



**LEGISLATIVE ASSEMBLY**  
FOR THE AUSTRALIAN CAPITAL TERRITORY

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STANDING COMMITTEE ON ENVIRONMENT AND TRANSPORT AND CITY SERVICES

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## Submission Cover Sheet

### Nature in Our City

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Standing Committee on Environment and Transport and Urban Services  
Legislative Assembly for the ACT  
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### **Inquiry into the Value of the Natural Environment to an Urbanising Canberra**

We are pleased that the Standing Committee on Environment and Transport and Urban Services has resolved to conduct an inquiry into the value of the natural environment to an urbanising Canberra.

The Woodlands and Wetlands Trust considers that the urban and natural interface is central to Canberra in terms of its identity and the vision for the bush capital as it develops.

#### **General Comments**

The Woodlands and Wetlands Trust is ideally placed to create opportunities to inspire people about nature through our contribution to promoting restoration of woodlands and wetlands. We are keen to engage with society to build and then strengthen people's relationship with the natural world. We have unique opportunities to work with the community to create a cohesive focus on the importance of conservation and protection of woodlands and wetlands and the multiple benefits they offer to society.

The mountains, hills and ridges, together with the creeks and river corridors, all largely define the Canberra landscape and those who live within it. The term 'nature' is very broad including as it does the reserves and extends into the urban streetscape and trees, residential gardens and public parks throughout the urban area.

When we consider Canberra as a centre of natural and urban connection we need to look at the values of nature, its stories, and the vision for its future in the ACT. These elements underpin the very survival and quality of life of Canberra and its community into the future. We feel that this is the very essence of this Inquiry – not Nature in our City, but Our City in Nature!

#### **Terms of Reference of the Inquiry**

If we are to maximise the opportunities the "bush capital" identity presents, we need to be clear about the economic, social and environmental values of nature to the community in Canberra. We also need to promote the important collaborative role that government, the corporate sector and the community all can play in conserving and protecting the natural assets we are fortunate enough to have in this city.

In addressing the criteria set out for the inquiry, we offer the following observations and suggestions for consideration.

***(1) The level of public support for and satisfaction with amount and quality nature and natural environment areas in Canberra, particularly in urban areas.***

One of the oft-quoted aspects about living in Canberra is the proximity in the urban area to nature reserves, parks and green areas. It is this consideration for many people that defines Canberra as the “bush capital” and goes to the heart of what differentiates Canberra from other major cities. The trails in our suburban Nature Reserves have always been popular for walking dogs, cycling, fitness training and nature walking and this popularity is definitely increasing.

Close proximity with the natural environment is recognized as one the major attractions that Canberra offers to both existing residents and newcomers. It is an integral element of what makes Canberra a special place and drives much of the economic benefits that come from increased population, infrastructure needs, tourism, and social amenity and other broader benefits such as healthy lifestyles. Engagement with nature is demonstrating increasing community health and well-being. Various factors have probably influenced a growth in numbers using nature reserves over the last decade, such as changing demographics and greater awareness of the importance of healthy lifestyles and physical activity.

The Twilight Tours conducted by the Woodlands and Wetlands Trust at Mulligans Flat have generated considerable positive public reaction to and support for opportunities to see and experience the natural world in its nocturnal state with species like the Eastern Bettong, the Eastern Quoll, and Bush-stone Curlews now able to be seen back in the environment they once inhabited. These tours are growing in popularity and the Trust will also be providing increasing numbers of day tours in view of public interest.

Equally, Trust tours at Jerrabomberra Wetlands have increased public interest in wetlands and the ecological role that they play. Community interest in wetlands species, especially iconic species like the Latham’s Snipe, is growing and the project to track the migratory paths of Latham’s Snipe between Australia and Japan has already generated considerable interest and engagement by community interests. Through these areas people are developing a greater appreciation of their local natural environment more broadly, an understanding of its importance to Canberra, and a sense of pride and ownership of the special natural assets we have.

Longtime residents living in the vicinity of Mt Taylor are anecdotally reporting an exponential growth in walkers on this reserve over the past 5 years. While historic estimates of walkers may not be available, the current estimates (Eyles, 2018, personal communication) number conservatively around 170,000 people – walking on the Mt Taylor Nature Reserve trails in 2017.

A consistent comment made by regular walkers is, *‘this is personal – it’s about keeping fit but I love being on Mt Taylor with the nature and the vistas’*. If we were to undertake some qualitative surveys of walker’s motivations, at least on this increasingly popular reserve, we may hypothesise that our nature reserves are positively impacting on health and well-being. The trails and natural environment, vistas and wildlife may well be inspiring many to maintain healthy lifestyles – thereby reducing health costs. Along with the qualitative work already

being done on this relationship around the world – establishing some specific qualitative evidence of this growing phenomenon in Canberra will be essential for future ACT planning.

***(2) The types of nature and natural environmental areas within Canberra e.g. urban open spaces or bushland reserves and the existing or potential benefits and challenges they bring to Canberra's Social amenity; Economic development; Biodiversity; and/or Climate resilience.***

Viewed from vantage points across pre-1990s Canberra suburbs, the view is one of predominantly a canopy of trees, with limited visibility of buildings or urban infrastructure – the city in the landscape.

While the early planning and development of Canberra recognised the landscape and conservation values of the surrounding hills and ridges as fundamentally shaping the city of Canberra, starting with the Griffin Plan concepts and principles, administratively, this system is now seen in the urban area predominantly as parks requiring mowing, drainage systems requiring cleaning, the provision and maintenance of playgrounds, conservation of a few 'threatened species' hotspots, and multiple land/park care volunteer groups. As a result, it is so fragmented that it has minimal political or administrative traction in terms of valuing, protecting and enhancing its key role in sustaining Canberra into the future.

The significant Mulligans Flat and Jerrabomberra Wetlands Nature Reserves within the Canberra urban area are major natural assets that have the potential to bring to Canberra a host of economic, social and environmental benefits that are not available to other major capital cities. The major importance of these assets lies with their natural values and the increasing value that the community is placing on these as part of urban existence. From an ecological perspective these reserves and the patches of remnant woodlands and waterways are also significant corridors for wildlife movements and connectivity across the landscape.

The important role that the natural environment plays in mitigating the impacts of a changing climate in the urban area also needs to be better recognised and valued in social and economic terms more effectively.

The reserves, remnant vegetation, and other green spaces all have capacity for creating a unique opportunity for Canberra to maximise economic, social and environmental benefits with the local community as well as with national and international visitors. Valuing, protecting and enhancing their key natural elements in the growing urban environment will be of major importance in the planning and development of Canberra.

**(3) Opportunities for Blue (water) and or Green (natural) Infrastructure in Canberra including: Functional requirements of proposed infrastructure; Cost and Maintenance considerations; Amenity benefits; and Conservation and biodiversity benefits.**

*Jerrabomberra Wetlands example*

The Jerrabomberra Wetlands component of the Trust's Reserves provides a valuable example of the inter-relation of people, land uses, infrastructure and nature. The Jerrabomberra Wetlands Reserve is an open space which has been profoundly modified by imposition of urban land uses and infrastructure, yet retains a space of significant 'natural' values.

It retains many 'natural' functions with respect to amelioration of stormwater peak flows, treatment of flow constituents (water quality), protection and recharge of significant groundwater systems, sustenance of a diverse range of terrestrial and aquatic landscapes and associated native fauna, significant amelioration (cooling in summer & warming in winter) of micro & macro-climates; together with habitats providing a refuge to terrestrial animals and avifauna in respect to loss of habitats as a result of urbanisation, and during periods of severe drought across the Region.

Reviewing the natural values of the Reserve, and its location in Canberra's urban area, three areas of strategic valuing and management have been the major focus:

- Shifting the interpretation of 'sustainability' of this type of nature area – from one of 'protection or restoration of pristine values' – to one of 'protecting the adaptive capacity of natural systems to respond to Climate and land-use change';
- Shifting from a 'non-pristine' based dismissal of its natural values (moderately to highly modified systems), to a designation acknowledging the retention of many 'natural ecosystem functioning values'; and
- Shifting importance of this space in respect to the health and well-being needs of a growing urban population and increased levels of urbanisation.

The three main areas of interest arising from this review of the Reserve for the Trust can be summarised as follows:

- (1) Protection, management and enhancement of existing natural resources of the Reserve,
- (2) Managing and enhancing the environmental services functions of the Reserve, and
- (3) Engaging the community in natural, cultural and social values and stories of the Reserve

Protection, management and enhancement of existing natural resources of the Reserve has included to date:

- Substantial removal and ongoing management of weeds across the Reserve;
- Trialling of traditional indigenous burning of grassland, both as a means of managing grass fire biomass, and restoration of native grasses;
- Trialling the ongoing use of cattle grazing of grasses across the floodplain, installing fences to exclude cattle from ecologically sensitive areas;
- Restoration of riparian planting along the Molonglo River and Jerrabomberra Creek;

- Surface and groundwater surveys, necessary to establish an understanding of water movement pathways and balance across the Reserve, its ecological function and management into the future; and
- Protection of the Molonglo River floodplain and its ancient channels, as an active floodplain system;

In managing and enhancing the environmental services functions of the Reserve, in association with its natural values action will centre on:

- Removal of dysfunctional urban infrastructure, such as the Jerrabomberra Sediment Trap, and associated restoration of vegetated Creek channel and vegetation (planned);
- Re-route Jerrabomberra Creek through its original Billabong channel (Murray Darling Basin Priority Project), enhancing amelioration of peak flows, and increased filtering and biological processing of flow constituents;
- Incorporation of supplementary shallow marshland (wetland) to enhance biological uptake of flow constituents (Murray Darling Basin Priority Project); and
- Seek opportunities to shift 'fixed water level (perennial) wetlands', to 'more natural seasonal variable water level (ephemeral) systems' – significantly enhancing the interception of flow constituents and ecological values.

Engaging the community in natural, cultural and social values and stories of the Reserve into the future is focused on:

- Collation and ongoing surveys related to describing the current values;
- Collation of indigenous, early European, and urban development use and land management of the Reserve, and packaging using arrange of media, as an important resource connecting the Canberra community and visitors with their heritage and custodianship;
- Provision of access, safety and amenity, facilitating the use and enjoyment and engagement with the area and its remarkable values, including signage and digital forms of information and an active arts program;
- Establishment of an education program, in partnership with Schools and special interest groups; and
- Promote partnership with allied environmental groups, neighbours and user groups, building on shared interests, in realising the Vision for the Reserve.

The 'Cost and maintenance' associated with the above directions and priorities for the Reserve are:

- An initial capital sum of \$2 million was included as part of the Trust package, for the development of a Jerrabomberra Wetlands Master Plan, and works and maintenance necessary to address deterioration across the Reserve over the previous decades.
- Parks & Conservation Service annual appropriation of \$120,000, including the provision of a Parks Ranger, and maintenance of an Office facility on the Site.
- Current Trust funding allocation \$120,000 for the provision of 2 Trust staff on the site, and special grants for support of Education, Arts and Research projects.
- Significant 'in-kind' contributions have been made by 'Friends of the Wetlands' Group, Water & Frog Watch, Green Army, and the Canberra Ornithological Group.
- Significant Grants have been received from EPSDD (Healthy Parks Healthy People) for the provision of access and research projects, and by the Heritage Committee

(Warfare Training Trenches Site access, archaeological surveys & interpretive material). The Murray Darling Basin Priority Projects (2) proposed for the Reserve, will have a construction value of the order of \$3 m.

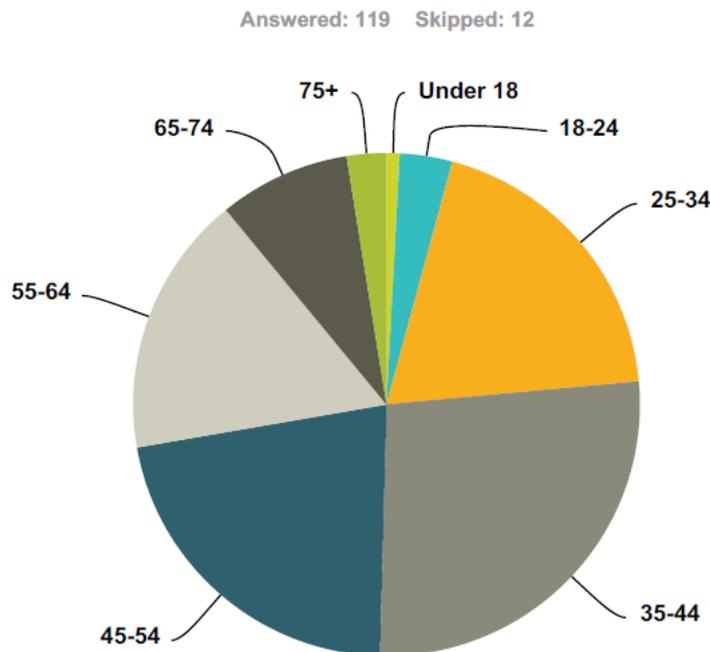
### *Mulligans Flat example*

The suburb of Forde is one where house values are, on average, in the top-ten in Canberra. In a survey undertaken by Forde Community Association asking residents what they valued about Forde, the top 2 responses were 'a master-planned suburb' and 'proximity to Mulligans Flat'. When we surveyed the community about their values, uses and aspirations for the Sanctuary, some key results were (132 responses):

- More than 50% of respondents visited every few months
- Most people spent more than half a day when they visited (65%)
- The top activities reported were walking, birdwatching, wildlife viewing and photography
- 26% of visits were 'alone' with more than 50% with a partner or family
- The 'main purpose' for visiting was to 'connect to nature and enjoy the peace and quiet' (50%)

The demographic responding to the survey was quite balanced:

### **Q11 Which of the following best describes your age?**



Based on data from the annual survey of 1,200 households regarding Nature Park use in Canberra:

- 64% of residents visited Canberra Nature Parks, and with the rate of multiple visits reported, it is forecast there are 2.3M annual visits to the Canberra Nature Park system broadly;
- Tidbinbilla – 40 minutes from the CBD and with annual entrance fee of \$35, had 340K forecast visitors (from the same data) and an actual through-the-gate measure of 230K for last year
- 5% of survey respondents reported visiting Mulligans Flat during the year, generating a forecast of 115K annual visits to the Sanctuary currently occurring (but given the disparity between the Tidbinbilla visitor forecast and actual measured visitors) a conservative estimate of current visitation to Mulligans Flat is 70,000 people/annum.

A Sanctuary is more expensive to run than other areas of Canberra Nature Park, however the experience being offered to the Canberra and Australian community is different. Wildlife and nature engagement is a key highlight for visitors, and local residents value the conservation programs and ease-of-access to this special place. Given we now see houses in Forde advertised for sale highlighting their proximity to the Sanctuary, it is highly likely that part of the uplift in housing value at Forde (top ten suburb in Canberra) is attributable to the conservation programs, profile and accessibility of the Sanctuary. The uplift in land values is reflected in household rates collected by the ACT Government.

Internationally there is growing evidence of the impact of wildlife and nature reserves on house prices related to the homes' proximity to the reserve. Across 36 National Wildlife Refuges in the United States, the capitalised value of those refuges on neighboring homes averaged \$7.6-8.7M (ranging from \$1M to \$40M for individual reserves). The 'capitalised value' provides an estimate of the increased property tax base that local communities enjoy as a result of the nature refuge and their provision of open-space amenities to nearby homeowners (Taylor et al 2012).

Across the United States, homes located within 800 m of a wildlife refuge and within 12 km of an urban centre have been valued, on average:

- 4-5% higher in north-east US
- 7-9% higher in south-east US and
- 3-6% higher in the California/Nevada region

In British Columbia, green corridors were found to positively influence adjacent properties, and in particular, an increase in that uplift for properties that border a National Park. Narrow strips of green space, categorised as 'small parks', were estimated to increase each property value by \$11K, and flowing through an annual 1% tax rate, an uplift of \$75K per annum attributed to the green space (Hobden et al 2004).

***(4) Managing the interface between the natural environment and urban areas particularly in regards to conserved environmental areas.***

There is a need for the ACT to adopt more sustainable, holistic, whole-of-landscape planning and environmental conservation policies, to cater for a growing city and the impacts this will have on the natural environment. A whole-of-landscape plan for the future, say for the next

30 years or to 2050, should aim to deliver more sustainable outcomes than is being achieved under current systems (largely through site by site development arrangements and offsets and fire management requirements).

It is worth recalling the Commissioner for the Environment and Sustainability's study into the Biosphere reserve approach which encompasses areas with significant human populations that provide models of 'active' sustainability, and especially consideration of urban areas and their hinterlands. It highlights the importance of biosphere reserves as models for land management, community participation and experimental approaches to sustainable development.

The Biosphere Reserve concept provides opportunities for local people, scientists, and government decision makers to cooperate to achieve sustainable development – that is, to achieve an integration of ecological, economic and socio-cultural elements in planning that takes into account the needs of future generations.

Using this approach a forward plan should be developed and underpinned by comprehensive, scientific evidence which includes patterns of landscape use by fauna species which may be impacted. There is considerable research from the Australian National University, CSIRO and others which can be drawn upon to underpin best practice, evidence-based planning.

One of the most important elements in protecting the values of nature reserves, green spaces and protected areas within the Canberra urban area is to ensure that adequate and appropriate buffer zones are built in to the planning process. Allowing these buffer zones to encroach into the reserve areas is not a satisfactory outcome as it gives rise to the potential for compromise of and adverse outcomes in natural areas. Equally important is the need to recognise the need to maintain connectivity between reserves, remnant vegetation and urban green spaces. One of the biggest risks to many species that move across the landscape is the potential for isolation in small areas that become unviable.

Particular measures which will assist in sustaining Canberra's biodiversity into the future include:

- The retention of remaining natural habitats/mature eucalypt trees across the landscape (both urban and rural); functional connectivity (movement) corridors for fauna;
- Adequate urban edge buffers and interface management, particularly in cases involving sensitive threatened ecological communities and species' habitats.
- The impacts and management of domestic animals (dogs, cats), and feral species such as foxes, could be part of a holistic approach to conservation planning and management.

***(5) Current policy or regulatory settings that impede the integration of the natural environment within optimal urban development and design.***

The lack of a more comprehensive holistic vision of the green spaces in and around Canberra does not make proper/best use of the planning that is already in place. Current development is encroaching too closely on the borders of natural areas reducing the

importance/effectiveness of areas that can serve as buffer areas. These areas are critical for protecting the values of the natural environment and their contribution to social amenity; economic development; biodiversity; and/or climate resilience benefits. It is also necessary for asset (bush-fire) protection zones to be outside the nature reserves (as is the case for the proposed new urban areas at Ginninderry).

Best practice management of the interface between natural areas and development is essential. There needs as well to be a better balance between user impact on natural areas and the maintenance of natural values through better planning for recreation activities and visitation to natural areas.

Canberra residents are seeking more and more recreational outlets for activities such as walking, running, cycling and this is putting more pressure on natural areas. Some of our reserves have been impacted already and have become significantly degraded (e.g. Bruce/O'Connor Ridge). As the Canberra population grows, this will be an increasing problem to address. The ACT might consider developing an overarching recreational plan or policy for the city.

The Trust would also like draw attention to the Report to the Report by the Commissioner for Sustainability and the Environment of July 2011, Dr Maxine Cooper, "Facing the challenges – positioning our nature reserves for the 21st century Report on Canberra Nature Park (nature reserves); Molonglo River Corridor (nature reserves) and Googong Foreshores Investigation Summary and Recommendations".

In this report Dr Cooper noted that "The (WW)Trust is intended to supplement, rather than replace annual government support for normal, ongoing management of these areas. It will be interesting to observe the success of the Trust model, as the tradition of private philanthropy funding public nature reserves is not yet well established in Australia and is unlikely, at least initially, to reach levels seen in the United States of America, as noted for the Western Pennsylvania Conservancy (discussed in Section 7.3.1.1 International examples). However, given the characteristics of ACT residents; a high level of concern for the environment, participation in community activities and a relatively high disposable income, this may be a place where a Trust might attract private donations."

"However, it would also be prudent to explore other avenues of funding in case the Trust model does not generate sufficient funds, as stated in Recommendation 6.2. **(6.2 (High Priority) Identifying new sources of funding. - One source of funds that would be more certain could be an ACT Environment Levy and if it were to be progressed it should be guided by principles presented in Recommendation 6.2 and, as it would require community support, it could be the subject of a discussion paper"**.

*(Note – In 2011 the Woodlands and Wetlands Trust was not operational, but since 2014 we have spent circa \$800K of the original endowment, and with that investment delivered \$5.9M worth of benefits to the Mulligans Flat and Jerrabomberra Wetlands – comprising donations, partnership contributions, new grants, and commercial revenues from outreach programs. These resources raised have been additional to 'business-as-usual' land management programs delivered by the Parks and Conservation Agency.)*

## **Recommendations**

The Woodlands and Wetlands Trust recommends:

- Consideration be given to implementing the Biosphere Reserve concept to achieve an integration of ecological, economic and socio-cultural elements in planning that takes into account the needs of future generations;
- The ACT adopt a holistic landscape planning approach that recognises the diversity of values and the importance of these values being appropriately considered in future development of Canberra.
- A holistic landscape planning approach should be adopted taking into account
  - the importance of connectivity of natural areas across Canberra and into surrounding rural and national park lands, including cross-border connectivity;
  - the retention of remaining habitats/mature eucalypt trees across the landscape; functional connectivity (movement) corridors for fauna;
  - the need for sustainability of new developments to encompass and respond to a changing climate and temperatures of the region;
  - inclusion of adequate urban edge buffers and interface management, particularly in cases involving sensitive threatened ecological communities/species' habitats,
  - the impacts and management of domestic animals (dogs, cats), and feral species such as foxes, could be part of a holistic approach to conservation planning, and
  - maintenance and retention of public green spaces and bushland.
- Reflecting the value-uplift in land values and rates provided by high quality conservation assets, consideration should be given to an environmental levy as a new source of funding that could be put in place to meet the challenges currently confronting natural areas and green spaces and to enhance management actions designed to increase protection, restore areas in poor condition and improve the resilience of reserves.

We would be happy to discuss or elaborate on any of the points that have been raised in this submission

Alison Russell-French  
Chair, Woodlands and Wetlands Trust  
June 2018



**References:**

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- Taylor, L.O., Liu, X., Hamilton, T.L., 2012. Amenity Values of Proximity to Wildlife Refuges, Report Submitted to the U.S. Fish and Wildlife Service, April 2012. Available at <http://www.fws.gov/refuges/about/pdfs/NWRSAmenityReportApril2012> withCovers8.pdf (last accessed June 7, 2013).