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MEMBER FOR GINNINDERRA



Mr Mick Gentleman MLA
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ACT Legislative Assembly
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Dear Mr Gentleman

Thank you for your letter of 18 May 2005 inviting a submission to the Standing Committee on Planning and Environment's inquiry into urban vegetation and wildlife corridors and the integration of biodiversity conservation in land use planning in the ACT and sub-regions.

A submission prepared by Environment ACT is enclosed. Environment ACT staff will be available to assist the Standing Committee further if that is required.



I look forward to reading the Standing Committee's report.

Yours sincerely

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ACT Legislative Assembly Standing Committee on Planning and Environment

Inquiry into urban vegetation and wildlife corridors,
and the integration of biodiversity conservation in
land use planning in the ACT and its sub-regions.

Submission prepared by Environment ACT

10 July 2005

Standing Committee on Planning and Environment

Terms of Reference

The Committee is currently inquiring into urban vegetation and wildlife corridors, and the integration of biodiversity conservation in land use planning in the ACT and its sub-regions.

The Committee will use *Draft Variation to the Territory Plan No 231 - East Gungahlin Suburbs of Kenny and Throsby and Goorooyarroo Nature Reserve* as a case-study in its broader inquiry, along with an assessment of the other planning principles for a sustainable Canberra which are included in DV231.

The Committee is particularly interested in receiving submissions from organisations and individuals on any or all of the following issues:

- the availability and adequacy of information (including regional and sub-regional land use maps and information about publicly and privately funded environmental works) for identifying and assessing wildlife corridors and developing land use policy
- policies and programs for promoting urban wildlife habitat in the ACT
- transboundary issues with local councils and the NSW Government concerning land use planning and biodiversity considerations
- the inter-relationship of legislation applicable in the ACT (including heritage, tree protection, biodiversity and nature conservation legislation)
- domestic pet policy in suburbs adjacent to protected areas and at the urban fringe
- any other issues of relevance

1. the availability and adequacy of information (including regional and sub-regional land use maps and information about publicly and privately funded environmental works) for identifying and assessing wildlife corridors and developing land use policy

Natural resource information for planning and management

Natural resource information for the ACT has been significantly developed over the last 10 years or so, with a focus on surveys for threatened species and ecological communities. This reflected the 1995 amendments to the *Nature Conservation Act 1980* which established the ACT Flora and Fauna Committee and a mechanism for identifying and declaring threatened species, ecological communities and threatening processes.

There was a sound basis for this more recent work due to the comprehensive studies and inventories undertaken in the 1970s and 1980s by the National Capital Development Commission. Key documents include *The Ecological Resources of the ACT* (Technical Paper 42, NCDC 1984) and the nine volume report series *Sites of Significance in the ACT*, (Technical Paper 56, NCDC 1990).

Further natural resource information is being developed through a Natural Heritage Trust funded project titled 'Setting Conservation Targets for Key Native species and Communities'. This project will determine the condition and conservation status of vegetation communities in the ACT, using methods consistent with regional and National Vegetation Information System (NVIS) standards, and develop targets for the protection and management of significant native species and ecological communities. This project is based on achieving a biodiversity target identified in the *ACT Natural Resource Management Plan 2004-14*.

The tasks involved in achieving this project include:

1. Defining the Ecological Communities of the ACT region.
2. Mapping the Vegetation Communities of the ACT.
3. Determining the conservation status of each vegetation community.
4. Set priorities for the conservation of vegetation communities.

Threatened species and ecological communities

Information on threatened species and ecological communities has been progressively published in a series of Action Plans, a requirement of the *Nature Conservation Act 1980*. In 2004 and 2005 updated and consolidated Action Plans have been released as whole of ACT conservation strategies, covering an endangered ecological community and the plants and animals that are dependent upon it. Thus Action Plans 27 and 28 cover Yellow Box - Red Gum Grassy Woodland and Natural Temperate Grassland respectively (*Woodlands for Wildlife: ACT Lowland Woodland Conservation Strategy*. Action Plan No. 27, ACT Government, 2004 and *A Vision Splendid of the Grassy Plains Extended: ACT Lowland Native Grassland Conservation Strategy*, Action Plan No. 28, ACT Government, 2005). A third strategy (Action Plan 29) is being prepared during 2005 to cover threatened fish and the riparian zones of the ACT's major rivers.

Action Plans 27, 28 contain, and 29 will contain, comprehensive information about the ACT's threatened flora and fauna, and satisfy the requirement under section 23(2) of the *Nature Conservation Act 1980*, that an Action Plan includes proposals for the identification, protection and survival of a threatened species or ecological community, or, in the case of a threatening process, proposals to minimise its effect. Each Action Plan considers (or will consider) the issue of ecological connectivity, movement of wildlife, and where relevant corridors that facilitate movement of flora and fauna between their habitats.

Information on major vegetation types, and threatened species is available to the general public through the Integrated Nature Conservation Plan (INCP). The INCP is an information system that provides access to natural resource information and published management plans for the ACT's nature conservation estate and the action plans for threatened species and ecological communities. The INCP is delivered in two ways: A network-based product to satisfy internal, EACT requirements and a web-based product to allow public access to some components such as public documents and maps.

Wildlife corridors (from continuous habitat to connected 'stepping stones')

Wildlife corridors or ecological connectivity across the landscape is increasingly recognised as a key element in planning and management for wildlife conservation outcomes for both plants and animals. Connectivity is usefully considered at three scales, which in an ACT context can be described as:

- regional (ACT and Southern Tablelands) - encompassing the two bioregions that cover the ACT – the Australian Alps, and the South-eastern Highlands,
- territory-wide (or habitat scale) relating largely to major rivers and large blocks of vegetation, and
- local (or block or patch scale), individual trees or small areas of vegetation.

Each of these is addressed during planning and management by ACT agencies including Environment ACT and ACT Planning and Land Authority.

The Canberra Spatial Plan included as one of its objectives “*protect and enhance biodiversity through nature reserves and maintaining connectivity between them*”. An action identified the prospect of a Territory Plan variation to ensure wildlife corridors are maintained primarily for wildlife movement.

The ACT's nature conservation estate (National Park and Nature Reserves) represent the key elements or the 'stepping stones' of a habitat connectivity system. Wildlife connectivity between these areas, across land that may have varying habitat qualities, relies on continued existence or introduction of landscape elements that support wildlife movement (e.g belts of trees, shrub cover, riparian vegetation). This is not primarily a matter of land tenure or purpose for which the land is used. It is more a matter of management of the land in which a secondary use – 'wildlife connectivity' - is recognised, accepted and actively maintained.

The effectiveness of a connected system of 'stepping stones' (usually protected areas such as nature reserves) depends upon the dispersal capacities of different groups of animals and plants. These may conveniently be considered in terms of birds (that have a capacity to fly between habitat areas), arboreal mammals (that may require trees to be at a minimum distance apart), ground dwelling mammals, reptiles, frogs (that may require continuous habitat or at least only small breaks), insects (that often have a capacity for aerial dispersal). For plants, dispersal may be dependent upon water, wind or carriage on animals for dispersal between habitat areas. The size, shape and distance between 'stepping stones' is a significant factor in the ecological effectiveness of any connectivity system.

Regional scale connectivity

At the regional scale, connectivity was identified as a key issue in the 1998 ACT Nature Conservation Strategy (Section 2.1). The 1998 *Nature Conservation Strategy* (prepared pursuant to the *Nature Conservation Act 1980*) drew upon an indicative wildlife corridor system developed cooperatively by officers from Environment ACT and the NSW National Parks and Wildlife Service (now Department of Environment and Conservation). This regional scale wildlife corridor system was subsequently incorporated in to the *1998 ACT and sub-region Planning Strategy*, adopted by Commonwealth, NSW and ACT Governments and Councils within the ACT sub-region.

In a section of the 1998 Planning Strategy entitled *Strategies for managing natural and cultural resources* a high priority is given "to the establishment of a regional public and private land conservation system, linking existing corridors and significant areas in the region, to enable species and ecological communities threatened with extinction to survive and thrive in their natural habitats.....". The Planning Strategy then identifies six actions and two benchmarks to implement 'protecting ecologically viable river and wildlife corridors in the region based on the sound scientific knowledge of the ecological requirements'. A preliminary map of environmental corridors at a regional scale is included in the *Strategy*.

Action Plans 27, 28 and 29 provides much of the information required to implement the ACT's contribution to this regional scale connectivity. The ACT Government's 2004 *Spatial Plan* and the *Planning Framework for Natural Ecosystems of the ACT and NSW Southern Tablelands* prepared by ACT, NSW agencies and local councils also recognise the importance of regional connectivity and also contain maps and information about the natural resources of the region.

Regional scale wildlife corridors are being increasingly recognised as being a fundamental requirement of any response to climate change. The NRM Ministerial Council has endorsed the National Biodiversity and climate Change Action Plan to help coordinate a national response and adaptation activities of jurisdictions across Australia. For the ACT major connectivity routes likely to be of local significance in climate change are the Murrumbidgee and Molonglo rivers, the forested areas of Namadgi National Park that link lowland to montane and sub-alpine environments, and links to the coastal environments to the east of the ACT

Territory scale connectivity

In 1999 Environment ACT undertook a project funded by the Natural Heritage Trust (NHT) that identified possible corridors for habitat and biodiversity conservation in the ACT with links to the region. A copy of the background report and the maps associated with it is attached to this submission.

The study adopted the following objectives for a corridor system for habitat and wildlife conservation

- To reduce the ecological effects of habitat fragmentation caused by urban development, transport infrastructure and land uses inimical to wildlife;
- To link natural habitats and assist in conserving biodiversity across and between the urban and rural landscape;
- To facilitate natural dispersal and movement of animal wildlife in the “bush capital”;
- To provide for natural ecological processes to continue at the landscape scale; and
- To maintain ecological links to the region.

The maps and explanatory report were given limited circulation within government agencies, and to the (then) Environment Advisory Committee and the Conservation Council of the South-east Region and Canberra. They are treated as working documents, subject to change as more ecological survey information came to hand, to assist these stakeholders provide informed comment on planning, development and management proposals that were of interest to them.

An example of how the information can be used is contained in the Lowland Woodland Conservation Strategy (Action Plan 27). It contains a map (figure 6.1, opp. page 102) with indicative habitat connectivity for wildlife movement derived from the same data. Similar Territory-scale connectivity for grasslands is not as clearly identified due to the remaining areas being more fragmented with a greater distance between significant remnants. However both the woodland and grassland strategies stress the significance of connectivity across the woodland-grassland interface. Such interfaces or ecotones are often key habitat for wildlife species that use components of both the habitats that meet there.

Action Plan 27 proposed the following connectivity links to improve woodland habitat connectivity for wildlife movement:

- from Hall – Kinlyside – Mulligans Flat – Gooroo – Majura Valley – Jerrabomberra Valley;
- from Jerrabomberra Valley to Rob Roy Range;
- between the Belconnen Hills and the lower Molonglo River; and
- across the rural landscape by connecting woodland fragments.
- protecting examples of Snow Gum lowland woodland, especially ecotones between woodland and grassland.

Another wildlife corridor recognised in planning and conservation terms, is the route of the annual autumn honeyeater migration along the Murrumbidgee River from Uriarra to Point Hut and then across the Tuggeranong valley to the Tinderry Range (NSW) on its way to coastal habitats. The honeyeater migration route is recognised as a natural feature in the Management Plan for the Murrumbidgee River Corridor.

Local scale wildlife connectivity

Local scale connectivity can particularly be planned and managed within single developments or as part of landscaping projects. Examples include:

- providing opportunities for fauna to use underpasses and/or overpasses included in major road projects (eg Gungahlin Drive Extension, Majura Parkway)
- promoting landscape designs that restore native vegetation where this is absent and in a way that links to neighbouring vegetation.
- planning residential sub-divisions so that open-space areas take advantage of or enhance natural features such as groups of trees, natural water courses, or rocky outcrops.

As noted in the previous section connectivity across the woodland/grassland interface (or ecotone) is identified in both Action Plans 27 and 28 as a priority conservation issue. There are now very few good examples of the natural relationship between two types of ecological community. The best examples of the woodland/grassland ecotone are at Jerrabomberra valley (Callum Brae and west Jerrabomberra nature reserves), Majura Military Training Area, eastern slopes of Mount Ainslie, Aranda Bushland, and Gungahlin nature reserve in Gungahlin.

Local scale connectivity in urban and rural areas of the ACT is usually addressed through governmental processes associated with planning, applications for development approvals and issuing leases. Natural resource information is provided to the various responsible government agencies, with advice as necessary regarding wildlife habitat and connectivity issues. Wildlife connectivity can be provided through a variety of means including all categories of public open space, maintaining river and stream courses, retaining remnant native vegetation, introducing new landscape plantings and managing roadside vegetation.

Environment ACT does not regard providing for connectivity at the local scale as requiring a commitment to set aside land as a reserve. The issue of connectivity is a potential consideration that applies to all land regardless of tenure (public or private) and primary land-use. More important is that wildlife habitat be considered and managed as part of and complementary to the primary purpose of the land. Therefore advice from Environment ACT on this matter is focused on assisting planners and managers of land to understand the local and regional context of any natural features on their land, any measures that will assist wildlife connectivity, and how this may be accommodated in association with the dominant activity on the land.

Provision of Financial Assistance for Conservation Works on Non Urban Land

Approximately 17% of the ACT is under rural lease for primary production and related purposes. These lands contain significant biodiversity values both in their own right and as habitat links and wildlife corridors between more substantial assets such as nature reserves, national parks and river corridors. Rural leases specifically provide for the identification and conservation of significant native vegetation and aquatic values through Land Management Agreements. Land Management Agreements identify features and areas having special conservation value and set out management measures required to achieve agreed conservation outcomes. Ecological information is provided to lessees to assist their development of Land Management Agreements.

In recognition that there is a significant public good component arising from nature conservation on leased rural land and that the direct financial cost involved may be an unreasonable burden for a lessee to meet in its entirety, the ACT Government has established a financial assistance scheme for off-reserve conservation of biodiversity. It is designed to fund projects for rural land that are important to conservation of the biodiversity of the ACT. This was first established in May 2000 and continues as an important mechanism for assisting landholders with nature conservation projects. ACT Government funding support is augmented by the Natural Heritage Trust.

These biodiversity incentives originally operated as the Rural Conservation Fund. They now operate as a component of the ACT Land Keepers program. Funding assistance is particularly directed at protecting and augmenting native vegetation and streamlines.

2. policies and programs for promoting urban wildlife habitat in the ACT

Community Engagement in Natural Resource Management

There is a strong support network of community groups (parkcare, landcare, 'friends of' ... groups, sub catchment groups) engaged in natural resource management - in parks and reserves, and urban and non urban catchments. Financial assistance may be provided through the ACT Environment Grants and national grant schemes. Facilitators and coordinators are employed with Natural Heritage Trust funding assistance to assist these groups plan and undertake their voluntary activities. Maps, resource data and training are provided. A web-based information management system is being developed to assist with provision of information and the reporting of project outputs and expenditure.

Work typically addresses remedial works on degraded land and streams, revegetation, weed management and survey and monitoring work. This can assist in providing for local wildlife connectivity as discussed above.

Canberra Urban Parks and Places (Department of Urban Services) prepares statutory Plans of Management for the public land urban open space it manages on behalf of the Conservator of Flora and Fauna under Division 5.7 of the *Land (Planning and Environment) Act 1991*. In these plans areas of native remnant vegetation with wildlife and conservation values present may be designated as Semi-natural Open Space. These areas, so designated, their natural vegetation cover largely left intact, are only mown at their margins, but are not fenced, so the public has unrestrained access to these areas for informal recreation and other purposes eg. nature study. Further, native vegetation areas in urban open space where remnant grassland or woodland habitat critical to endangered species is required to be left undisturbed may be reserved as Grassland or Woodland Sites. No mowing of these areas is undertaken, and the boundaries of these areas may be fenced.

The draft Plan of Management for Gungahlin's Urban Space and Sportsgrounds has examples of areas in both these categories. Other park types eg. Pedestrian Parkland, District Parks and Neighbourhood Parks may also contain areas of remnant native vegetation.

Canberra Urban Park and Places currently includes a Catchment and Environmental Management Unit. In this unit there is a Landcare and Community Liaison officer available to support urban Parkcare activities. A seed bank of native indigenous seeds has been established for supporting revegetation purposes. A similar Environmental Management unit is planned within the new Urban Land Management agency, which will replace Canberra Urban Parks and Places.

In 2004-05 Canberra Urban Parks and Places commissioned Dr Ken Hodgkinson of CSIRO Sustainable Ecosystems to conduct a scientific literature review (Part A) and make recommendations (Part B) on 'Alternative Management Options for Urban Grasslands'. The twelve recommendations in Part B of the report of the project make a strong case for identifying and managing remnant grassland areas within urban open space in Canberra. The recommendations include not planting trees in remnant

grassland areas and undertaking deliberate native grassland restoration activity to restore degraded grassland sites. For example Recommendation 12 is:
'CUPP allocate funds (\$30,000/year for three years) for a PhD research project to establish the management regime(s) to shift degraded grasslands from exotic plant dominance to local native grass and forb dominance in landscapes managed by Canberra's Urban Parks and Places.'

In 1999 CUPP commissioned Ecology Australia to undertake a Nature Conservation Study of CUPP lands and lakes areas. The study (Bezuijen and Carr 1999) developed a method of assessing the relative nature conservation value of these areas by developing and applying an index or rating of conservation value, and a habitat degradation rating. The study demonstrated how these ratings and indices could be used to recommend priorities for rehabilitating or regenerating vegetation to assist in This regional scale wildlife corridor system was subsequently incorporated in to the *1998 ACT and sub-region Planning Strategy*, adopted by Commonwealth, NSW and ACT Governments and Councils within the ACT sub-region. the creation of a viable corridor network. CUPP was provided with relevant data and interpretative rules to assess the management significance of the various land and lake areas assessed with respect to their conservation value and the habitat degradation values.

In June 2000, Canberra Urban Parks and Places and Canberra Ornithologist's Group published *Birds in Canberra Gardens* a book publishing the results of 17 years of weekly bird survey data collected by volunteer observers in their home gardens throughout urban Canberra. This survey, which continues to the present day, is providing a unique record of bird species abundance and diversity for Canberra's urban area. The end papers of this publication maps the location of the participating bird survey sites within urban Canberra, including their location in relation to all the reserved public land in urban Canberra comprising urban open space, Canberra Nature Park and the other nature reserves.

In September 2004 Environment ACT published a brochure entitled *Canberra Nature Park – Bush on your doorstep*. This provides Canberra's residents with information about each unit of Canberra Nature Park together with a map showing their relationship to the original vegetation of the Territory. Facts about the ACT's threatened species and ecological communities, local plants for local gardens and wildlife corridors are also included.

3. transboundary issues with local councils and the NSW Government concerning land use planning and biodiversity considerations

As noted above regional scale connectivity is a consideration in natural resource planning and management in the ACT. The *Planning Framework for Natural Ecosystems of the ACT and NSW Southern Tablelands* prepared by ACT, NSW agencies and local councils is a significant reference point for cross-border issues with local councils and the NSW Government. Environment ACT works regularly with the NSW Department of Environment and Conservation to ensure that the information on the ACT's part of the report is up-to-date.

Of particular significance to conservation of threatened species and ecological communities are the two grassland conservation areas that lie adjacent to each other in the Jerrabomberra valley. In the ACT, a new nature reserve is being established around Mikes Hill, east of the site for the ACT Prison. Across the border (marked by the former Queanbeyan Cooma railway line) is the Queanbeyan Nature Reserve at Letchworth. Both reserves contain Natural Temperate Grassland (an endangered ecological community) and populations of the endangered Grassland Earless Dragon. Other threatened species are found in the two areas. There is a good opportunity for the relevant ACT and NSW agencies responsible for managing the two areas to cooperate on a program to the grassland habitat and enhance ecological condition of the railway line to assist movement of fauna, particularly the Grassland Earless Dragon, between the two areas.

Since its inception, the ACT has been a party to the *Memorandum of Understanding on Cooperative Management of the Alps Parks*, signed by State and Commonwealth Ministers for the Environment in 1986. The Memorandum provides for cooperative management of resources, especially with those Alps parks that border directly on the ACT (Namadgi National Park). These parks include Kosciuszko National Park, Brindabella National Park and Bimberi Nature Reserve.

Environment ACT actively participates in the Alps Cooperative Management Program, which seeks to assist in managing the Alps parks as a single biogeographic unit. The Parks and Conservation Service takes a lead role on behalf of the ACT, with support as appropriate from other parts of Environment ACT. Recent examples of involvement in this program are participation in and/or management of cross agency workshops on Alps Post-fire Biodiversity, Best Practice Feral Pig Management, Bog and Wetland Recovery, the development of a rehabilitation manual for sub-alpine/montane environments and the ACT component of on-going monitoring program of vegetation responses to fire.

4. the inter-relationship of legislation applicable in the ACT (including heritage, tree protection, biodiversity and nature conservation legislation)

Urban Tree Protection as a Biodiversity Conservation Measure

The Tree Protection (Interim Scheme) Act 2001 establishes a statutory framework that gives comprehensive protection for trees in urban Canberra. Applications for activities that impact upon trees on leased land are individually assessed in terms of criteria that include ecological values.

The Tree Protection Bill 2005 proposes a permanent tree protection regime for urban Canberra whereby exceptional trees are protected through a tree register. Comprehensive tree protection may remain for areas where the risk of unnecessary tree loss is a matter of concern. Ecological considerations may qualify a tree or group of trees for registration.

Non-urban land subject to development planning is assessed in term of ecological values in the concept planning phase. Individual trees of significance, and broader ecological values are identified. Suburb and infrastructure design takes this information into consideration.

5 domestic pet policy in suburbs adjacent to protected areas and at the urban fringe

Responsibility for domestic animals policy lies with Canberra Urban Parks and Places (CUPP) within the Department of Urban Services. CUPP administers and provides the budget for Domestic Animals Services the agency responsible for regulatory services for dogs and cats in Canberra, including running the dog pound based at Symonston. The *Domestic Animals Act 2000* (the Act) and Domestic Animals Regulation 2001 provide the legislative framework for the managing and regulating of domestic animals, particularly dogs and cats in urban Canberra. Since both dogs and cats are active predators of native wildlife, the Act and the Regulation provide a basis for controlling the impact of these predators on flora and fauna.

Dogs must be on a leash in public places and on public land unless they are within a declared off-leash dog exercise area under the control of a responsible person. There are areas where dogs are prohibited by signage in urban open space, nature reserves and public places authorised by the Minister, usually for public safety or for nature conservation reasons such as those recognised in statutory Plans of Management. Other defined areas where dogs are prohibited are (a) the grounds of a pre-school, primary school or child-care centre, (b) high school or secondary school during school hours, or when sport or sport training is being conducted; (c) a sports ground where sport is being played; or (d) within 10 metres of a (i) playground for children with children playing on it, (ii) a fireplace or barbecue, or (iii) a signposted swimming area.

If the Minister is satisfied that cats in an area are a serious threat to native flora or fauna in an area, under section 81 of the Act, the Minister may declare the area to be an area where cats must be confined to their keeper's or carer's premises during stated times. The cat curfew area declared for Forde and Bonner and Mulligans Flat and Goorooyarroo Nature Reserves in Gungahlin requires cats to be permanently confined to residential premises or a cat enclosure at all times. This declaration protects native bird species and other fauna in urban open space in these suburbs, particularly endangered species in the nature reserves from predation by cats. There is no other similar cat curfew area declared in Canberra, but there is potential for other such areas to be declared to protect natural biodiversity at other locations, particularly at the urban fringe, and adjacent to reserved areas such as nature reserves or Namadgi National Park. The existing cat curfew area could be extended to include the suburb of Throsby, which also abuts Goorooyarroo Nature Reserve.

Under the Government's Domestic Animals (Cat Containment) Amendment Bill 2005, which has been introduced into the Assembly, it will be compulsory for cats living in the cat containment area to be identified by microchip embedded beneath a cat's skin. In other areas of the Territory it will be compulsory for cats over 12 weeks of age to be identified by microchip at point of sale. While cats elsewhere may continue to be identified by microchip or collar and tag, after July 2008 it will be compulsory for all domestic cats throughout the ACT to be identified by microchip. New offences have been proposed to provide for active enforcement of the declared cat containment area and for the new provisions for cat identification by domestic animals rangers and other authorised people under the Act. New provisions will also be introduced, similar to those already in place for dogs, for the seizure of stray cats, temporary housing of seized cats, their identification, release to their owners, and their sale or disposal after a statutory holding period of seven days.

6. any other issues of relevance

Research to assist management of natural areas

Setting aside natural areas in a nature reserve system and providing for wildlife connectivity will not alone achieve protection for the biodiversity intended to be conserved in them. These areas require active management informed by the best available scientific knowledge.

To assist Environment ACT apply best practice management to its woodland reserves including the associated habitat connectivity it has forged a link with Professor David Lindenmayer at the Centre for Resource and Environmental Studies at the Australian National University in a joint program of research into grassy woodlands. The Australian Research Council through its Linkage Program has recently announced funding for a five-year research program called '*Innovative enhancement and management of threatened temperate woodlands for improved biodiversity conservation*'. The ACT Government will contribute \$50,000 a year from its budget allocation for threatened species research and the Linkage Program will provide \$807,000 over five year.

A long-term, large-scale "natural experiment" is being established to provide critical data & analyses on the simultaneous effects of management regimes on woodland biota. A key outcome will be an improved understanding of woodland biota response to management critical for use on grazing properties, reserves, travelling stock routes in rural southeastern Australia. This will be a major step forward given that temperate woodlands are among Australia's most threatened vegetation types.

This study tackles fundamental problems associated with identifying best practice resource management regimes essential for an ecologically sustainable Australia. It is highly relevant to policies and institutional arrangements on woodland management, biodiversity conservation and ecological sustainability and it will lead to (1) more cost-effective and ecologically-effective expenditure on woodland enhancement and management – particularly on private lands where most remaining woodland occurs. (2) greater emphasis on strategic planning about which woodland areas to manage, how and why they should be managed, and how these managed areas fit within site-level and landscape-level patterns of vegetation cover and farm management practice.

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