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Changing Place: Local People, Recreation and Protected Areas on the South Coast of Western Australia[1]

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Abstract

The environmental impact of local people recreating in nature is an under-studied aspect of protected area management. A recent review of nature-based recreation was undertaken in regional south-western Australia. Surrounded by an array of protected areas, including a national park with World Heritage status, the local residents of this remote West Australian location have relatively unrestricted access to a variety of conserved landscapes. A mineral resources boom in Western Australia has witnessed a return to mining in the area, accompanied by a considerable population increase of both itinerant and permanent miners. For local people and environmental managers alike, this influx has raised concerns about the carrying capacity of this fragile ecosystem to sustain the wilderness recreation activities of the newly arrived mining community. This paper draws on evidence gathered from a recent study and outlines the extent to which local people can be considered visitors to these protected places.

Introduction

The subject of *local people* has become a persistent theme in protected area management discourse. For the past decade the social dimensions—particularly the notion or ideal of local participation and/or community involvement—have become more prominent in conservation science (Ghimire & Pilbert, 1997). Globally, local people are considered critical players in contemporary policies and approaches aimed at sustainable resource management (Gray & Lawrence, 2001). However, interactions between people and the landscapes in which they live highlight a complex and dynamic array of relationships, values and practices (Gunderson & Holling, 2002). This *sense of place*—an emotional and symbolic connection with location (Agnew, 1989)—has become an important and unifying concept in a large body of research (Proshansky, Fabian & Kaminoå, 1983; Cloke, Philo & Sadler, 1991).

Current international literature on local people focuses on indigenous knowledge and rights as well as the traditional subsistence activities in national parks often associated with Asian and African nations (Zube & Busch, 1990). Less evident is the examination of local people's nature-based activities, particularly recreation in protected or conserved areas. An exception is Hercock's (1999) study of local and other Australian four-wheel drivers in the remote north Kimberley region of Western Australia (WA) which suggests that local visitors could benefit from greater awareness of the impact of their recreating behaviours. As Buckley and King (2003) argue, collecting baseline data on particular numbers of people, activities, frequency, equipment, management regimes and seasonal variations in particular ecosystems and environments are all important reference points for ongoing impact assessment. Likewise, an understanding of place and, in particular, community attachment can assist in incorporating community stakeholder values into an ecosystem management framework (Williams & Stewart, 1998). This paper examines the particularities of local people as nature-based recreational users in a remote Australian community.

This article initially offers an overview of the relevant literature on place before describing the locale and matters central to the discussion. Following this, the paper outlines the methodology and provides a summary of selected results and implications.

Place Concept

Commonly, places are represented in abstracted terms through map locations, topography and arrangements of landscape scale as though they are inert backgrounds for activity and experience (Malpas, 1999). Sense of place—a socially constructed concept—recognises that location is mediated by relationships between people and their interactions with the natural environment (Tall, 1996). This notion provides a distinct way of defining community within three social levels: the individual, the collective or community, and the societal or cultural scale (Dixon & Durrheim, 2000). Inter-related elements that encompass sense of place include identity, attachment and the physical landscape. Looking at these elements separately, place-identity is described by Proshansky *et al.* (1983) as a 'pot-pourri of memories, conceptions, interpretations, ideas and related feelings about specific physical settings as well as types of settings' (p. 60). This psychological structure arises out of individuals' attempts to regulate their environments towards a coherent sense of self (Korpela, 1989). *Home*, or the personalisation of dwelling, is the most oft-cited example. A central feature of place-identity is a sense of belonging (Tuan, 1980), not only at the self-defining level but encompassing the collective nature of the relationships between persons, identities and material settings (Dixon & Durrheim, 2000).

The second aspect, place attachment, is viewed as a multifaceted concept, highly shaped by the history of relationships, particularly social groupings. Research conducted by Eisenhauer, Krannich and Blahna (2000) found that reasons for attachment stemmed from interactions at particular places between family and friends that resulted in social bonds. According to Kitayama and Markus (1994), residents with

a longer tenure exhibit greater social interdependence whereas relative newcomers tend to view their relationship to a location independent of their social relations. From a social theory perspective, Coleman (1990) considers that social interdependence constrains the individual from acting independently of broader social traditions. Of relevance to the current study, place attachment includes familiarity with characteristics of the natural environment through recreational activities and associated consumption and material values. People with a strong attachment to place tend to reveal a sense of ownership and pride and respect for places, forming intrinsic emotional connections (Williams & Stewart, 1998). Such strong bonds are cemented by visiting places repeatedly and establishing rituals and traditions of use (Brown, Reed & Harris, 2002). For Tall (1996), who claims that 'a weak sense of the past encourages a weak sense of place' (p. 112), this bond is also predicated on length of tenure in a place. Further, Tall has argued that if the attachment to place is more tenuous, as may be the case for an itinerant workforce, more consumptive or 'use-oriented relationships' with place develop, making for more fragile and provisional commitments.

Landscape, the third dimension, is an important element in the development of a sense of place. Natural places are imbued with symbolic and material meanings that correspond with experience and reminiscence (Kaltenborn, 1998). According to Manzo (2003) people actively shape environmental values and meaning in landscapes well beyond functional values. People relate, often nostalgically, to how a landscape used to be with aspects such as memory and time being important contributors to meaning. Cantrill and Senecah (2001) argue that these recollections act as mediation for engagement with natural resource management practices.[2] Over time, the processes that define sense of place ideally progress from belonging, through attachment, to commitment in landscapes (Kaltenborn, 1998). For Brandenburg and Carroll (1995), however, the complexity of these interacting processes and relationships are neither linear nor easily categorised. Instead they call for approaches that take into account the values that underpin people's decision making as an important reference point for conservation-oriented practices.

The Mining Landscape

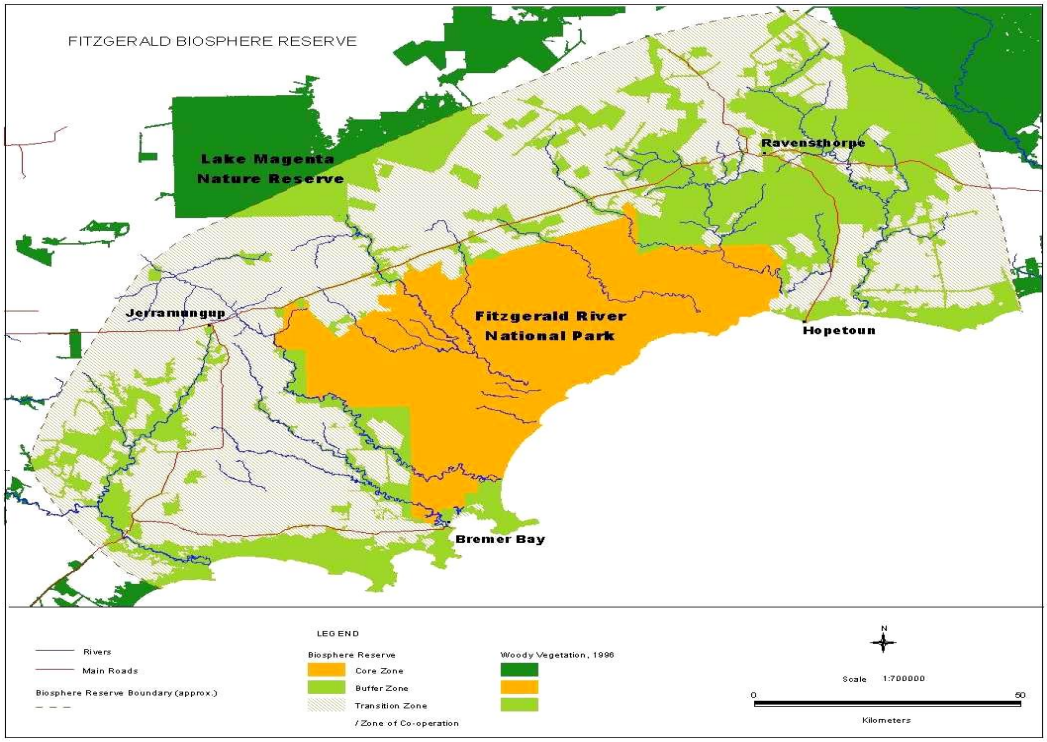
At the time of conducting the study, mining in Australia was in a prosperous phase with high demand and expectations of capitalising on the mineral resources boom. Yet the global economic crisis has now created uncertainty about future mining in the Ravensthorpe area (ABC Goldfields WA, 2008). To date, much of Australia's mineral exploration and mining has been at the level of *low hanging fruit*—identifiable and developed ore bodies relatively easy to access. However, as these resources are being rapidly depleted, exploration is moving into more fragile, remote and relatively undisturbed landscapes supported by new mining technologies (Solomon, Katz & Lovel, 2007) with resultant social and environmental impacts reflected in this study site. Concerns about the unmanaged activities of a newly arrived mining workforce are compounded by a regional protected area management described as 'passive' and

'under-resourced' (Bradby, 1989: 13), largely confined to fire regime and disease management with limited capacity to monitor visitor impacts (SCRIPT, 2005).

The Place and the Issues

Ravensthorpe Shire covers an area of 13,000km² and is located 550kms south-east of Perth in the state of WA. It lies in the eastern aspect of the Fitzgerald Biosphere Reserve (FBR) which contains the Fitzgerald River National Park with World Heritage status (see Figure 1). While described as agricultural heartland, the Shire is experiencing considerable land use change primarily in the form of mining and mining exploration and the recent advent of agri-forestry, specifically blue gum plantations (Shire of Ravensthorpe, 2007).

Figure 1: Map of Fitzgerald Biosphere Reserve



Source: Map courtesy of Greening Australia Western Australia (GAWA).

The history of the Shire of Ravensthorpe is an account of the ebbs and flows of land use change in WA—initially gold and copper mining, then agriculture and, more recently, a mining resurgence. When gold was first discovered at Phillip River (near Ravensthorpe) at the end of the nineteenth century, prospectors converged by foot, boat and horse. By 1905, the gold rush was at its peak and escalating population growth brought with it associated social, infrastructure and land use demands. New

services were established such as banks, police posts, dams, hotels, cemeteries, upgraded port facilities, roads, railways and, eventually, telegraph (Lawrence, 1976).

Intertwined are the histories of two towns—the inland service or administrative centre of Ravensthorpe and, 50kms away, the coastal town of Hopetoun (formerly Mary-Anne Harbour). In 1901, at the time of Australian Federation, both were gazetted as towns. At that time the population of the district was estimated at 500. By 1910 the population had swelled to 3,000 and the Shire possessed 90 gold and copper mines, two government batteries and three smelters (Donaldson & Donaldson, 2000).

Slumps in the world price of copper and depletion of gold reserves led to a closure of mines, banks and smelters from 1911 onwards. By 1920, mining had ceased and it was some 20 years before one of the original copper mines, Elverdton, was re-opened. In the post-WWII era, agriculture replaced mining as the primary driver of economic wealth until early this century. Between 1960 and 1969, in response to a demand for release of agricultural land in WA (specifically around Esperance) bolstered by innovations in soil science and fertiliser usage, new farm blocks were subdivided in the district leading to an agricultural boom.[3]

The remaining mine, Elverdton, was eventually shut down in the 1970s leaving behind a significant tailings legacy. Until recent times, mineral reserves in the Shire have been described anecdotally by local prospectors as a little bit of everything but not enough of anything. This perspective has been altered by the recent construction of Australia's largest nickel laterite mine and processing plant at Bandalup Hill, between the towns of Ravensthorpe and Hopetoun (Clark, 2007).

There has been a long-reported tradition of community involvement in environmental issues in the Shire with strong networks of groups and individuals championing for the protection and restoration of the natural environment. This was most evident in the 1980s when a group of local people successfully petitioned the WA Government to stop land clearing for mining and agricultural purposes (Thomas, 1989; SCRIPT, 2005). More recently, the division between the minority *green* and majority *production* sectors of the Shire has narrowed due to the broader agricultural sector support for landcare programs (West, 2001). However, there have remained ongoing concerns about the sufficiency of extant protective arrangements within the Shire (Buckley, 2007).

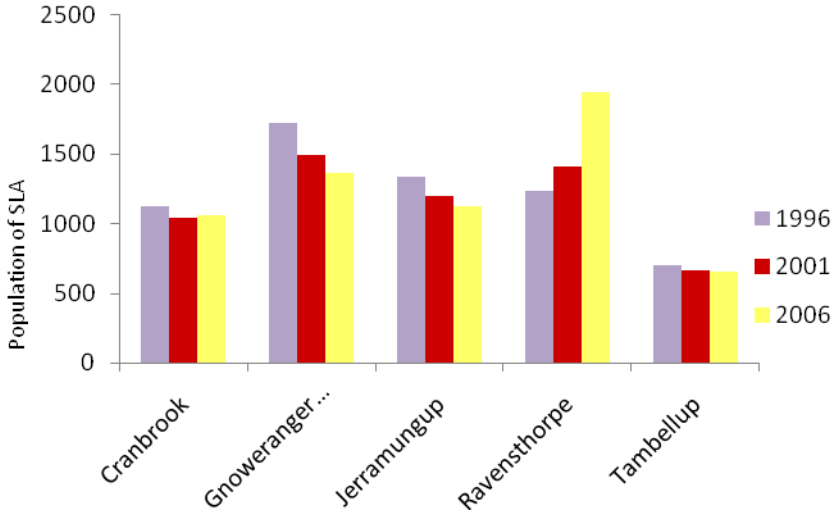
Currently, one third of the Shire's area is agricultural communities, predominantly broadacre farming and wool production. The remaining two thirds is set aside for nature parks and reserves—essentially biodiversity hotspots within what is Australia's only internationally recognised hotspot[4] (Harris *et al.*, 2008)—including over 100kms of protected coastal zones (Shire of Ravensthorpe, 2007). For both locals and visitors this constellation of south coast protected areas features a unique yet fragile Mediterranean-type ecosystem designated by UNESCO in 1979 as a biosphere reserve, the FBR.

A central objective of a biosphere is that people living within the reserve develop sustainable resource use practices. Complicating this objective are recent changes in land use patterns and the identified pressures arising from nature-based recreation, particularly by a newly arrived workforce. In this remote rural setting, resurgence in mining has precipitated a population pull factor resulting in a significant increase of both itinerant (fly-in fly-out) and permanent (on-site) miners and their families.

Demographics

At the time of the 2006 Census, the Shire of Ravensthorpe was primarily an Australian-born, homogenous, male-dominated community. Evidence from the census data also reveals that it is a community in transition from mainly agriculturally-based to mining activities. The Shire has a growing population, the majority of whom are married and are in the 24-49 years age group. It has fewer young people (15-24 years) than the national mean and has high home ownership as well as high rental (ABS, 2007a).

Figure 2: Population of Local Government Areas in Coast (1996-2000)



Source: ABS (2007b).

To illustrate the changing demographics, Figure 2 shows the high growth of population associated with the Shire of Ravensthorpe compared with other shires in the south coast region, namely Cranbrook, Gnowangerup, Jerramungup and Tambellup. For the Ravensthorpe Shire, the growth between the last two census periods is particularly pronounced, from 1,409 persons in 2001 to 1,950 persons in 2006—a growth of nearly 28 percent (ABS, 2007a). Highlighted also in this figure is the growth in Ravensthorpe Shire compared with its near neighbour, Jerramungup, which declined in the same decade. The other south coast shires are largely

agriculturally-based and this underlines the so-called *hollowing out* of rural communities in the past decade.

The changing demographic has created a local perception that these in-migrants lack both an attachment to place and the knowledge to manage impacts of their recreational activities. Although there are landscape scale concerns about mining, long-term residents and natural resource managers question the carrying capacity of this fragile environment to sustain the nature-based recreation incursion of this temporary population.

This study establishes a social baseline of local people and nature-based recreation with the aim of contributing to a broader understanding of the impacts of land use change on protected area management.

Methodology

Data were collected using a community-as-researcher methodology—an approach that recruits local people as researchers. This study was undertaken between November 2007 and January 2008. Informed by a participatory action framework, this approach, known as the Balingup model, incorporates a group of locally identified people who administer a survey to fellow community members (Stehlik & Buckley, 2008). A key component of the model is the role these local researchers play in the development of the survey instrument, ensuring input of local knowledge and context. Community researchers agree to survey a quota of respondents representing a cross-section of key stakeholder interests. This sampling method, described as respondent-driven or social networks sampling (Salganik & Heckathorn, 2004), broadly captures the views of local people and includes identified stakeholder groups, such as farming, mining, off-road trail bike riding and tourism. Table 1 provides an overview of these stakeholders. Importantly, this type of sampling approach serves as a *snapshot* of a selection of the community.

Results

This section outlines a portion of the community survey findings. A discussion of respondents' relationships with the natural environment is followed by a summary of the range and frequency of activities in the Shire's protected landscapes before addressing the ascribed values, potential threats and possible impact mitigation strategies.

One hundred and eighteen respondents completed the survey, representing approximately ten percent of the Shire's overall population. Of interest, 27 percent of this sample has moved into the area within the past three years. Most recently arrived respondents described their occupation as mining or mining affiliated. Analysis of the top three *employment by industry* classifications—agriculture (18%), mining (13%) and natural resource management (NRM) (12%)—and *length of time in the Shire* revealed

some distinct differences in the areas of relationship with, attitude to, and activities and actions within the natural environment.

Table 1: Summary of Stakeholders and Activities

Stakeholder	*Activities*
Local residents	geographical areas specifically targeted include towns, smaller settlements and farming communities within Ravensthorpe Shire
Active wilderness recreational groups	horse riding, managed (club) and unmanaged (independent) motorbike riding, four wheel driving, camping and mountain biking
Passive wilderness recreational groups	wildflower viewing, bushwalking, birdwatching, photography and botanical study
Tourists	local businesses, local promotion groups, tour operators and geological excursions
Economic interest groups	local businesses, farming, mining and apiarists
Environmental interest groups	flora and fauna groups, Friends of the Fitzgerald, NRM networks and scientific community

Source: Original table.

The survey instrument contained a list of statements about relationships with the natural environment. Agriculturalists figured dominantly in statements about management and livelihood relationships associated with the land and also rated highly in terms of statements such as 'I see myself as a custodian or a carer of the environment', 'I study the natural environment' and 'I appreciate the natural beauty'. Survey respondents employed in NRM also rated their role as 'custodian or carer' highly. The statement 'I recreate in natural areas' was the strongest expression of an identifiable relationship with the natural environment by respondents from the mining sector.

Questions about activities established the type, scope and frequency of local residents' nature-based recreating within the Shire. These were separated into passive and active activities due to impact factors (see also Table 1). Highest ranked passive nature-based recreation activities were wildflower viewing, bushwalking, visiting the National Park and birdwatching. These activities were most commonly undertaken in protected areas, although bushwalking and birdwatching were reported in various landscapes. Frequency of passive recreational activities was described as regularly (daily or weekly). For active recreational activities, four-wheel driving and off-road motor or trail biking were the most frequently identified, followed by camping. Importantly, access into many protected areas in the region is via unsealed roads, necessitating off-road vehicle (ORV) usage irrespective of season. Similarly, many beaches in the area are accessible by four-wheel drive or trail bike only and in some locations this includes driving on the beach as a form of recreation as well as a means of accessing more remote locations. ORV activities were generally undertaken often (fortnightly to monthly) and camping occurred occasionally (annually). When examining the impact

of *length of time in the Shire* on type, scope and frequency of activities, the lead passive activity of newly arrived residents was wildflower viewing, while four-wheel driving was the dominant wilderness activity and visiting the beach the leading coastal activity. For longer term residents, bushwalking was the highest ranked passive activity with camping being the main terrestrial activity and visiting the beach the preferred coastal activity.

Values associated with the environment within the Shire were grouped into four categories: natural, visual, social and economic aspects. The top five ranked values within each category are outlined in Table 2. All survey respondents prioritised natural values (flora, biodiversity and fauna) over the remaining categories, followed by visual (aesthetics), social (ease of access) and economic (tourism) aspects. Significantly, recently arrived people assigned *unlimited recreational opportunities* as highest valued followed by *future mining discoveries*, while for longer term residents the values of *personal connection with the area* and *childhood memories* dominated. Such findings accord with Brereton and Pattenden's (2007) assessment that the so-called new residents of the Shire are more likely to profile as the traditional and transient mining worker who are 'more affluent, have increased leisure time … and bring with them differing value-sets and aspirations' (p. 2).

Table 2: Categories and Values

Categories	***Values ranking***
Natural	flora/plants/wildflowers (1)
	biodiversity richness (2)
	fauna/animals (3)
	natural setting (4)
	wildlife corridor (5)
Visual	aesthetics (1)
	relatively untouched (2)
	panorama (3)
	uniqueness (4)
	interesting land forms (5)
Social	easy access (1)
	not too many tourists (2)
	education (3)
	unrestricted recreational activities (4)
	personal connection to the area (5)
Economic	tourism (1)
	sustainable business ventures (2)
	farming (3)
	current mining activities (4)
	future mining activities (5)

Source: Original table.

Perceived threats to protected areas varied depending on the length of time respondents had lived in the Shire. Short-term residents consider the greatest threats to the environment to be *farming*, *land clearing* and *lack of environmental management*. *Overuse* was considered the greatest threat by longer term residents, followed by *increased traffic* and *too many tourists*. Interestingly, the exercise of prioritising threats to the environment revealed the underlying tensions and divisiveness linked to land use and land use change for this community.

A final aspect of the study was an analysis of suggestions by research respondents of ways to ameliorate impacts of recreational activities. Open-ended responses ranged from maintaining the status quo to imposing restrictions on access and activities as measures of environmental protection. Strong concern was expressed by local people about the possibility of being *locked out* of protected areas, which was contrasted by high levels of agreement for minimising, controlling and monitoring visitors in particular areas—in essence an *us* and *them* binary. A middle road was to educate people on off-road protocols while introducing reasonable measures to minimise impact such as limiting access during the rainy season to prevent the spread of fungal dieback[5] (Phytophthora Cinnamomi).

Evident from consultations with local people involved as community researchers with the project was a desire for workable solutions involving the community—local people don't want to be shut out of the protected areas nor do they wish to be excluded from decision making. This concern was based on past experience where access decisions had been made without community involvement—a situation that has been reported as very divisive in such a small community. As Bushnell (2003) argues, denying use of resources and avenues of participation to local people severely reduces their incentives to conserve.

Conclusion

The results of the study confirm an active recreating community participating in and deriving pleasure from an array of nature-based pursuits. There is considerable evidence to confirm anecdotal claims that the newly arrived population is highly engaged in both passive and active activities, taking advantage of few restrictions on access to protected areas. What is less clear is relative newcomers' understanding of the environmental effects of recreating and their willingness to increase their awareness. While longer term residents claim a stewardship role with regard to the natural environment—supporting evidence in the literature on identity formation—they too are engaged as nature-based recreation users, albeit in chiefly low impact activities. There does appear, however, to be an under-reporting of high impact activities, especially four-wheel driving, which may in part be due to the normalising of ORV transportation rather than necessarily viewing it as a form of recreation. If there are established—formal or informal—rules and norms about exploring the local environment, there is uncertainty about whether these have been communicated to the newer members of the community. Extant formal mechanisms exist, such as the

Control of Vehicles (*Off-road Areas) Act 1978*, legislating protective practices, however, enforcement has been identified as problematic.[6] For the WA Trailriders' Access Rights Coalition (WATARC), club membership has many advantages including being able to communicate and model off-road protocols although this does not guarantee compliance. Individually, some longer term residents appear to be opting for the status quo, although local recreational clubs could play an enhanced role in imparting local knowledge about sustainable recreational practices.

Overall, the findings of this study support conceptions in the literature about sense of place and place attachment, particularly the use-oriented relationship with the natural environment for recently arrived residents, as well as the intrinsic significance of the landscape for longer term residents. Striving for responsible nature-based recreating presents an opportunity as much as it offers a challenge. According to a number of recent studies, community groups, particularly cultural and sporting, figure strongly in the social fabric of the Shire (Donaldson & Donaldson, 2000; Brereton & Pattenden, 2007; Williams *et al*., 2008). Engaging with and welcoming newcomers into various community groups may potentially produce broader benefits, both social and environmental.

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Notes

1 An abridged version of this paper appears in MMV4 Conference Proceedings: Buckley, A. (2008) Right or responsibility? Local people as 'visitors' in protected areas on the south coast of Western Australia. Fourth International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas, National Research Council, Montecatini Terme, 14-19 October, pp 363-7.

2 Research into the main motivators for people taking action in environmental conservation has established that childhood experiences of the outdoors or nature is the single-most important factor in developing personal concern for the environment (Hungerford & Volk, 1990).

3 Historic account derived from www.ravensthorpe.wa.gov.au/our_community (Retrieved: 4 June 2008).

4 A hotspot comprises two key elements: an exceptional level of plant endemism—or uniqueness to a place—coupled with a serious level of habitat loss (Myers, 1988). In 1990 the south coast region of WA was included in the 25 globally recognised biodiversity hotspots specifically as a key Mediterranean-type ecosystem. Almost 80% of the plant species in this location are found nowhere else in the world. For further information see www.biodiversityhotspots.org/xp/hotspots/hotspotsscience/Pages/hotspots_defined.aspx (Retrieved: 12 January 2009).

5 Dieback is a soil-borne pathogen chiefly spread through the transport of infested soil which adheres to vehicles and heavy machinery, particularly earthmoving equipment (Department of Environment & Heritage, 2004). Currently the spread of dieback in the Shire is minimal compared to parts of the south coast region with greater rainfall (South Coast NRM and Australian Dept of Environment and Heritage, 2008).

6 Response to DLGRD Position Paper: *Control of Vehicles (Off-road Areas) Act 1978* (July, 2006) prepared by Trail Bike Management Pty Ltd for the WATARC. Retrieved: 13 January 2009 from www.rtra.asn.au/docs/WATARC_response_to_ORV_Review_0607.pdf.