conservation Park Management Plan, Mount Lofty Ranges, South Australia*. Department of Environment and Planning, Adelaide.
- Warburton, E. (1979) Picnics in the Hills. *Journal of the Historical Society of South Australia*, 6, 46-54.
- Willey, Gordon 1953 *Prehistoric Settlement Patterns in the Viru Valley, Peru*. Smithsonian Institution Press, Washington, D.C. *Bureau of American Ethnology Bulletin* 155.
- Willey, Gordon R. (ed.) 1956 *Prehistoric Settlement Patterns in the New World*. b *Viking Fund Publications in Anthropology* No. 23, New York
-