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To the  
Commissioner for Sustainability and the Environment

**Submission**  
**Investigation into Canberra Nature Park (nature reserves); the Molonglo River Corridor; and Googong Foreshores**

**INTRODUCTION**

The Mt Ainslie Weeders, Friends of Mt Majura and Watson Woodland ParkCare groups welcome this investigation into Canberra Nature Park (CNP) and the opportunity to contribute to the investigation. For the purpose of this submission, our groups' focus is on the area in which we work.

CNP is an assembly of urban public land with an overlay of nature reserve. The reserves are managed primarily for conservation of biodiversity and secondly for recreation, education and research. The character of Canberra as the "bush capital" is distinguished by CNP and makes it unique among cities of the developed world. This in itself is something to value and take pride in. The bushland provides opportunities for people to connect with, experience and enjoy nature at their doorstep.

The importance of the proximity of the bush to urban areas should not be underestimated in the context of equity and wellbeing. The investigation should embrace the social aspects and consideration be given to invest in the public's safe experience of CNP.

The presence or absence of high conservation values in urban nature reserves, such as threatened species, endangered ecological communities, or sites of geological or cultural significance, should guide management strategies for specific CNP units that contain these values.

**TERMS OF REFERENCE ADDRESSED (Refer points 1 – 8)**

**1. Assess Condition**

The Mt Ainslie and Mt Majura nature part units contain significant remnant Yellow Box-Red Gum grassy woodland (YBRG), which is listed under the Nature Conservation Act 1980 (ACT). The grassy woodlands occur on the lower mountain slopes and merge into sclerophyll forest on the upper slopes and grassland on the eastern slope of Mt Ainslie. They contain habitat for

threatened or declining species. Past and current land use adjacent to and within the nature reserve severely impacts on the conservation values, particularly of the YBRG. Some of the impacts are woody weeds from suburban development; increase of pest species that benefit from the human environment; a host of herbaceous weeds and physical disturbance stemming from implementation and maintenance of transmission lines and other utilities; modification of the vegetation structure and composition caused by mowing and slashing in conjunction with fire fuel reduction and the spread of weeds from horse holding paddocks.

1.1 The Majura horse holding paddocks are situated within the Mt Majura nature reserve and uphill of the Watson Woodlands and Justice Robert Hope Park. Management of the paddocks has destroyed values within the paddocks and negatively impacted on the values of the surrounding reserve. Management actions, such as application of superphosphate, overstocking during drought and continuous supplementary feeding that introduced weeds, in combination with a lack of any weed and rabbit control, have led to land degradation on and off site and resulted in loss of native ground cover and top soil crust, soil compaction, sheet erosion, weed invasion within the paddocks and weed spread in the adjoining reserve (Attachment 1 Figure 1).

1.2 Unsustainable grazing pressure of grassy woodlands by vertebrate herbivores results in the depletion of native ground cover, bare ground, erosion and weed infestation.

Grazing as a measure to reduce fire fuel must be carefully considered to prevent further degradation of grassy systems within CNP and adjacent land. Grassy systems are already pressured and require periods of good recruitment to replenish the seed bank. Within the past ten years native perennial grass species in the Mt Majura/Mt Ainslie complex had only one significant seed set in the 2005/06 growing season. Several perennial grass species, such as *Dichelachne* and *Austrodanthonia*, have been lost from some areas (Attachment 1 Figure 2).

1.3 On Mt Ainslie there are many unofficial tracks used by mountain bikers that have caused damage and erosion. There is no enforcement to halt this inappropriate use of the nature reserve and repair / rehabilitation work is badly needed but not forthcoming. Enforcement of rules is required prior to or in conjunction with repair.

1.4 Parts of walking tracks are badly worn, actively eroding and pose a safety risk to visitors. Consideration should be given to the financial and environmental costs of postponing repair (Attachment 1 Figure 3).

## **2. Actions to protect and enhance**

### **2.1 Control of rabbits.**

A continuous commitment is required for a Canberra-wide integrated rabbit management program to halt and reverse the decline of ecosystems. We propose an initial five year program to design, implement and deliver a control program with a full time staffing position to strengthen pest management in the ACT. Further details on rabbit control are given below in 8. Existing Federal programs, such as *Caring for Country*, should be considered to part-fund a Canberra- wide rabbit management plan.

## 2.2 Control of other vertebrate pests

Hare numbers have increased in recent years and are regularly seen on the lower and mid slopes of Mt Majura, including in the area that supports the endangered Canberra Spider Orchid. As far as we are aware, hares on land adjoining the nature reserve are controlled, however, they are not controlled within the reserve.

Foxes are also observed on a regular basis. Their number seemed to have increased along with those of rabbits and hares over the past few years. Foxes must be controlled to reduce impact on native wildlife.

We suggest an efficient program to control hares and foxes. Although the proximity of CNP to suburbs restricts control methods, this should not be used as an excuse to do nothing about the problem.

## 2.2 Majura horse holding paddocks

We recommend a change of land use from special purpose reserve to nature reserve to formally protect conservation values of Yellow Box - Red Gum grassy woodland within the paddocks. In agisted areas, management practices sympathetic with the nature reserve and endangered grassy woodland should be adopted.

## 3. Review land management programs and practices

3.1 A number of nature conservation policies and strategies, Acts and plans of management are relevant to CNP. The CNP Management Plan (1999) (MP) outlines management strategies for CNP.

The MP is overdue for review (ACT Planning and Development Act 2007). It needs to be amended to incorporate new nature reserves and nature conservation policies and strategies, such as Action Plans 27 and 28 (Lowland Woodlands; Lowland Native Grasslands) that were introduced after 1999.

The MP provides for a range of management strategies and actions that were not implemented during its life: for instance, the development of management strategies for each CNP reserve to reflect the specific values, management objectives and requirements of each reserve. Control actions, including some of high priority, have been approached in an ad hoc and one-off manner, with little if any result: for example, actions to manage pests.

## 3.2 Enforcement

Ongoing issues include dogs off-leash attacking visitors and wildlife; mountain bike riding off permitted tracks; dumping of garden waste; planting of inappropriate species; erecting installations within the nature reserve (garden extensions, BMX tracks). Uncontrolled dogs are a primary concern for visitor safety. It is felt that little has been done to enforce the Act relevant to dog control in public spaces/nature reserves. Signage is missing or not replaced after vandalism.

## 3.3 Exotic plants

3.3.1 A code of control action needs to be developed to protect conservations values. For example, cutting and dabbing woody weeds rather than the use of foliar spray, as the latter

impacts on ground cover vegetation; removal of large amounts of woody debris following cut-and-dab control to reduce fire fuel and rabbit shelter; exploration of other methods of control, such as frilling (Attachment 1 Figure 4).

3.3.2 The list of species not to be sold by nurseries needs to be reviewed and amended. For example, *Grevillea rosmarinifolia* should be included in the list.

3.3.3 A data base of sites with significant weeds (e.g. Serrated Tussock and Blackberry) should be developed to assist weed management.

3.3.4 The ACT Weed Strategy 2009-2019 should be implemented and adequately resourced.

### 3.4 Majura horse paddocks

Agistment should be permanently removed from the following areas: endangered YBRG grassy woodland; YBBR grassy woodland grading into mature Brittle Gum open forest; habitat of endangered and declining woodland species; drainage lines; areas with soils that are prone to compaction and erosion. Actively eroding and degraded slopes should be rectified by replanting and sowing stabilizing vegetation.

### 3.5 Buffer zones

Buffer zones are widely applied strategies in conservation management to integrate conservation with development. They are peripheral zones of strictly protected core conservation zones and subject to restricted use with the aim to reduce the negative impact of conservation on neighbouring land uses and of neighbouring land uses on conservation.

Recent approvals of developments bordering nature reserves with high conservation values attribute a buffer function to roads. However, the buffer function of a road is unilateral.

A road around the perimeter of a development bordering a nature reserve cannot be considered a sufficient buffer zone. It would not protect the bushland flora and fauna from invasion by dogs, cats, weeds etc. and in the event of a bushfire, a wide area of the nature reserve would be bulldozed to protect human life and property, but to the detriment of the reserve.

A buffer zone strategy must work in both directions, particularly for areas with high core conservation values. Land use and management that are compatible with buffer zones must be identified.

### 3.6 Infrastructure and maintenance

Facilities and installations such as electricity transmission lines, substations, water reservoirs and distribution installations, sewage, water mains, telecommunication services, and maintenance road networks are situated in CNP. This infrastructure should be part of the investigation as it impacts significantly on both CNP management objectives as stated in paragraph 3 of the Background section to the Terms of Reference. For instance, the ACTEW transmission lines and associated easement that dissect the Mt Ainslie and Mt Majura nature reserves impact on the visual amenity and landscape values of the reserve, act as a wildlife barrier, have destroyed endangered ecological communities when constructed, and require ongoing maintenance work that promotes erosion and weed spread. Including the effects of infrastructure in the investigation could guide improvements in the current management

regime (Attachment 1 Figure 5).

3.7 Conservation objectives should be given prominence when conducting slashing and mowing in CNP units. Equipment needs to be set at appropriate cutting heights and slashing should be conducted only after native grasses have set seed. Weeds can be spread from equipment which has not been thoroughly cleaned between jobs. Furthermore, there are two different agencies managing slashing and mowing: one for Urban Parks and one for CNP. These agencies need to communicate better with one another when managing the interface between Urban Parks, road verges and CNP where overlaps occur.

#### **4. Urgent actions and long-term changes**

4.1 In our opinion, grazing pressure must be reduced as a matter of urgency and sites containing endangered species (e.g. Canberra Spider Orchid) must be protected (fenced off).

##### **4.2 Protection of cultural heritage sites**

Mt Majura nature reserve contains a number of significant sites and objects relating to early European settlement and land use of the area. A post-and-rail fence predating 1886 is one of the few boundary fences of this type in the ACT. To our knowledge, there have been no plans or action to document, interpret and protect this fence and it has visibly disintegrated over the past few years. Members of the local ParkCare group found a number of other objects relating to early planning and rural land use, such as an old surveyor's mark and examples of ring-barked trees, which appear not to have been documented.

The above example is just one among many, including indigenous sites. Surveys, documentation and active on-ground intervention are required to protect significant sites and objects.

##### **4.3 Offsets**

Offset legislation should be implemented urgently. Otherwise, there will be nothing suitable left to offset. See ToR 7 below for further details.

#### **5. Knowledge gaps, research**

5.1 Fire management, the efficiency and effects of grazing, management practices, and monitoring techniques require long-term research and are still poorly understood. Simple experimentation and careful old-fashioned observation are still required to fill in significant knowledge gaps. Many of these initiatives need not cost a lot of money. Community groups should be encouraged and supported to assist with this work. See ToR 6 below.

5.2 Training in the use of technology (e.g. GPS) for both CNP staff and ParkCare volunteers would enhance management practices and provide increased efficiency.

#### **6. Effective communication and involvement**

6.1 Good communication between service providers, land managers and other stakeholders,

such as ParkCare, is crucial.

6.2 The efficiency of rabbit control could be significantly increased by involving the community in monitoring active rabbit warrens and by investing in training, and developing and implementing efficient monitoring methods to identify threshold numbers and the success of control programs.

6.3 ParkCare is generally considered a successful example of government and community working together. In 2009/10, volunteers spent in excess of 1500 hours surveying and mapping rabbit warrens on Mt Ainslie and Mt Majura. Clearly, PCL rangers could not have done this as well as attend to their other duties. Dedicated volunteers also do many hours of other work in CNP, particularly weeding. They develop an intimate knowledge of their patch and can become experts in many aspects of their work. This should be valued and nurtured by government and recognized as a valuable investment.

The range and extent of volunteer participation should be increased to capitalize on the significant, ongoing growth in the number of older retired people in our community with time on their hands and an increasing awareness of environmental issues. A targeted approach to this group within the community would generate a far larger 'army' of volunteers to assist PCL to deal with increasing pressure on the environment in a shrinking financial climate, and generate social and health benefits for those involved.

ParkCare should be strengthened by the appointment of a second coordinator (northside and southside) and a schools education program should be considered.

## **7. Biodiversity offsets**

Continuous fragmentation and strangulation of ecosystems by infrastructure and residential development are by far the most significant threat to biodiversity and other conservation values of CNP.

Our groups fully support the principle of biodiversity offsets and are aware that the ACT government is investigating offsets legislation. It should be noted that other states already have such legislation in place: for example, NSW Threatened Species Conservation Amendment (Biodiversity Banking) Bill 2006. A recent article in *The Canberra Times* (30 January 2010, "NSW road to destroy critical bushland" by Megan Doherty) offers a positive demonstration of an offset policy and concludes "...it was usual...for much more land to be offered as an offset than was actually being affected."

### **7.1 Some key principles**

#### **7.1.1 Additionality**

Offsets must be additional to current regulatory requirements and best practice on-site environmental management. Protecting existing habitat only provides an additional conservation outcome where the habitat is good quality and is:

- under real threat of clearing or
- is in significant decline in quality or

- is not of good quality and is actively managed in perpetuity to achieve a gain in biodiversity values equivalent to the loss

It should identify high priority areas such as grassy woodland integrating into temperate grassland, grassy woodlands of certain types and quality, listed ecosystems and habitats of listed species. It should give preference to large areas over fragmented small islands.

#### 7.1.2 Like-for-like

There is a need to ensure that offset and impact sites are located within the same bioregion/sub-region, that the offset will improve environmental quality and the offset will provide the same type of habitat with the same functional role for species (e.g. hollows for breeding) or ecosystems (e.g. corridors) as is impacted to ensure the maintenance of ecosystem function.

#### 7.1.3 Permanence

There is a need to ensure that offset sites are legally protected and managed in perpetuity and that compliance audits and monitoring are conducted to ensure that predicted gains translate into actual gains.

#### 7.1.4 Ratio

There must be an offset ratio applied that reflects the conservation significance of the area being offset and the uncertainty regarding whether the conservation objectives will be achieved.

### 7.2 Site identification

In 2002 a variation of the Territory Plan (TP) was enacted that removed land from public land: nature reserve and placed it into public land: special purpose reserve (horse holding paddock). The variation was based on advice that the land had no tree habitat but suitable pasture for grazing (Variation to the Territory Plan No.182 – Public Land – Nature Reserve Yellow Box Red Gum Grassy Woodland (Tuggeranong Hill, Mt Majura and Mulligans Flat) and the Aranda Snow Gum Site. April 2002). In fact, the opposite is true: the land, situated on partly steep terrain, has one of the highest tree habitat values in the area, with hollow-bearing mature Yellow Box, Red Gum and Brittle Gum trees that provide habitat for breeding Gang-gang cockatoos and other hollow-dependant species; the ground cover consists mainly of litter and heath and a few scattered patches of sparsely growing spear grass. Over the past seven years Friends of Mt Majura parkcare group made numerous presentations to Government and Government agencies in regard to the replacement of the southeast paddocks back into nature reserve.

Our submission identifies a larger area for a proposal which we believe meets the criteria for a biodiversity offset. We recommend that the remaining unleased Territory land east of Antill Street and the Commonwealth designated land with a special purpose Pd public land overlay be managed for biodiversity conservation and as a corridor connecting lower slope endangered grassy box woodland to Mt Majura.

Criteria met under offset principles

#### 7.2.1 Additionality

The unleased Territory land is currently zoned as CZ6 commercial in the ACT Territory Plan. The offset proposal seeks to rezone this portion to public land with a 'Pe' urban open space overlay (the same land use zone as for Justice Robert Hope Park west of Antill Street). The unleased designated land currently managed as horse holding paddocks and agistment with a Pd special purpose overlay should be managed for conservation and incorporated into the nature reserve system. The additional land would provide a wildlife corridor that completes the altitudinal succession between good-quality endangered grassy woodland in Watson and Hackett to the Canberra Nature Reserve on Mt Majura. These changes would require a Variation to the Territory Plan.

#### 7.2.2 Like for like

The offset sites (Watson, Hackett) and impact sites (Watson and Gunghalin) are clearly located within the same bioregion. They consist of the same Yellow Box/Red Gum grassy woodland to that which existed on the impact sites. Provided that grazing can be minimized, the potential for restoration is good and would provide for further biodiversity resilience.

#### 7.2.3 Permanence

This has to be provided in the terms of a Variation to the Territory Plan. If the proposal is supported in principle, it would involve consultation between a wide ranging constituency of stakeholders. We feel that similar predicted gains would translate into actual gains.

#### 7.2.4 Ratio

The proposal seeks to offset land ratios equivalent to those practiced under other states' legislation.

### **8. Grazing pressure**

8.1 Grazing pressure from a large number of herbivore vertebrates affects not only the native ground cover layer but prevents natural regeneration of indigenous shrubs and trees, impacts on soil, promotes weeds and makes rehabilitation difficult if not impossible. Work to control weeds and erosion is not sustainable and resources are wasted if grazing pressure is not reduced and managed on an ongoing basis. In our opinion, unsustainable grazing pressure is the key process for weed persistence and spread once it is introduced into the system, for erosion, and for loss of biodiversity (Attachment 1 Figures 6).

8.2 Rabbits are on the rise in Canberra and elsewhere in Australia. The increase of numbers is associated with a build-up of RHD immunity in populations. Recent surveys reveal high densities of rabbit warrens / burrows in CNP. A 2008/09 survey of 400 ha of the lower slopes of Mt Majura and Mt Ainslie found a density of 1.67 per ha. A 2009/10 survey of 1053 ha of Mt Majura and Mt Ainslie, including the steep slopes, found 1.05 per ha. A survey of 63ha on Mt Painter in 2010 found 4.6 per ha. Note: rabbit control was conducted in the 2008/09 surveyed areas of Mts Majura / Ainslie. The immediate post-control survey suggests significant reduction of warrens / burrows numbers. However, reinvasion has already occurred, most likely from areas that were not included in the initial control program.

8.3 Most people understand that the bush islands of CNP have a limited capacity to support herbivores, including kangaroos, and that numbers must be managed to promote healthy systems. Public demonstrations, such as the enclosure fence on Mt Majura, can further raise awareness of unsustainable grazing pressure. Despite inevitable public opposition, the debate to cull kangaroos should focus on the drastic consequences of doing nothing.

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