



VNPA Comments on the Broadcast Australia Pty Ltd/Residential development/Cnr Sydenham and Taylors Roads, Sydenham/VIC/Clearing of Land for Future Urban Development.

**EPBC Reference Number 2008/4453,
Public Environment Report 250 Taylors Road, Delahey.**

Overview

The Victorian National Parks Association (VNPA) is Victoria's leading community conservation organisation.

The proposal is to clear a significant area of the EPBC-listed critically endangered ecological community Natural Temperate Grasslands of the Victorian Volcanic Plain (NTGVVP) containing two species listed as critically endangered under the EPBC Act.

The proposed Action has been deemed to impact on matters of National Environmental Significance due to the following:

- Clearing 33.63 % (22.26 ha) of existing NTGVVP from the site;
- Clearing 22.70 % (12.81 ha) of existing Golden Sun Moth habitat from the site; and
- The loss of 19 Spiny Rice-flower plants.

There also appears to be small area of Grassy Eucalypt Woodland of the Victorian Volcanic Plain which was recently listed under the EPBC Act.

Considering the dire state of Natural Temperate Grasslands of the Victorian Volcanic Plain, the VNPA considers that this proposal to clear is inconsistent with the objectives of the EPBC Act.

The VNPA believes the clearing of this site as proposed should not be allowed to proceed, and that all areas of critically endangered Temperate Grasslands of the Victorian Volcanic Plain, particularly (as here) where a very significant population of the critically endangered Golden Sun Moth and Spiny Rice-flowers is located, should be retained.

Introduction

Broadcast Australia Pty Ltd (BA) owns a 95 ha site at Delahey, on the north-western outskirts of Melbourne ("the Site"). Part of the Site is used to provide broadcast radio services.

The Site supports a high-quality example of at least 70 ha of a nationally critically endangered ecological community (Natural Temperate Grasslands of the Victorian Volcanic Plain), a number of other associated vegetation complexes including Plains Grassy Wetland (considered extinct by the State government) and small area of plains grassy woodland.

The Site contains a significant recorded population of the nationally critically endangered Golden Sun Moth (*Synemon plana*), and a population (in the order of 19 individuals) of the nationally critically endangered Spiny Rice-flower (*Pimelea spinescens* subs. *spinescens*).

The area is also prime habitat for a number of other species such as the Striped Legless Lizard, Growling Grass Frog and Fat-Tailed Dunnart, though none were recorded in field surveys. However, this result may be more to do with the survey methodology.

The proponent is proposing to clear 51 ha of the southern portion of the site and retain the rest as a conservation reserve and radio transmitter station. In so doing the proponent proposes to clear 23 ha (33%) of the total 69.55 ha of grassland for a potential residential development. In addition to this, the further clearing of 12 ha (21%) of a total of 54.67 ha of Golden Sun Moth habitat is proposed.

Issues

1. **Golden Sun Moth:** Because Habitat Zone A & Ar has been demonstrated to be critical habitat for the Golden Sun Moth, the clearing of this site as proposed should not be allowed to proceed. The Commonwealth has taken a similar position in respect to Golden Sun Moth habitat at Truganina South, west of Werribee, and the VNPA urges that a consistent approach be adopted here.

The report by Brett Lane and Associates demonstrates that the Golden Sun Moth is quite extensive across the site, both in the north and south and covering over 80% of the total area, and this is thought to be the second-largest currently known population in the Greater Melbourne area. This assessment is based only on a limited survey, and the population may be more significant than reported in the referral.

On the basis that a limited survey has shown that the moth populations are highly significant and may be some of the most significant around Melbourne, the VNPA urges the Commonwealth to reject the proposal.

2. **Habitat Zones F,G,E Fr** are of particular significance. They comprise an area of approximately 10 hectares in the south-west corner which is of very high conservation significance and has no history of cultivation. This area retains the original species of the *Themeda triandra* based framework of the Natural Temperate Grasslands of the Victorian Volcanic Plain. This is evidenced by the presence of most the Spiny Rice-flower population (*Pimelea spinescens*). By contrast, most of habitat zone A (70 hectares) is dominated by *Austrodanthonia* and *Austrostipa* spp that have recolonised the site after long-past cropping activities.

The habitat scores for Habitat Zone F,G,E Fr, though high enough to result in a conservation significance of Very High, are lower because most of the herb layers (as reported in the Public Environmental Report) were dormant. Also, the survey was carried out in September 2005, during a period of sustained drought and at a time when seasonal exotic species are at their maximum dominance. Native grassland species peak later in the season. The VNPA notes that an assessment in late spring in a wetter year such as this year would almost certainly yield a far high diversity of native flora in this zone.

This area also contains records for 19 individual Spiny Rice-flower specimens (zone F), as well as the state listed endangered Tough Scurf-pea (see original Referral Appendix II)

Though the VNPA does not support any development at all on this site, we recommend that in the event of any development being permitted in the southern portion of the site, the vegetation in this zone should be retained, with an attachment to the proposed conservation zone around

the antenna areas to the north.

- Habitat Zone C & D** (0.8 hectare, habitat score 0.5). This small area of very high conservation significance vegetation (Eucalypt Woodland of the Victorian Volcanic Plain) is in the extreme north edge of the development. Regardless of whether some development is permitted in the south-east or not, this area could easily be retained by incorporating it into the adjacent conservation zone to the north. The vegetation is relatively intact for this landscape.

The VNPA recommends that this zone be excluded from any permitted development and added to the conservation zone. Likewise, retention of zone D may also allow the conservation area to be consolidated, and it contains the state-listed Small Scurf-pea.

Retention of these areas would ensure that the key values of the site are retained. See attachment I of outline of proposed areas to be retained.

Discussion

A range of studies have highlighted the values associated with Melbourne's grasslands. For example:

"The grasslands around Melbourne are floristically distinct to those in rural areas in western Victoria and contain threatened species not found at other site " (Williams 2005)

"Recent developments in the field of conservation planning and reserve design have emphasised the need to conserve areas based on their "irreplaceability" (the contribution that a site will make to the reserve network) and vulnerability (the likelihood of an area being destroyed or degraded)...Because of the very small amount of native grassland remaining in Melbourne, it is likely that all sites supporting native grassland in the region are irreplaceable and of great conservation value for any reserve system." (Williams 2005)

Many smallish areas have been found to be viable and to maintain biodiversity. There should be no set minimum size for grassland reserves; instead, areas for retention should be assessed on the basis of:

- species richness
- intactness/condition
- landscape context and connectivity, as part of a habitat corridor
- extent of occurrence of key species e.g. Nationally and State significant species; and
- irreplaceability
- role in ecological function/process
- reserve design and management opportunities.

There are many small grassland areas which, with appropriate management, can be effectively managed for conservation. Examples include Evans Street Grassland in Sunbury (3 ha), Central Creek Grasslands in the Merri Catchment (Ngarri-djarrang), Cooper Street (40 ha), Altona Reserve (4ha), etc. Also key species such as Golden Sun Moth occur in smaller sites. For example, of the 50 known sites for Golden Sun Moths, around half are less than 10 ha in size.

Williams (2005) notes that *"...current government conservation planning policy is to create a reserve system with an emphasis on long-term viability, thus there (is) a concentration on larger sites away from urban areas...This policy assumes that urban grassland reserves are not viable in the long term, despite evidence that with appropriate resources and management they are able to persist and maintain the majority of their biological value."*

Many grasslands are currently degrading owing to surrounding areas of non-remnant or poor quality paddocks that are often poorly managed from an ecological perspective (increased exogenous

disturbance, eg. by Serrated Tussock infiltration and or active spraying for weed control). It is arguable that turning the surrounding non-remnant and poor quality paddocks ('dead land') into housing will decrease the amount of exogenous disturbance, and if combined with active management, will create viable conservation areas. Various studies have found that native grasslands are relatively insensitive to area and isolation-based fragmentation effects, and habitat quality is strongly influenced by management levels and by the landscape matrix surrounding remnant patches through changes in fire regimes and increased external disturbance (Williams et al 2006, Williams et al 2005)

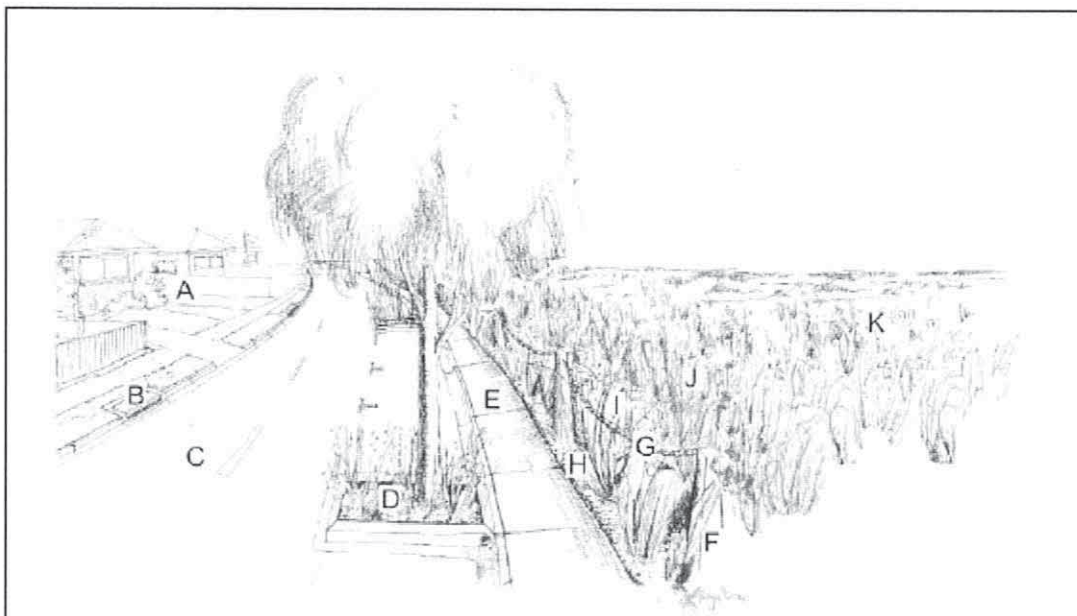
William et al 2006 comment that: "This study extends these findings to include evidence that the landscape surrounding remnant patches, as well as the quality of the habitat maintained within the remnant, may be more important drivers of fragmentation effects on plant species than spatial attributes of patches, such as area and isolation"

Any reserve will require appropriate management, but should also include good design principles. There is an extensive body of knowledge and experience being developed for management and design of urban grassland reserves. There is also evidence that these reserves have community support and provide opportunities for local communities to understand the nature of their environment. Williams (2005) highlights some key design features, outlined below.

These design principles should be included in the conditions for any permit or approval and be translated into action through the establishment of a conservation master plan and management plan. The spatial design and interface issue should be addressed through the master plan process and inform the conservation management plan.

Based on final approval, consideration should also be given to ensuring that any development is separated by a road and appropriate fencing to improve management, particularly for fire.

Figure - Design of proposed buffer for residential or commercial development adjacent to native grasslands.



The diagram incorporates many of the ideas presented in the paper Williams, N.S.G (2005) Management strategies for preventing weed invasion in urban grasslands.

Legend:

A – New residential development. B– Storm water drain taking water away from grassland.

C – Road, footpath and car parking act as wide fire break. D – Planting cut-out containing compatible native street trees and understorey planting. E – Footpath draining away from grassland. F – Fire resistant fence posts.

G – Fence or chain and bollards to prevent vehicle, bicycle and control pedestrian and pet access. H – Granitic sand to prevent weed invasion along path edge.

I – Dense ornamental indigenous plantings to deter pet access.

J – minimum 15 m dense buffer zone planting of kangaroo grass.

Conclusion

The Taylors Road site is sufficiently large to maintain a viable grassland reserve. Additional clearing of grassland on the site will increase fragmentation and pressure on any remaining reserve.

We believe that clearing of this site should not be allowed to proceed, on the basis that there are both high quality examples and a relatively large area of critically endangered Temperate Grasslands of the Victorian Volcanic Plain. In addition to this, the site supports a very significant population of the critically endangered Golden Sun Moth.

If development does proceed, it should be further limited to the eastern corner of the site, and high-conservation areas (Habitat Zones F,G,E Fr) and Habitat Zones C& D should be retained.

Consideration should also be given to location of roads, and appropriate design guidelines should be included in any development approval.

References

Williams, N.S.G (2005) *Management strategies for preventing weed invasion in urban grasslands*, Australian Research Centre for Urban Ecology, Royal Botanic Gardens, Melbourne, Australia. *Plant Protection Quarterly* Vol.20 (1), 2005, 15.

Williams, N. S. G., Morgan, J., McDonnell, M. J., McCarthy, M. A. (2006). *Local extinction of grassland plants; The landscape matrix is more important than patch attributes* *Ecology*, 87(12), pp. 3000–3006.

Williams N.S.G., Morgan J.W., McDonnell M.J. and McCarthy M.A. (2005) *Plant traits and local extinctions in natural grasslands along an urban - rural gradient*. *Journal of Ecology* 93, 1203-1213.

ATTACHMENT 1.



*Area to be returned
if development
proceeds.*

Figure 6. Distribution of Golden Sun Moth



Legend		0 50 100 200 Meters		Development parcels, Buffer zone and GSM habitat zone	
Site	GSM Habitat Zone	NTGVVP		Broadcast Australia, Delahey	
Future Development Zone	Open Space Buffer	Habitat Zone		Client: Broadcast Australia	
Road Alignment				Project No: 6142	Date: 22/06/2010
North Conservation Zone				Created by: I. Kulk / L. Braun	
				BL&A <small>Ben Lane & Associates Pty Ltd</small> <small>Ecological Knowledge & Management</small>	
				<small>Experience</small> 300+ National Sites <small>95 000 0000 0000</small> <small>fax 9139 9697 6110</small> <small>Knowledge</small> 110 000 0000 - Carlton North <small>blane@bllandassociates.com.au</small> <small>Solutions</small> 100 000 0000 <small>www.bllandassociates.com.au</small>	