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**THE LEGISLATIVE ASSEMBLY FOR THE
AUSTRALIAN CAPITAL TERRITORY**

**GOVERNMENT RESPONSE TO THE 'STATE OF THE
ENVIRONMENT REPORT 2011' PREPARED BY THE
COMMISSIONER FOR THE ENVIRONMENT**

**Presented by
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GOVERNMENT RESPONSE TO THE STATE OF THE ENVIRONMENT REPORT 2011

Foreword to the Government Response

In accordance with section 19 of the *Commissioner for the Environment Act 1993*, the Commissioner for the Environment has provided the 'State of the Environment Report 2011' to the Minister for Environment and Sustainable Development.

The report highlights that, while at a local level the quality of our natural environment is comparatively high, there are ongoing challenges for the ACT community in reducing our environmental impact and ecological footprint while maintaining the high degree of liveability the Territory enjoys.

The report's recommendations focus on a number of key areas: ensuring strong management of water resources; providing solid data, research and planning bases (across key areas such as urban planning and land use, transport, housing, waste and biodiversity conservation), to underpin environmental activities and outcomes; and developing appropriate and targeted climate change responses, including strengthening community engagement in sustainability.

The Government's response to the report is positive. As the response to each of the Commissioner's recommendations below will show, the Government has already established a number of policies and projects that will actively respond to the Commissioner's recommendations and will see some of the trends highlighted in the report, slowed or reversed.

The complete Report and related documents may be viewed on the Commissioner's website at:- http://www.envcomm.act.gov.au/investigations/nature_reserves_investigation

Tabling the Report

Pursuant to section 19(3) of the *Commissioner for the Environment Act 1993* (the Act) the Minister, must within 6 months after the day of receiving a State of the Environment Report (the Report), present to the Legislative Assembly either a statement that sets out the response of the Government to the report; or a statement that sets out the reasons for not presenting a statement to the Assembly.

The Minister for the Environment and Sustainable Development received the report from the Commissioner in December 2011 and tabled the Report on 1 May 2012.

This document is the Government's response to the report, consistent with section 19(3) of the Act.

The Recommendations and Government's Response

The Commissioner made 22 main recommendations, each of which is listed below, followed by the Government's response.

Recommendation 1

Establish cross-boundary management of the ACT's water resources including:

- a. developing catchment policy and an integrated water supply catchment management strategy, as recommended in previous State of Environment Reports; and*
- b. strengthening integrated management action by facilitating improved exchange and use of information, such as spatial information, between government agencies, Natural*

Resource Management groups and Catchment Management Authorities, and by promoting sustainable catchment management with landholders and the community.

Government response: Supported

The Government has a strong record in water and catchment management, aiming always to achieve sustainable and appropriate conditions for water resource management. The Government has acted both on previous recommendations of the Commissioner and on the information and data it gathers as part of its own and regional programs to implement a range of policies, programs and activities to ensure the viability of the ACT's water supply into the long term.

The Government takes an integrated and 'whole of process' approach to catchment management that incorporates planning and policy, development controls, controls on water abstraction, discharge licensing and regulation, sediment and erosion controls and improved design and management of urban stormwater systems. This integrated approach to our water responsibilities has been recognised in the Commissioner's Report.

Beyond the ongoing water monitoring and assessment program that includes water quality, stream flow and biological monitoring, all of which feeds into our water management strategies and programs, a number of projects demonstrate our commitment to improving Canberra's water and urban outcomes.

The Government has invested strongly in the design and construction of wetlands throughout urban Canberra, providing a range of water management and community education benefits. These wetlands are restoring concrete channels to 'living systems', improving water quality and flood protection and creating aquatic habitats that are revitalising native species. The harvested stormwater will be trialled as a secondary water source for irrigation of school and sports grounds, saving, further supplementing the availability of our potable water supplies. Beyond these water harvesting opportunities, the wetlands will provide water recreational and education opportunities in our suburbs, with volunteering opportunities bringing communities together to invest in our water systems.

The implementation of mandatory Water Sensitive Urban Design (WSUD) into developments starts to build a system-wide approach to managing our waterways and the broader catchment, moving to effectively integrate the management of the urban water at all points in the water cycle. Since the last State of the Environment Report, the Government has made WSUD measures mandatory for certain developments, including new suburbs, where the retention of permeable surfaces, harvesting of rainwater and the use of water retention measures such as tanks, swales and wetlands and using simple methods such as landscaping to minimise stormwater runoff represent demonstrable improvements at household, street, suburb and city level in the protection of our waterways.

Within that strong water management context, the Government supports the recommendations:

- a. One of the Government's priorities is to review and revitalise its *Think water, act water* policy that has been in place since 2004 and has supported much of the progress the Government has made in water management and quality over that time.

The Government has implemented administrative changes that have, for the first time, brought water policy and catchment management together in a single unit. This will bring an enhanced management and monitoring focus to water policy that will be

reflected in a revised and refreshed water strategy that updates *Think water, act water*. That revised strategy will embed catchment management as a central part of the Government's approaches to water planning and management

A broader, catchment-focussed water strategy could develop prioritised plans for our urban, rural and natural landscapes that address identified differences in the water issues those areas face and provide a coordinated response to those challenges.

- b. To promote development and implementation of an integrated regional approach to ACT/NSW cross-border water supply and management, the ACT and NSW Governments already have in place agreements on a regional management framework as well as Cross Border Agreements on water resources and settlement. Those existing MOUs will be revitalised as part of the revised *Think water, act water* strategy in a context of broad-scale, integrated regional catchment management approaches to our water resources. The Government's collaborative relationships with Natural Resource Management groups, Catchment Management Authorities and other non-government organisations and community groups will also be strengthened through that process.

Recommendation 2

Complete assessment of the ACT's at risk groundwater resources.

Government response: Supported in principle.

The Government acknowledges the importance of continuing to improve understanding of aquifers at risk of over-use and contamination, and to identify and manage impacts on groundwater quality.

Given that groundwater in the ACT is a relatively small resource compared to surface water, the Government has taken a risk-based approach to groundwater monitoring. Aquifers under highest demand for abstraction and therefore most at risk are afforded proportionally more resources for measuring and monitoring – aquifers in conservation reserves where no abstraction is occurring require minimal information to manage risk; aquifers in urban areas with higher use along with other changes to the catchment such as increased impervious surfaces require more information. More monitoring bores are located in aquifers in urban areas and a wide range of methods are used to determine sustainable yield.

The Government has 15 groundwater monitoring bores in high demand areas and receives information from another six sites coming from interested groundwater abstractors. These bores provide accurate groundwater assessments based on information about the transmissivity (capacity for water to move through the aquifer), hydraulic conductivity, storage capacity potential and recharge rates of the various aquifer types. In particular, aquifer recharge responses to rainfall are monitored for the information they may provide in quantifying the effects of changed rainfall patterns expected from climate change.

The Government considers it appropriate to continue to take that risk-management approach to its groundwater resources.

Recommendation 3

Update water management, monitoring and reporting programs to inform:

- a. *actions to mitigate impacts of urban development on water quality;*

- b. the efficacy of Water Sensitive Urban Design measures;*
- c. improvements in sediment and erosion mitigation actions; and*
- d. management of ACT lakes.*

Government response: Supported.

The Government has moved to place water policy and catchment management within the one administrative area of the Environment and Sustainable Development Directorate (ESDD). This will enable more effective development and implementation of ‘whole of supply’ policy and programs for ACT water resources.

The Directorate is currently reviewing the Government’s *Think water, act water* policy and has identified the four areas nominated in this recommendation as integral to a broader catchment management policy approach (see response to Recommendation 1a). As part of that review, options to improve data collection and reporting across those key areas are being explored. In particular, a means to monitor WSUD implementation is being considered, with a view to understanding the ways in which it can have best effect in broader catchment management.

Not only will this work improve our understanding and management of our own catchment areas, it will better support the Government in fulfilling its obligations under the National Water Initiative agreed by the Council of Australian Governments.

Recommendation 4

Improve monitoring to assess the impact of erosion on local land and water resources, and to help to understand the interactions between the ACT's catchment and ecosystem services in particular:

- a. undertake baseline soils mapping for the ACT to facilitate monitoring and assessment of soil condition;*
- b. identify indicators of land health including soil health, vegetation quality and change, and landuse changes, and monitor and publicly report on these on a regular basis;*
- c. improve limited land health data by including land health assessments in water catchment data to inform soil condition across the ACT; and*
- d. improve actions related to sediment and erosion mitigation.*

Government response: Supported in principle.

Healthy soils are a fundamental part of our landscape and understanding their condition is important to broader catchment management outcomes. The ACT Natural Resource Management Council has reported that, despite the impacts of urban and rural use over extended periods of time, current ACT land uses and our existing land capability are not inconsistent.

A range of conservation planning, research and mapping activities are being undertaken by the Government to support a better understanding of ecological processes and the effects of management actions. This includes, for example, vegetation mapping of ACT lowland vegetation using air photography that allows the classification of vegetation areas according to percent tree cover. The amount of tree/canopy cover in an area has a profound effect on how an ecosystem functions, and what species are present. Ecologists have consistently found that this ‘structure’ of the vegetation is more important than the particular plant species, in determining what assemblage of animals is present and on bush fire behaviour. Mapping programs of this kind are providing accurate and sound advice to land managers, government

agencies and the community and building the understanding of ecosystem process needed to better manage our land resources.

- a. The Government, working with the relevant NSW agencies, has mapped approximately half of the ACT's soils, with the data supporting a range of natural resource management activities. The Government will consider mapping the remaining proportions within the context of its broader strategic programs and subject to resource availability, including through Commonwealth funding programs. Consideration can be given to the development of a soils policy.
- b. The Council of Australian Government's Standing Council on Environment and Water is reviewing Australia's Native Vegetation Framework that, once agreed, requires jurisdictions to monitor the extent and condition of vegetation. Opportunities to expand current programs or enhance policy outcomes will be considered within overarching environmental responses and as resource availability permits.
- c. The assessment of likely hotspots for soil erosion leading to in stream turbidity is being undertaken for the Upper Murrumbidgee catchment as a collaboration between ActewAGL, ESDD and the Murrumbidgee Catchment Management Authority. Further consideration of catchment health measurement and reporting will be undertaken following the review of the *Think water, act water* and the development of a new strategy.
- d. See response to item c.

Recommendation 5

Management of knowledge and the coordination of scientific research, data collection, monitoring and reporting (including public information) is an area of concern across all themes. A specific recommendation to address this is provided under the recommendations section of the Biodiversity Theme paper.

Government response: Supported.

The Government agrees that it is important that data generated in relation to the Report's themes are appropriately and effectively collected, managed, analysed and reported within available resources and will look to progressively implement measures to achieve this outcome.

Recommendation 6

Strengthen research, planning and practical projects to enhance biodiversity conservation in the ACT through:

- a. *developing a biodiversity monitoring strategy, building on existing government and non-government skills, capacity and programs, and focused on periodic reporting. This should include, where appropriate, systematic statistical methodologies which support monitoring of trends and changes to biodiversity assets in the ACT;*
- b. *funding a dedicated senior officer position to facilitate knowledge development and consolidation, across disparate sources, including more strategic integration within and between government, research/academic institutions and community groups and members.*

To support this role, systems should be developed to provide wide public access to information to guide research, teaching, planning and practical projects to enhance the sustainability of the ACT and Region;

- c. identifying opportunities to integrate multiple environmental assessments. For example, when monitoring nature reserves for vegetation qualities, land-health indicators and grazing impacts should also be monitored at the same sites. Assessing sites in Canberra Nature Park on a rolling 3-year basis over a 10-year period would provide the basic information for monitoring trends in environmental condition;*
- d. publicly reporting decisions and activities relating to individual species, populations and ecological communities in the ACT. This should include both qualitative and quantitative information;*
- e. reviewing and updating Action Plans where appropriate, and publicly reporting on progress against Action Plan objectives and proposed actions; and*
- f. collaborating with NSW Government and regional organisations to contribute to regional and national biodiversity data sets.*

Government response: Supported in principle

Maintaining well-functioning ecosystems and building resilience in ecosystems is an important part of dealing with climate change. So too is ensuring the continuation of ecosystem structure and function.

The Government undertakes a range of programs for nature and biodiversity conservation in the ACT. These include research primarily focused on local flora and fauna, preparing scientific advice on ecological and natural resource management, conducting ecological surveys, biodiversity monitoring, and preparing and guiding implementation of threatened species recovery plans. Plans of Management are also prepared for all parks and reserves in the ACT. The Government has also invested in research and studies on key issues related to biodiversity and climate change adaptation, especially related to ecological connectivity, sleeper weeds and pest animals, to support its conservation activities. In recent years, for example, studies of vegetation and habitat in the Murrumbidgee riparian zones and its tributaries have been carried out and electronically published and are informing our activities and programs to support and enhance biodiversity.

The Government's actions on the ground that are strengthening ecological connectivity, enhancing the reserve system and strengthening partnerships with land managers are being reinforced at all levels within Government. Biodiversity and biodiversity conservation is a key consideration in the Government's central strategic and planning documents that will guide the City's longer term future: the *ACT Planning Strategy* and *Weathering the Change* and its supporting *Action Plan 2*. The ACT Government will continue to promote understanding of the potential impacts of a changing climate and build resilience of biodiversity.

- a. The Government has a range of ongoing monitoring programs that address threatened species and communities as well as the impact of management actions in our parks and reserves and on public land. This program includes monitoring of the impact of fire fuel reduction burns as well as the long term recovery of natural systems following the 2003 bushfires.
- b. The Government considers that there is no need for a specifically dedicated knowledge manager position to be funded over and above existing resources. Existing resources are capable of coordinating the management of data. Developing electronic information management and presentation systems (such as ACTMAPi, the ACT Government's

interactive mapping service) provide the opportunity to address the management and presentation of data.

- c. This recommendation is supported in principle, noting that resourcing and technical complexities may limit more than the identification of opportunities as recommended.
- d. Action Plans have been developed for all threatened species and communities and are regularly reviewed and updated for validity. All of these are publicly available. Other species and communities are monitored if there is a specific need to do so, such as for Eastern Grey Kangaroos. Broadscale monitoring of vegetation and biodiversity will continue.
- e. See response to item (d).
- f. Extensive collaboration occurs between the ACT and NSW, including regional natural resource management organisations. This specifically supports the sharing of data and development of projects addressing natural resource management issues such as connectivity, weeds and feral pests. The Government supports continuation of these arrangements.

Recommendation 7

Better integrating biodiversity values within urban planning through:

- a. integrating biodiversity corridors and habitat connectivity in the Territory Plan process;*
- b. identifying, where possible, appropriate clearance thresholds for ecological communities across the ACT to maintain and improve biodiversity values and guide development decisions. To complement this the draft biodiversity offset policy should be finalised to ensure no net loss in ecosystems; and*
- c. developing and implementing an ACT fauna sensitive road design manual.*

Government response: Supported in part.

The ACT government has established a range of policies and programs to promote awareness and understanding of biodiversity and to protect and conserve our local and regional biodiversity. Policies and programs are strengthening our ecological connectivity and enhancing the reserve system, while strengthening partnerships with land managers to share responsibility and outcomes across the community.

The Government is also building biodiversity and biodiversity conservation into the Territory's future. It is investing strongly in research and planning to inform our key future strategies on water management (a revised *Think water, act water*), the shape and development of our city (the *Draft Planning Strategy*), how we move around our city (*Transport for Canberra*) and how we respond to climate change and its impacts (*Weathering the Change* and *Draft Action Plan 2*), all of which have the need to protect and conserve our natural resources and regional biodiversity at their centre.

- a. The Government has collaborated with NSW to model landscape connectivity across the ACT. This data is being used to inform responses to planning for future development and in projects improving connectivity across rural leases and open space. The Government's *Draft Planning Strategy* that will guide the City's development over the next 30 years clearly recognises the importance of biodiversity and connectivity to our long term success. The *Draft Planning Strategy*, when finalised, will guide

development and implementation of the Territory Plan. Opportunities for achieving improved biodiversity corridors more directly into the Territory Plan can be investigated through its regular review processes.

- b. The Council of Australian Governments is considering national approaches to environmental offsets and the ACT Government is participating in that process. An ACT offsets policy will be sensibly guided by the outcomes of that work to ensure local, regional and national outcomes can be achieved.
- c. This recommendation is not supported. The Government considers there is insufficient evidence of the need for, or benefits of, this recommendation to support the costs of its production and implementation.

Recommendation 8

Improve transparency of biodiversity integration into legislative and planning frameworks through:

- a. including objectives for the protection of biodiversity and a definition for 'biodiversity' as part of the Nature Conservation (NC) Act 1980 review;*
- b. aligning provisions in the Environment Protection Act 1997 and Planning and Development Act with any relevant changes to the NC Act including biodiversity definitions and reviewing the definition of environmental harm to determine whether unauthorised loss of biodiversity should be included as an offence; and*
- c. assessing the effectiveness of managing threatening processes through Action Plans and determining if management of key threatening processes needs strengthening through listing under the NC Act.*

Government response: Supported in principle.

The *Nature Conservation Act 1980* is the ACT's primary legislation for nature conservation. The Act provides the legal underpinning of nature conservation policy, management and action across the Territory to protect native plants and animals, and manage conservation lands.

The ACT has established a comprehensive reserve network protecting areas of high conservation value. Today 54 per cent of the ACT is a part of that reserve network with all ACT ecosystems and habitats of all threatened species represented. The Government actively and strongly supports a high quality of management of those reserved lands.

The Government clearly recognises that since the Act's adoption in 1980 the science of conservation management has expanded and community conservation concern has increased. Recent Australian legislation and conservation policy has increased the focus beyond individual species and reserve management to a whole-of-landscape or ecosystem approach to restore and protect ecological functioning. To ensure ACT legislation remains contemporary and relevant, the Government initiated a review of the Act in 2010 that included a public discussion paper that actively sought community views on the Government's framework for managing our natural resources. The review sought to identify what legislative actions are required to deliver the ACT's nature conservation objectives, including a sustainable natural environment.

Cutting across the ACT Government's review of its nature conservation legislation is the August 2011 agreement by the Council of Australian Governments (COAG) on the need for major reform of environmental regulation across all levels of government. The dual aims of

the COAG reforms are to reduce regulatory burden and duplication for business and to deliver better environmental outcomes. Better integration of State, Territory and Commonwealth environmental protection regulation will provide better environmental protection. The introduction of new ACT legislation will rightfully need to consider the direction and outcomes of the COAG process.

- a. The review of the existing *Nature Conservation Act 1980* identified the need to include a direct objective for the protection of biodiversity and a suitable definition. This will be considered when drafting amendments to the legislation, consistent with outcomes of national processes.
- b. The review of the existing legislation identified the need for improved enforcement and compliance regimes. Appropriate mechanisms for achieving this will be considered in developing the amendments to the legislation.
- c. This issue was identified in the review of the current *Nature Conservation Act 1980* and will be considered in the development of the amendment Bill.

Recommendation 9

To improve knowledge of our indoor air quality, the Chief Health Officer should consider the health impact of indoor air quality in the ACT in the 2014 Chief Health Officer Report.

Government response: Supported.

The Chief Health Officer will consider inclusion of the health impact of indoor air quality in the ACT in the 2014 Chief Health Officer Report.

Recommendation 10

Improve local air quality outdoors through:

- a. *requiring air quality assessments in all new greenfield developments, to identify and manage air emissions, potentially detrimental to human health and the environment;*
- b. *installing and operating a second performance air monitoring station to ensure that the ACT is compliant with NEPM standards; and*
- c. *determining the feasibility, including costs, of mobile monitoring of appropriate ambient air quality NEPM standards at locations in and around Canberra.*

Government response: Supported in part

As the Commissioner's Report highlights, Canberra has good outdoor air quality that has not diminished during the last two State of the Environment reporting periods. The Report also acknowledges the Government's action on reducing winter smoke from wood-burning fires as a key source of air pollution, with a resulting reduction in particulate matter in the air. The Government has also implemented previous recommendations to encourage low-emission vehicles and publicly report air-quality data.

The vehicle emissions from high levels of private vehicle use remain an area for further action, both by the Government and the community. Consistent with the Government's target of being carbon neutral by 2060, reducing our travel by private passenger car is a key focus of the

Government's *Transport for Canberra* strategy which it release in February 2012. Changing the balance of travel towards low-emission transport through a mode-shift to public transport, walking and cycling and providing associated infrastructure, programs, pricing, policy and promotion will help achieve multiple outcomes of lower emissions, reduced air pollution and a more liveable city with less traffic and congestion.

The revised Action Plan under the Government's *Weathering the Change* also sets out approaches for making our vehicles less emissions intensive. Increasing the efficiency of transport through encouraging the use of greener passenger vehicles – including electric vehicles and best-in-class purchase incentives, encouraging higher numbers of people per vehicle through carpooling and '3-for-free' and creating strategic road networks for the efficient movement of people and goods will all play a role in reducing emissions and improving air quality.

- a. As the Government's trio of strategies for Canberra's future – *Transport for Canberra*, *Weathering the Change* and the *Draft Planning Strategy* – are progressively implemented, opportunities to incorporate air quality assessments into greenfields developments can be investigated through existing Territory Plan review processes.
- b. The Government will consider the need for the installation and operation of a second performance air monitoring station in the context of the complete suite of strategies it is implementing for the City's sustainable future.
- c. This recommendation is not supported. The evidence of the benefits provided by this type of measuring tool in terms of quality data that could meaningfully inform is not sufficiently clear to support the likely high cost of such a program.

Recommendation 11

As a priority the ACT Government develop and implement pathways to achieve carbon neutrality in ACT Government buildings and services. These should be implemented through the second Action Plan of Weathering the Change and include monitoring, evaluation of actions and annual public reporting on progress.

Government response: Supported in principle.

The ACT Government is responsible for approximately four percent of the ACT's greenhouse gas emissions. These emissions are linked to: energy used to heat and cool buildings and power appliances and equipment; fuel used by public buses and vehicles in the Government fleet; landfill emissions; electricity used for lighting, including street lights; and emissions from business travel.

The ACT Government is leading the creation of a sustainable future by putting in place a framework for reducing these GHG emissions that will result in the ACT Government being carbon neutral by 2020.

The ACT Government recognises the need to lead by example. It has committed to moving towards carbon neutrality in its own operations. A Carbon Neutral Framework is currently being developed that will guide reduction in greenhouse gas emissions in all government operations and services.

Action Plan 2 will include a mechanism by which all emissions are monitored and reported.

Recommendation 12

The ACT Government develop and implement a pathway to achieve the legislated climate change emission reduction and renewable energy targets. This should be implemented through the second Action Plan of Weathering the Change and include:

- a. a focus on reducing emissions from transport and our buildings (especially improving energy efficiency of old building stock);*
- b. responsive regulatory, governance and investment arrangements for renewable energy;*
- c. continued engagement with ACT community; and*
- d. regular monitoring, evaluation of actions and public reporting on progress against the targets.*

Government response: Supported in principle.

The ACT is a small contributor to global greenhouse gas emissions: we create about 1.2% of Australia's emissions, and Australia contributes about 1% of global emissions. The Government has taken a very clear stand, however, that the size of our contribution does not negate the need for the ACT community to responsibly play its part in reducing greenhouse gas emissions.

In November 2010 the *Climate Change and Greenhouse Gas Reduction Act 2010* came into effect, establishing ACT emissions reduction targets of: zero net greenhouse gas (GHG) emissions by 2060; 40% below 1990 levels by 2020; and 80% below 1990 levels by 2050.

These targets set a clear direction for planning our sustainable future. The Government also recognises, however, the need to manage the risks posed by shifts in climate that will inevitably occur over the next century regardless of any future cut in emissions. In response, it has developed *Weathering the Change Draft Action Plan 2* which proposes five possible pathways towards zero net emissions by 2060. Those pathways present different means to use six reduction strategies – energy efficiency buildings; sustainable transport; sustainable waste; renewable energy; gas generated electricity; and carbon offsets.

With respect to the importance placed by the ACT Government on leading by example, some of the relevant initiatives are outlined in the commentary relating to Recommendation 11.

The Report's recommendations are consistent with strategies in the *Draft Action Plan 2* and the Government supports them in that context. The final version of the *Draft Action Plan 2* will implement the Government's key climate change objectives and responses.

- a. Pathway 2 in *Draft Action Plan 2* targets reductions in GHG emissions from buildings (Strategy 1), transport (Strategy 2) and waste (Strategy 3), with the remaining emissions achieved through switching approximately two-thirds of the ACT's electricity supply to renewable energy (Strategy 4).
- b. Appropriate governance and other mechanisms will be considered in developing the final version of *Action Plan 2* that will support the Government's energy aims and objectives.
- c. Community engagement has been a core element of the development of the draft *Action Plan*. The Government recognises the need to engage the community in sustainability and carbon neutrality and will continue to do so as it implements the final *Action Plan*.

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- d. *Action Plan 2* will include a mechanism by which all emissions are monitored and reported.

Recommendation 13

Develop a climate change adaptation planning and implementation response through:

- a. *building on existing and undertaking additional sector vulnerability risk assessments;*
- b. *establishing a monitoring, evaluation, reporting and improvement methodology and framework as a consistent guide for Government, to develop, progress and report against adaptation planning;*
- c. *integrating adaptation planning outcomes into existing ACT planning and management frameworks.*

Government response: Supported in principle.

While reducing our carbon footprint is the primary focus of *Action Plan 2*, the ACT also needs to prepare for some unavoidable changes in the climate.

Adaptation to climate change is about maximising our resilience and capacity to cope with this unavoidable change. This is a collaborative venture that requires action and decision making by governments, business and families in the lead up to and during climate change. In contrast to greenhouse emission reductions, where early and decisive action is needed to help reduce the longer term costs of future climate change, the adaptation challenge requires an informed risk management approach across many areas of government. Our objective is to embed climate change risks into standard risk management frameworks so adaptation is core business for the ACT.

In the next five years the challenge is for the Government to further prepare itself and the community for the impacts that may flow from changed climatic conditions. This process is already well underway. The adaptation strategies currently being implemented by the ACT Government include climate research and information and managing risks.

- a. The Government has undertaken a number of vulnerability assessments, including cooperating with NSW on the Integrated Regional Vulnerability Assessment for its South-East State Plan Region. *Weathering the Change* notes that the adaptation challenge requires an informed risk management approach across many areas of government. As noted earlier, our objective is to embed climate change risks into standard risk management frameworks.
- b. The ACT is participating in the NSW Government and the University of New South Wales' Climate Change Research Centre to develop the NSW and ACT Region Climate Model (NARClIM). The NARClIM will generate detailed climate projections for NSW and the Australian Capital Territory.

NARClIM will improve our ability to predict changes in temperature, wind and rainfall in the state which, in turn, will provide critical information to manage the impacts of climate change on health, settlements, agriculture, weather extremes and services, such as water and energy supplies.

- c. Adaptation is being built into future ACT planning and management through the Government's key forward-looking strategies that are being developed concurrently and in an integrated way. Our key strategies on water management (a revised *Think water, act water*), the shape and development of our city (the *draft Planning Strategy*), how we move around our city (*Transport for Canberra*) and how we respond to climate change and its impacts (*Weathering the Change* and *Draft Action Plan 2*), all respond to the need to change and respond to climatic and natural resource challenges as we move forward.

Recommendation 14

Develop a regional approach to planning for climate change. This needs to be done in partnership with NSW Government, local councils and regional organisations. Key areas of focus should include opportunities for renewable energy development, water security, urban and regional planning, transport management and adaptation of ecosystem services to climate change.

Government response: Supported in principle.

The Government is keenly aware of the importance of regional approaches to managing and implementing actions on a wide range of environmental challenges. This approach is clearly recognised by the Government's Memorandum of Understanding on Regional Collaboration with the NSW Government. This agreement establishes frameworks for collaboration across a wide range of areas, but with a primary focus on a number of priority areas such as economic opportunities, land use planning and infrastructure and service delivery.

Sound collaborative work has also been undertaken with surrounding local councils in developing our transport, water, climate change and planning strategies. The Government will continue to work with Councils - Yass, Queanbeyan, Palerang, Goulburn-Mulwaree and Cooma – to develop regional freight, transport, catchment and land management strategies and programs to support improved outcomes for the entire region.

Further evidence of the Government's commitment to regional approaches is its partnering with the NSW Government and UNSW to develop a NSW and ACT Region Climate Model, which will generate detailed climate projections for NSW and the ACT. The ACT Government has also cooperated with NSW on the Integrated Regional Vulnerability Assessment for its South-East State Plan Region. The project helps build the ACT's capacity to undertake its own integrated vulnerability assessment.

In addressing potential impacts from climate change on biodiversity and ecosystem services, the ACT successfully bid for \$2.15 million through the Commonwealth's Biodiversity Fund.

These monies will be used to implement an ecological restoration program across 60,000ha of nationally significant woodlands across lowland areas of the ACT and adjacent NSW. The six year project will consolidate and connect the largest remaining box-gum grassy woodland landscape in Australia, enhancing a biodiverse and carbon storing landscape, resilient to climate change.

This project will provide critical resources to assist with ongoing efforts to halt further loss and fragmentation of low land woodlands from urban pressures, over grazing, weed invasion and changed fire regimes.

Recognising that ecosystems do not stop at the Territory border, this project will work collaboratively with NSW on land just across the border from the Mulligan's Flat Woodland Sanctuary. These lands in the northern ACT and adjacent NSW are commonly referred to as the Greater Gorooyarroo Landscape. The ACT Government will work with Greening Australia Capital Region and the Murrumbidgee Catchment Management Authority to implement work in NSW.

The Government recognises the relationship between the ACT and surrounding NSW in terms of the provision of renewable energy generation. The *Electricity Feed-in (Large-scale Renewable Energy Generation) Act 2011* promotes the potential establishment of large-scale facilities for the generation of electricity from a range of renewable energy sources in the Australian capital region through the entitlement of a feed-in tariff.

Recommendation 15

Finalise and implement the draft ACT Planning Strategy to provide an integrated approach to future landscape planning. Particular attention should be paid to:

- a. determining indicators and measures for urban quality in the ACT that includes the benefits provided by green infrastructure and access to open space; and*
- b. developing greenfield and infill targets, which take into account both the need for public open space and the passive benefits of green infrastructure, as well as strengthening a sense of community and self containment.*

Government response: Supported

The Government will consider a new *ACT Planning Strategy* that seeks to establish how our territory will develop into the future to meet the aspirations of the people and the environmental, social and economic challenges of the 21st century. It also seeks to address the challenges we face in Canberra and how we can meet them.

Like many cities, Canberra is facing the global challenges posed by population growth, climate change, energy and food security. To ensure our long-term environmental, economic and social security, we need to make difficult decisions and take action now. The Government is currently finalising the draft *Planning Strategy* that will set a clear path for how our city responds to those challenges.

As identified through conversations with the community, and in independent research and evaluation, the ACT has a number of strengths to help it and the region address the challenges and manage our future. Those strengths are its existing metropolitan structure (that has built strong communities but which can support urban intensification focussed on centres and transport routes), its strong knowledge and service-based economy (a 'clean' industry that can be an important base from which to diversify and attract families, businesses and services), and the diversity of the region in which we live (that offers many opportunities for education, specialist services to government, clean technology, digital enterprise and the creative sector, tourism, food and fibre production and the potential to generate renewable energy).

Those strengths will help us adapt to change and to address our long-term sustainability and liveability. But they will require us to change and adapt as a community. The path for change that is being set out in the Strategy will be based around outcomes we as a community, have identified as important to achieve and will present clear and defined strategies to achieve them.

Together with its refreshed strategies on transport, climate change, energy, social equity, health and affordability, the *ACT Planning Strategy* will guide our planning and development and ensure that Canberra is able to be recognised throughout the world as a truly sustainable and creative city.

- a. The *ACT Planning Strategy* will seek to establish key outcomes and identify clear actions to deliver those outcomes. Community feedback clearly indicates that enhancing Canberra's system of public spaces, investing in design to improve the sustainability and environmental performance of the built form and urban infrastructure are priorities. The Government's final decisions on the Strategy will include consideration of how actions can be tracked to understand how the desired outcomes are being delivered.
- b. Consistent with current strategic city planning approaches, the draft *ACT Planning Strategy* is considering indicators for increasing percentage of new dwellings being developed within the existing urban footprint, a reduction in land take per person and an increasing number of people (across all age cohorts) participating in physical activity. Key government bodies will continue to work together to ensure good urban outcomes are achieved.

Recommendation 16

Develop adaptable housing strategies to address the needs of changing population demographics into the future.

Government response: Supported

Population and demographic change is a critical issue across Australia. Nationally, there is a steady drift of young people and families to the larger (and generally coastal) cities seeking better employment opportunities, a vibrant culture and good access to a range of services. For regional communities this migration leads to a further decline in the available employment prospects and the services that can be provided. Attracting and retaining the younger age cohorts, particularly families that spend income on services and activities necessary to raise children, are vital to a region's prosperity.

Canberra's population is projected to grow from an estimated 365,000 in 2011 to 457,300 by 2030. The total population of the six Local Government Areas (LGAs) adjacent to the ACT is also projected to be 148,700 by 2030. This population projection of 606,000 people in our region by 2030 may be desirable for the economic resilience of Canberra and our neighbours, but it means we have to address issues around our environmental sustainability, including our use of land and water, management of waste and protection of biodiversity.

In comparison with other Australian jurisdictions, Canberra's population is relatively youthful. However, it is still an ageing population, the implications of which for the planning and design of our city include: providing more choice in housing to meet people's changing needs and allowing people to 'age in the community'; changing the services we need to provide, with an increase in health, community and aged care services; and ensuring our streets, paths, public parks and public transport are safe, well-maintained and cater for people of decreasing physical mobility.

Existing provisions within the Territory Plan require that 10% of units in a multi-unit development must be capable of adaptation as residences suitable for persons with a disability,

and the aged. The Government is considering changes to this code to increase this provision, potentially to a position where all units must be adaptable. Consideration is also being given to incorporating universal design principles and requirements into single and multi-unit residential development planning codes.

Recommendation 17

Finalise and implement the draft Sustainable Transport Action Plan to provide an integrated approach to transport and urban planning. In doing so:

- a. obtain additional non-work related travel data, similar to the annual Sydney Household Travel Survey, to ensure a more complete understanding of Canberra's transport habits;*
- b. focus on strategies and targets to improve access to sustainable forms of transport outside of transport corridors;*
- c. develop targets for;*
 - i. reducing greenhouse gas emissions from transport;*
 - ii. increasing sustainable transport usage for non-work travel to complement the existing targets for work travel; and*
- d. track progress towards Sustainable Transport targets on an annual basis.*

Government response: Supported

One of the Government's priorities is to provide an effective and efficient transport system that meets the needs of the community while reducing its environmental and social impacts.

Since 2001, the Government has invested over \$1 billion in transport infrastructure, programs and services to support a cleaner, more sustainable Canberra. The Sustainable Transport Plan that the Government introduced in 2004 has delivered: key transport infrastructure such as the Belconnen bus stations, bus lanes and more than 800km of cycle lanes and paths; fast, convenient public transport, with the Red Rapid, Blue Rapid and Parliamentary Zone Frequent Network; and the increased number and spread of Park and Ride and Bike and Ride facilities to make it even easier to catch a bus in Canberra.

In March 2012, the Government launched its *Transport for Canberra* strategy, a plan that updates and replaces the Sustainable Transport Plan as the foundation for transport planning for the next 20 years. Developed in conjunction with the Government's revised *Planning Strategy* and *Weathering the Change Action Plan 2*, it is a coordinated transport approach that is guided by six key principles of:

- integrating transport with land use planning;
- making active travel (like walking and cycling) the easy way to get around;
- providing sustainable travel options and reducing transport emissions;
- moving people safely around our city;
- accessibility for everybody; and
- efficient and cost-effective management of travel demand across the system.

Transport for Canberra responds to all the actions identified in the Commissioner's Report:

- a. Commits to developing a solid baseline of data to benchmark progress in achieving the goals established in the strategy via an annual transport 'report card' from 2013.
- b. *Transport for Canberra* incorporates the Government's policies on improving access and use of sustainable forms of transport. A range of measures are proposed that include: improving vehicle occupancy rates, ensuring appropriate infrastructure (such

as bus stops and stations, timetables, cycling and walking infrastructure) is provided; promotion and behaviour change programs and ensuring appropriate and efficient pricing of transport to encourage behaviour change; and informed decision-making. Overall, a public transport coverage standard has been set of 30 minute frequency of services within 500m of 95% of households by 2031 and consistent weekend and weekday routes by 2016.

- c. *Transport for Canberra* has set a goal of reducing the percentage of vehicle kilometres travelled by private passenger car which is to be achieved through mode shift. Increased efficiency of travel and of the ACT public transport fleet will lower the emissions intensity of the ACT passenger vehicle fleet. Mode share targets and emissions reporting will be done through the annual transport ‘report card’ and under legislated emissions reporting.
- d. An annual transport ‘report card’ from 2013 will report on progress towards achieving our transport goals including reporting against specific targets for work and non-work travel and transport emissions.

Recommendation 18

Finalise and implement a new ACT Waste Management Strategy with a focus on reducing waste generation; in particular:

- a. *examine and implement options for diverting wastes from landfill to higher order beneficial reuse opportunities. These actions should be measured, recorded and reported publicly.*
- b. *focusing community education on the link between consumption and waste; and*
- c. *targeting specific programs to reduce waste from the construction and demolition sector, and commercial and industrial sectors.*

Government response: Supported

The Government has published the *ACT Waste Management Strategy 2011–2025* that sets a clear direction for the management of waste in the ACT. It builds on the success of the *No Waste by 2010 Strategy* that successfully reduced the waste sent to landfill from nearly 60% of total waste in 1995–96 to below 30% by 2003–04. The ACT is now one of the leading jurisdictions in waste management in Australia with over 70% of waste generated in the ACT reused or recycled.

The Strategy encompasses wastes from the household, commercial and industrial, construction and demolition sectors and biomass from wood and garden waste. The goal of the Strategy is to ensure that the ACT leads innovation to achieve full resource recovery and a carbon neutral waste sector. This goal is directed to the achievement of four key outcomes: reduced waste generation; full resource recovery; a clean environment; and a carbon neutral waste sector. This will be delivered through 29 identified strategies.

The Strategy builds the ACT’s current actions in managing waste resources and focuses on changes that can achieve the greatest benefits in terms of resource recovery, climate change and environmental amenity. Better waste management is an opportunity to: relieve pressure on raw materials through the recycling and reuse of products; reduce greenhouse gas emissions; and ensure Canberra remains a clean safe place to live and enjoy.

Importantly, the Strategy recognises waste as a resource that, with innovation by government and industry, can be transformed into valuable products. Technology in waste management has evolved. New waste sorting and processing facilities provide more cost effective ways of achieving resource recovery and greenhouse gas abatement. At the same time, new technologies for creating energy from waste (or bioenergy) can produce safe renewable base-load power to support the ACT's needs. Innovative bioenergy technologies also offer the potential to manufacture valuable products such as biochar or liquid fuels from wood, biosolids and other materials the ACT currently underutilises or inters in landfill.

The Strategy also recognises waste management as a system that is central to the ACT economy. Managing waste is an issue for all households and businesses. The ACT has a well developed waste management sector that generates significant employment and economic activity through the collection, transportation, sorting and processing of waste. Resources recovered are then reused in economic production.

The Government remains committed to doing more and progressing towards its goal of zero recoverable waste sent to landfill. An implementation plan to support the Waste Strategy 2011 is currently under development.

- a. Diverting waste to higher value uses is a key priority of the Strategy. The ACT's future waste system development will adhere to the principle that waste should be directed to the highest-value use. The Government will continue to investigate the costs and benefits associated with developing markets for waste streams with a view to providing services that deliver the maximum benefit to the Canberra community in a cost effective manner. This investigation will proceed concurrently with the review under the *Sustainable Energy Policy 2011–2020* that will examine renewable energy opportunities in general.
- b. The Government will support awareness campaigns encouraging the community to generate less waste, and also to maximise use of current waste collection systems so that waste going to landfill is minimised where possible and practicable.
- c. The nature of new suburban development in the ACT where many new homes are built concurrently means there is an opportunity for temporary on-site recycling facilities. The Government will consult with facility providers and the construction industry to explore options to consider in development of the Implementation Plan.

Recommendation 19

Strengthen heritage protection in the ACT by:

- a. *developing an action plan for heritage which addresses the backlog of heritage nominations and recognises key future places for protection;*
- b. *strengthening audit, compliance and enforcement processes in line with recommendations of the Marshall report;*
- c. *developing a memorandum of understanding with the Australian Government to protect assets, subject to Australian Government planning approvals, on the ACT Heritage Register;*
- d. *promote ACT heritage values as a part of the Canberra 2013 Centenary celebrations.*

Government response: Supported in part.

The *Heritage Act 2004* came into force in 2005 as the ACT's primary legislation for managing the identification, protection and conservation of the Territory's heritage places and objects. The Act aims to represent and protect the rich natural and cultural heritage of the ACT, encompassing both Aboriginal and European cultural values.

Consistent with the provisions of the Act and the Government's commitment to ensure the ACT's heritage is appropriately managed and protected, the Government instituted a review of the legislation in 2010 with a view to examining the efficacy of the current heritage framework in achieving its key objectives. The review involved a wide range of consultations and research including a public discussion paper, workshops and community sessions.

Following the review the Government is currently considering appropriate legislative amendments to the Heritage Act.

- a. The Government's response to the review and revised legislation will appropriately consider options to address this recommendation.
- b. The Government's response to the review and revised legislation will appropriately consider options to address this recommendation.
- c. The Government does not support this recommendation in light of the fact that the Commonwealth does not hold any assets that are listed exclusively on the ACT Heritage list. An MOU is therefore considered to provide no additional protection to ACT listed properties.
- d. The Government supports this recommendation.

Recommendation 20

Align and integrate climate adaptation planning and disaster risk management where appropriate. This should include lessons learned from changes to fire management.

Government response: Supported.

Integrating climate change impacts into natural disaster and emergency risk management and planning is a key priority that has been identified within the framework of the Government's *Weathering the Change draft Action Plan 2*.

The ACT Government is translating knowledge about the likely impacts of unavoidable climate change into better plans and actions to reduce the risks to water supply, biodiversity, natural disasters, health and the urban environment with detailed planning and management activities already occurring across government.

A Territory wide risk assessment will prioritise natural disaster risk in accordance with relevant Australian standards and support measures to strengthen communities, individuals, businesses and institutions to minimise the adverse effects of disasters, including the potential impacts of climate change. As an ongoing management tool, climate change impacts will be integrated into emergency management planning, with regular reviews of those plans to ensure they reflect the known risk priorities.

Recommendation 21

In collaboration with NSW Government and local councils, develop a regional approach to planning and risk management to address future challenges of population and climate change.

Government response: Supported.

The Government is keenly aware of the importance of regional approaches to managing and implementing actions on a wide range of environmental challenges, including risk management. This approach is clearly recognised by its signing of a Memorandum of Understanding (MOU) on Regional Collaboration with the NSW Government. This agreement establishes frameworks for collaboration across a wide range of areas, but with a primary focus on a number of priority areas such as economic opportunities, land use planning and infrastructure and service delivery.

Recommendation 22

Strengthen community engagement in sustainability by:

- a. undertaking research on attitudes to sustainability and consumption patterns and behaviours. This could be done through regular, comparable, community surveys similar to the annual NSW Who cares about the environment? with the outcomes informing focus areas for community engagement.*
- b. foster behavioural change through community engagement to reduce our ecological footprint with a particular focus on:*
 - i. sustainable transport; and*
 - ii. impacts of consumption.*

Government response: Supported.

The Government fully understands and supports the need to ensure the community is engaged with sustainability and its importance to the future of the ACT community.

All of its key strategic positions and documents that are addressing the future of the Territory – *Weathering the Change, Transport for Canberra, ACT Planning Strategy, Think water, act water* and the *Waste Strategy 2011-25* - have been developed in strong consultation with the public, community and volunteer groups, community councils, and other key stakeholder groups. These consultations have used a range of mechanisms including online forums, public discussion papers, workshops, information sessions, surveys and submissions.

All these key documents recognise the importance of education, community participation and community ‘buy-in’ and have incorporated strategies and actions to ensure this occurs.