

# Appendix 1

## Summary of scoring of indicators across issues

Indicator	Air quality	Land	Water	Biodiversity	Heritage
<b>Context</b>					
Managers know and understand the environmental values and attributes that management is seeking to maintain or enhance relevant to the topic	4	4	4	4	3
Managers understand the threats and pressures (direct, indirect and cumulative) affecting the topic	4	4	4	4	3
Managers are aware of, and understand, the broader regional, national and international (if relevant) influences relevant to the topic	4	4	4	4	4
Managers understand the stakeholders' perspectives about the topic	3	4	4	4	4
<b>Planning</b>					
A planning system and/or policy framework is in place that effectively addresses the topic	4	4	4	4	3
Clear, measurable and appropriate objectives, outputs and outcomes for management of the topic have been documented	4	4	4	4	3
The main stakeholders and/or the local community are appropriately engaged in planning to address the topic	3	4	4	4	4
<b>Financial, staffing and information inputs</b>					
Financial resources are sufficient to meet objectives	3	3	3	3	3
Skills and expertise are adequate to inform and implement management decisions	4	4	4	4	4
Adequate information (eg biophysical, socioeconomic, heritage) is available to inform management decisions	4	3	3	4	3

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Appendix 1 *continued*

Indicator	Air quality	Land	Water	Biodiversity	Heritage
<b>Management systems and processes</b>					
The main stakeholders and/or industry(ies) and/or the community are effectively engaged in the ongoing management of the topic	3	4	4	4	4
An appropriate governance system is in place to address the topic	4	4	4	4	4
There is effective and timely performance monitoring of plans or programs	4	3	4	3	3
Impacts (direct, indirect and cumulative) of threats and pressures associated with the topic are appropriately considered	4	3	3	4	4
The most current and relevant available information (eg biophysical, research and/or monitoring, socioeconomic, heritage) is applied appropriately to make relevant management decisions regarding the topic	4	3	4	4	4
Approaches and methods used in managing the topic are appropriate and in line with best practice	4	3	4	3	4
Relevant standards and targets are identified and are being met regarding the topic	4	3	4	3	3
<b>Delivery of outputs</b>					
Implementation/operation plans (or activities) have progressed appropriately (time and budget)	4	3	3	3	3
The results have achieved their stated management objectives for the topic	4	3	3	3	3
<b>Achievement of outcomes</b>					
The outputs are on track to achieve stated outcomes	4	3	3	3	3
The outputs are reducing the major risks and threats for the topic	4	3	3	3	3
The condition of values is within the acceptable range	4	3	3	3	3

# Appendix 2

## Scores, justification and references for each indicator for each topic

Topic: Air quality	Score	Evidence	Source
<b>Context</b>			
Managers know and understand the environmental values and attributes that management is seeking to maintain or enhance relevant to the topic	4	The environmental values and attributes are clearly articulated in the national standards and ACT air quality standards.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> )  National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM) reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )
Managers understand the threats and pressures (direct, indirect and cumulative) affecting the topic	4	The Air Environmental Protection Policy (EPP) details the relevant guidance material that staff use to understand the direct, indirect and cumulative threats and pressures affecting the regulation of the management of air quality.  This includes the principal national guidance: National Environment Protection (Ambient Air Quality) Measure 1998 and National Environment Protection (Air Toxics) Measure 2004.  Monitoring data provide a basis for knowledge of threats and pressures.	<i>Environment Protection Act 1997</i> ( <a href="http://www.legislation.act.gov.au/a/1997-92/default.asp">www.legislation.act.gov.au/a/1997-92/default.asp</a> )

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Appendix 2 *continued*

Topic: Air quality	Score	Evidence	Source
Managers are aware of, and understand, the broader regional, national and international (if relevant) influences relevant to the topic	4	<p>The AAQ NEPM provides the regional, national and international influences that are relevant to the topic.</p> <p>The ACT's only pollutant of concern is particulate matter, primarily associated with the use of domestic wood heaters in winter, and occasional influences from bushfires and controlled burns used to manage ecological environments.</p>	<p>ACT Annual Air Quality reports (<a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a>)</p> <p>AAQ NEPM reports (<a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a>)</p>
Managers understand the stakeholders' perspectives about the topic	4	<p>The National Environment Protection Measure (NEPM) review is the key consultation mechanism undertaken at the national level.</p> <p>At the local level, engagement has been through the development of (including consultation on) the <i>Environment Protection Act 1997</i> and Environment Protection Regulation 2005, particularly the provisions in the Regulation that relate to emissions to air.</p> <p>The development and implementation of, and reporting under, the AAQ NEPM and subsequent review of the NEPM deal specifically with the air quality issue of greatest concern in the ACT: particulate emissions.</p> <p>The variation of the NEPM also includes a consideration relating to the standards for emissions from domestic wood heaters. A risk profile was undertaken with respect to wood suppliers. Wood moisture content is being monitored and controlled. More than 1000 heaters have been removed and replaced with gas heaters.</p> <p>Community engagement also includes day-to-day advice on the suitability of use of wood fires, based on Bureau of Meteorology predictions of the likelihood of an inversion trapping smoke and affecting air quality.</p>	<p>ACT Annual Air Quality reports (<a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a>)</p> <p>AAQ NEPM reports (<a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a>)</p>

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Appendix 2 *continued*

Topic: Air quality	Score	Evidence	Source
<b>Planning</b>			
A planning system and/or policy framework is in place that effectively addresses the topic	4	<p>In addition to the legislative framework provided for by the Act and Regulation, and the AAQ NEPM, provisions of the <i>Planning and Development Act 2007</i> – in particular, an Environmental Impact Statement (EIS) – are required for significant developments where impacts from emissions are considered.</p> <p>In the ACT context, this has resulted in domestic wood heaters being restricted and subjected to conditions in some new development areas because of their topographical location and the potential for inversion to cause adverse air quality. These restrictions apply in Dunlop, East O'Malley and the entire Molonglo development, excluding Wright.</p> <p>The EIS process also deals with significant point-source emissions – for example, the proposed gas-fired data centre proposed in the industrial estate of Hume.</p>	<p>ACT Annual Air Quality reports (<a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a>)</p> <p>AAQ NEPM reports (<a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a>)</p>
Clear, measurable and appropriate objectives, outputs and outcomes for management of the topic have been documented	4	<p>The objectives and outputs are well documented through national standards such as the AAQ NEPM. They are also reported through the annual ACT Air Quality Report.</p>	<p>ACT Annual Air Quality reports (<a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a>)</p> <p>AAQ NEPM reports (<a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a>)</p>
The main stakeholders and/or the local community are appropriately engaged in planning to address the topic	3	<p>The strategic planning (EIS) and development assessment processes have a legislative consultation mechanism that provides for community engagement and consultation.</p> <p>This is supported by the ACT Government's community engagement guidelines. Consultation is also reported in the Environment Protection Authority (EPA) Annual Report.</p> <p>Stakeholders (eg industry, wood suppliers, householders) are engaged in addressing the issue of particulate matter from wood heaters.</p>	

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Appendix 2 *continued*

Topic: Air quality	Score	Evidence	Source
<b>Financial, staffing and information inputs</b>			
Financial resources are sufficient to meet objectives	3	<p>The ACT EPA has one dedicated air quality regulatory officer with the technical expertise to implement the regulations and guidance detailed above.</p> <p>The officer is within a management structure and team environment that provide support to this function, including information technology to maintain the ACT Government's records on air quality and annual reporting.</p> <p>Extensive policy support is also provided from within the ACT Government.</p>	Staff feedback
Skills and expertise are adequate to inform and implement management decisions	4	<p>The skills and expertise are adequate to inform and implement decision-making. The ACT EPA works closely with ACT Health and interstate colleagues with relevant expertise.</p>	Staff feedback
Adequate information (eg biophysical, socioeconomic, heritage) is available to inform management decisions	4	<p>Consideration of socioeconomic, social, ecological and human health is integral to the guidance and standards detailed above, and forms the basis of their development and decision-making. Monitoring stations are in place to ensure that data are collected at relevant sites.</p>	<p>ACT Annual Air Quality reports (<a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a>)</p> <p>AAQ NEPM reports (<a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a>)</p>

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Appendix 2 *continued*

Topic: Air quality	Score	Evidence	Source
<b>Management systems and processes</b>			
The main stakeholders and/or industry(ies) and/or the community are effectively engaged in the ongoing management of the topic	3	<p>Consultation is primarily through national forums such as the variation to the AAQ NEPM. The Air EPP will be reviewed following completion of the variation, and any required amendments to the Environment Protection Act and Regulation. Consultation includes consideration of the National Plan for Clean Air and the National Clean Air Agreement, which are currently being developed by environment ministers.</p> <p>In addition, there are community information programs about replacement of wood heaters, regulation of moisture content of fuel, and weather that is unsuitable for burning.</p> <p>Social media are used to advise the public about inversion layers.</p>	<p>ACT Annual Air Quality reports (<a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a>)</p> <p>AAQ NEPM reports (<a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a>)</p>
An appropriate governance system is in place to address the topic	4	<p>The ACT reports annually against the AAQ NEPM and also produces the annual ACT Air Quality Report. The monitoring, which is undertaken by ACT Health in accordance with the AAQ NEPM, and annual reporting by the EPA provide the framework for continual evaluation and monitoring.</p> <p>Recent changes in directorates mean that policy development and implementation of regulations are now in different departments. These governance changes currently work because of good interpersonal relationships.</p> <p>Memorandums of understanding (MOUs) with other departments and NSW are in place, and operate effectively for disaster management.</p> <p>There are strong relationships with other states, including 'heads of EPA' meetings and intergovernmental agreements.</p>	<p>ACT Annual Air Quality reports (<a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a>)</p>
There is effective and timely performance monitoring of plans or programs	4	<p>The NEPM and Air EPP detail the national and ACT legislative framework, and require annual reporting.</p>	<p>ACT Annual Air Quality reports (<a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a>)</p>

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Appendix 2 *continued*

Topic: Air quality	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
Impacts (direct, indirect and cumulative) of threats and pressures associated with the topic are appropriately considered	4	Annual reporting enables management decisions to be made if standards should fall.  Issues relating to wood smoke have been identified. Management decisions, such as replacing wood heaters with gas, monitoring the moisture content of fuel and advising on unfavourable weather conditions, have been considered and implemented.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> )  AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )
The most current and relevant available information (eg biophysical, research and/or monitoring, socioeconomic, heritage) is applied appropriately to make relevant management decisions regarding the topic	4	Annual reporting enables management decisions to be made if standards should fall. Issues relating to wood smoke have been identified, and management decisions have been considered and implemented.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> )  AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )
Approaches and methods used in managing the topic are appropriate and in line with best practice	4	National standards are being used and implemented appropriately.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> )  AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )
Relevant standards and targets are identified and are being met regarding the topic	4	These are identified in the AQQ NEPM and Air EPP. Standards are being met.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> )  AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )

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Appendix 2 *continued*

Topic: Air quality	Score	Evidence	Source
<b>Delivery of outputs</b>			
Implementation/operation plans (or activities) have progressed appropriately (time and budget)	4	ACT air quality has met national standards. The ACT has seen continuing improvements in its air quality as a result of legislative and program initiatives.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> ) AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )
The results have achieved their stated management objectives for the topic	4	ACT air quality has met national standards. The ACT has seen continuing improvements in its air quality as a result of legislative and program initiatives.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> ) AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )
<b>Achievement of outcomes</b>			
The outputs are on track to achieve stated outcomes	4	ACT air quality has met national standards. The ACT has seen continuing improvements in its air quality as a result of legislative and program initiatives.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> ) AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )
The outputs are reducing the major risks and threats for the topic	4	The ACT has seen continuing improvements in its air quality as a result of legislative and program initiatives. The greatest threat is particulate matter from wood smoke, and this issue is being addressed and managed appropriately.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> ) AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )
The condition of values is within the acceptable range	4	ACT air quality has met national standards. The ACT has seen continuing improvements in its air quality as a result of legislative and program initiatives.	ACT Annual Air Quality reports ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/air_quality_monitoring_reports</a> ) AAQ NEPM reports ( <a href="http://www.scew.gov.au/publications/nepc-annual-reports">www.scew.gov.au/publications/nepc-annual-reports</a> )

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Context</b>			
Managers know and understand the environmental values and attributes that management is seeking to maintain or enhance relevant to the topic	4	<p>Map layers are available for broadscale vegetation, woodlands, Natural Temperate Grasslands, bogs and fens, lowland Snow-Gum woodland, significant species (of conservation interest but not listed as threatened) and threatened species, threatened invertebrates, reptiles, amphibians, fish and aquatic vertebrates. Habitat values (based on patch size) and regional links (corridors) are also available.</p> <p>Information on the condition of vegetation is lacking. There is no comprehensive mapping or information about the acidity, salinity, carbon storage and overall condition of soils in the ACT.</p> <p>The ACT Nature Conservation Strategy, plans of management, business plans, works plans, the <i>ACT Weeds Strategy 2009–2019</i>, the Invasive Weeds Operational Plan, threatened species recovery action plans and biodiversity offset management plans provide good knowledge and understanding of values and attributes across all land tenures.</p> <p>All private land plans require a Farm Firewise Plan as an annexe to the Land Management Agreement (LMA).</p> <p>The Contaminated Sites EPP 2009 details how the EPA regulates contaminated sites management in the ACT. Note: This EPP will require revision to facilitate changes to the Act as a result of amendments relating to the Register of Contaminated Sites. (See the Bill for changes: <a href="http://www.legislation.act.gov.au/b/db_50463/default.asp">www.legislation.act.gov.au/b/db_50463/default.asp</a>.)</p> <p>The principal document for management of contaminated lands nationally is the <i>Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites</i> (1992); locally, the main document is the ACT Government <i>Strategic Plan: Contaminated Sites Management</i> (1995).</p> <p>The Worboys Report indicates that two of the catchments are in poor condition, but all catchments are improving, as assessed by workshops and expert panels.</p>	<p><i>Environment Protection Act 1997</i></p> <p>ACT Nature Conservation Strategy</p> <p>Plans of management</p> <p>Business plans</p> <p>Works plans</p> <p><i>ACT Weeds Strategy 2009–2019</i></p> <p>Invasive Weeds Operational Plan</p> <p>Threatened species recovery action plans</p> <p>Biodiversity offset management plans</p> <p>Worboys et al (2011), <i>Caring for our Australian Alps Catchments</i></p>

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Context <i>continued</i></b>			
Managers understand the threats and pressures (direct, indirect and cumulative) affecting the topic	4	<p>The Contaminated Sites EPP details the relevant guidance material that staff use to understand the direct, indirect and cumulative threats and pressures affecting the regulation and management of contaminated sites. This includes the principal national guidance: National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended 2013 (NEPM 2013).</p> <p>The ACT Nature Conservation Strategy, the ACT Weeds Strategy 2009–2019 and the ACT Pest Animal Management Strategy 2012–2022 clearly outline threats and the means by which these can be mitigated across all land tenures.</p>	<p>NEPM 2013 (<a href="http://www.scew.gov.au/nepms/assessment-site-contamination">www.scew.gov.au/nepms/assessment-site-contamination</a>), made under the ACT <i>National Environment Protection Council Act 1994</i></p> <p><i>ACT Nature Conservation Strategy 2013–23</i></p> <p><i>ACT Weeds Strategy 2009–2019</i></p> <p><i>ACT Pest Animal Management Strategy 2012–2022</i></p> <p><i>ACT Climate Change Mitigation strategy</i></p>

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Context <i>continued</i></b>			
Managers are aware of, and understand, the broader regional, national and international (if relevant) influences relevant to the topic	4	<p>Managers are aware of national and regional issues through the <i>Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites</i> (1992) and, locally, the ACT Government <i>Strategic Plan: Contaminated Sites Management</i> (1995).</p> <p>The Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) is currently developing national remediation guidelines to replace and expand on the management aspects of the Australia and New Zealand 1992 guidance. This guidance, along with the original NEPM 1999, provides the regional, national and international context and influences; it was developed following review of international practices.</p> <p>CRC CARE was established under the Council of Australian Governments primarily for this purpose. It has representatives from all jurisdictional regulators, and major industry and consultancy stakeholders.</p> <p>The ACT Government has used the most up-to-date conservation data to identify broad 'landscapes' in which more targeted investment may contribute to conservation outcomes at the landscape scale.</p> <p>Landscapes are a mix of reserves, rural leases and other tenures that contain significant native vegetation remnants with potential for restoration and connection.</p> <p>Nationally listed threatened species or ecological communities are considered across all tenures, with appropriate land management actions recommended.</p> <p>The ACT is currently preparing a comprehensive climate change mitigation strategy. Modelling is used to identify potential climate change impacts.</p> <p>The ACT protects areas subject to international agreements, such as Ramsar-protected wetlands in Ginini.</p> <p>The ACT, as part of the Murray–Darling Basin, is involved in relevant land management actions in association with adjacent states.</p> <p>The ACT Weeds Strategy is designed to complement the Australian Weeds Strategy, which identifies an agreed approach to national priorities for weed management throughout Australia. It draws on the Weeds of National Significance list of weed species as a starting point for determining ACT priority species.</p>	<p>www.crccare.com</p> <p>ACT Weeds Strategy 2009–2019</p>

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Context <i>continued</i></b>			
Managers understand the stakeholders' perspectives about the topic	4	<p>The development of guidance at the national and local levels has provided the framework for engagement with key stakeholders. In the ACT, this has been through the development of, and consultation on, contaminated land provisions in the <i>Environment Protection Act 1997</i> in 1999, the development of the Contaminated Sites EPP under the Act in 2000, its subsequent review in 2005 and 2009, development of the national guidance (NEPM 1999) and its subsequent amendment in 2013, and the ongoing work of the CRC CARE, all of which involved extensive stakeholder consultation.</p> <p>In the ACT, the key stakeholders are those parties that are required to manage contaminated sites. These include government land custodians (eg Territory and Municipal Services – TAMS; the Land Development Agency – LDA; Chief Minister, Treasury and Economic Development Directorate; Education and Training Directorate and private stakeholders, such as oil companies and industry.</p> <p>The framework detailed above provides the basis for engagement, with the primary trigger for engagement being the ACT's planning and land development framework.</p> <p>Field days are well attended, and peer group meetings are effective.</p> <p>The small number of landholders (110) in the ACT means that a 'country town' approach can work.</p>	Workshop discussions NEPM 1999

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Planning</b>			
A planning system and/or policy framework is in place that effectively addresses the topic	4	<p>All public land must have a management plan, and all leasehold land is required to have an LMA.</p> <p>The Namadgi National Park covers 46% of all land, and 90% of all public land, in the ACT. The associated management plan was prepared under the <i>Planning and Development Act 2007</i>, and includes management of biodiversity, fire, water, recreation and heritage.</p> <p>The Tidbinbilla Plan of Management also provides a planning framework to address land management issues.</p> <p>The Territory Plan and the <i>Planning and Development Act 2007</i> provide the land-use and development framework in the ACT, including specific rules and criteria in relation to contaminated land.</p> <p>The EPA is a mandatory referral agency under the Territory Plan, which provides the framework for application of the ACT's legislation, policies and guidelines to the management of contaminated land.</p> <p>The ACT Nature Conservation Strategy has a number of strategies that encompass rural land management issues, such as managing total grazing pressure, developing and implementing an ACT soils strategy, and restoring and managing priority landscapes.</p> <p>The <i>ACT Weeds Strategy 2009–2019</i> and the <i>ACT Pest Management Strategy 2012–2022</i> provide frameworks and actions for managing weeds and pest animals across the ACT.</p> <p>Restoration of wildlife corridors across the landscape is guided by the CSIRO flyways and byways work.</p>	<p>Territory Plan (<a href="http://www.planning.act.gov.au/tools_resources/legislation_plans_registers/plans/Territory_plan">www.planning.act.gov.au/tools_resources/legislation_plans_registers/plans/Territory_plan</a>)</p> <p>CSIRO (2014). <i>Flyways &amp; Byways: Guiding Restoration of Wildlife Corridors</i> (<a href="http://www.environment.act.gov.au/__data/assets/pdf_file/0005/672233/FlywaysByways_FinalReport_Doerr-et-al-2014-A10059895.pdf">www.environment.act.gov.au/__data/assets/pdf_file/0005/672233/FlywaysByways_FinalReport_Doerr-et-al-2014-A10059895.pdf</a>)</p> <p><i>ACT Weeds Strategy 2009–2019</i></p> <p><i>ACT Pest Management Strategy 2012–2022</i></p> <p><i>Namadgi National Park Plan of Management 2010</i></p> <p><i>Tidbinbilla Plan of Management 2012</i></p> <p><i>ACT Nature Conservation Strategy 2013–23</i></p>
Clear, measurable and appropriate objectives, outputs and outcomes for management of the topic have been documented	4	<p>The principal criteria for contaminated land is land-use suitability, which is regulated.</p> <p>A number of strategies relating to land management are included in the ACT Nature Conservation Strategy, the <i>ACT Weeds Strategy 2009–2019</i> and the <i>ACT Pest Management Strategy 2012–2022</i>. These provide clear and measurable objectives, outputs and outcomes.</p> <p>The Namadgi National Park Plan of Management and the Tidbinbilla Plan of Management provide objectives and lists of prioritised actions, but lack detail on measurable outputs and outcomes.</p>	<p><i>ACT Nature Conservation Strategy</i></p> <p><i>ACT Weeds Strategy 2009–2019</i></p> <p><i>ACT Pest Management Strategy 2012–2022</i></p> <p><i>Namadgi National Park Plan of Management 2010</i></p> <p><i>Tidbinbilla Plan of Management 2012</i></p>

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Planning <i>continued</i></b>			
The main stakeholders and/or the local community are appropriately engaged in planning to address the topic	4	<p>The NEPM 2013 includes a detailed community and risk communication strategy.</p> <p>The Parks Care Forum, the Conservation Council and the ACT Catchment and Landcare Association all have regular communication and connection with the Government concerning land management issues.</p> <p>There is good ongoing consultation with universities and CSIRO.</p>	<p><a href="http://www.comlaw.gov.au/Details/F2013C00288/Html/Volume_20#_Toc351714350">www.comlaw.gov.au/Details/F2013C00288/Html/Volume_20#_Toc351714350</a></p> <p>Workshop discussions</p>
<b>Financial, staffing and information inputs</b>			
Financial resources are sufficient to meet objectives	3	<p>Financial resources are adequate, with one Contaminated Sites Officer. For broader land management responsibilities, TAMS rangers operate across all tenures.</p> <p>Management of pest plants and animals is subject to wide fluctuations. Base funding is low, and is supplemented with specific program funding. Such programs are heavily reliant on Commonwealth funding, which is not assured after 2018.</p>	Workshop discussions
Skills and expertise are adequate to inform and implement management decisions	4	<p>The ACT EPA has one dedicated Contaminated Sites Officer with the technical expertise to implement the regulations and provide guidance. The officer is within a management structure and team environment that provide support to this function, including information technology support to maintain the ACT Government's records on the location of, and actions for, contaminated sites (both statutory and nonstatutory). This includes maintaining the ACT's Contaminated Sites Geographic Information System and Contaminated Sites Management Database.</p> <p>The ACT uses a system of EPA-approved contaminated land auditors to certify the assessment and remediation of contaminated sites. The auditors are accredited by either the NSW EPA or Victorian EPA.</p> <p>A large proportion of staff have undergraduate or higher degrees, and a personalised training and development plan is a feature of all staff performance agreements.</p>	Workshop discussions

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Financial, staffing and information inputs <i>continued</i></b>			
Adequate information (eg biophysical, socioeconomic, heritage) is available to inform management decisions	3	<p>Socioeconomic, social, ecological and human health considerations are integral to the guidance and standards outlined for contaminated lands.</p> <p>The Parks and Conservation Service (PCS) has information about ecological and heritage values, as well as contaminated sites.</p> <p>Landholders are expected to provide information on areas subject to erosion and weed infestations.</p> <p>The ACT Nature Conservation Strategy, <i>ACT Weeds Strategy 2009–2019</i> and <i>ACT Pest Management Strategy 2012–2022</i> include good information about distribution of species, and knowledge to assist with their management.</p> <p>The Namadgi National Park and Tidbinbilla plans of management include explanations for management decisions.</p>	<p>Workshop discussions</p> <p><i>ACT Nature Conservation Strategy 2013–23</i></p> <p><i>ACT Weeds Strategy 2009–2019</i></p> <p><i>ACT Pest Management Strategy 2012–2022</i></p> <p><i>Namadgi National Park Plan of Management 2010</i></p> <p><i>Tidbinbilla Plan of Management 2012</i></p>
<b>Management systems and processes</b>			
The main stakeholders and/or industry(ies) and/or the community are effectively engaged in the ongoing management of the topic	4	<p>The Flora and Fauna Committee considers threatened species and communities, and is involved in listing species, reviewing action plans and strategies, and monitoring and reporting on the state of biodiversity and the effectiveness of management across all tenures.</p> <p>The NRM Advisory Committee considers broader landscape, pest and weed issues, and advises on community engagement.</p> <p>The development of the various biodiversity and conservation strategies affecting land management included consultation.</p> <p>All statutory management planning includes a mandatory consultation element.</p> <p>Policy changes are typically made in light of formal public consultation or the engagement of specialist committees, such as the Weeds Working Group, the Environment Advisory Committee and the Tidbinbilla Board.</p>	<p>Terms of reference of Flora and Fauna Committee</p>

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
An appropriate governance system is in place to address the topic	4	<p>The <i>Planning and Development Act 2007</i> provides the legislative basis for land management through LMAs. These agreements must have the approval of the Conservator of Flora and Fauna.</p> <p>The <i>Nature Conservation Act 2014 (ACT)</i> and the <i>Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)</i> are the key pieces of legislation governing biodiversity across all tenures.</p> <p>Formal committee structures for consultation are in place (eg Flora and Fauna Committee for threatened species and communities, NRM Advisory Committee for broader landscape issues such as pests and weeds).</p> <p>MOUs that include actions on rural lands are retained with a number of partner agencies, including the Capital Woodlands and Wetlands Conservation Trust, and the Fenner School.</p>	<p><i>Planning and Development Act 2007</i></p> <p><i>Nature Conservation Act 2014 (ACT)</i></p> <p><i>Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)</i></p> <p>Terms of reference of Flora and Fauna Committee</p>
There is effective and timely performance monitoring of plans or programs	3	<p>The EPA has a program of continual evaluation. Major policies such as the Contaminated Sites EPP are reviewed on a 5-yearly basis to ensure that they remain relevant and contemporary; other guidance issued by the EPA is reviewed periodically, or when new national or relevant international guidance becomes available.</p> <p>Performance of LMAs is not audited. Issues are recognised when local staff notice them, rather than through a comprehensive or strategic performance monitoring process. It is a condition that the LMA is reviewed every 5 years.</p>	EPA guidance on management of contaminated sites ( <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/business_and_industry/contaminatedsites">www.environment.act.gov.au/environment/environment_protection_authority/business_and_industry/contaminatedsites</a> )
Impacts (direct, indirect and cumulative) of threats and pressures associated with the topic are appropriately considered	3	<p>Little information is available about the acidity, salinity, carbon storage and overall condition of soils in the ACT. There are connectivity issues with Box–Gum Woodland patches.</p> <p>Urban-edge and Box–Gum Woodland protection continues to be a problem, with the need for protection burns, which lead to a decline of values. Buffers tend to be in the reserves rather than in urban areas, which again reduces the values.</p> <p>Impacts of weeds and pest animals on land are well known and documented, and relevant strategies are in place to direct their management.</p> <p>Plans of management for Tidbinbilla and Namadgi National Park consider a wide range of issues (including fire, climate change and recreation) affecting land management.</p>	<p>Workshop discussions</p> <p><i>Namadgi National Park Plan of Management 2010</i></p> <p><i>Tidbinbilla Plan of Management 2012</i></p>

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Topic: Land	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
The most current and relevant available information (eg biophysical, research and/or monitoring, socioeconomic, heritage) is applied appropriately to make relevant management decisions regarding the topic	3	<p>The EPA has developed an institutional controls policy, which requires managers of unleased contaminated land to enter into an Environmental Protection Agreement with the EPA under the Act. Where contaminated sites occur on leased land, controls are placed on the lease and a notation included on the title for the land. For example, the LDA and TAMS, two of the major land custodians, have agreements with the EPA (these are available on the Environment and Planning Directorate [EPD] website).</p> <p>Advice is provided on weeds and pest management, which brings the latest scientific understanding to operational practice – this information is available interactively to field staff through the PCS Portal Canberra Nature Park Hub.</p> <p>The Namadgi National Park and Tidbinbilla plans of management are based on good knowledge, and include specific actions for research and monitoring to assist with management.</p>	<p>Workshop discussions</p> <p><i>Namadgi National Park Plan of Management 2010</i></p> <p><i>Tidbinbilla Plan of Management 2012</i></p>
Approaches and methods used in managing the topic are appropriate and in line with best practice	3	<p>Management of contaminated lands meets national standards.</p> <p>Management of biodiversity in the broader landscape, apart from rare and threatened plants and communities, receives less attention; however, significant work has been done in the establishment of key corridors.</p> <p>Improvements in monitoring and reporting are being addressed but are not yet complete.</p>	<p>Workshop discussions</p> <p><i>Conservation Planning and Research Program Report 2011–2013</i></p>
Relevant standards and targets are identified and are being met regarding the topic	3	<p>Management of contaminated lands meets national standards.</p> <p>Threat abatement and recovery plans are completed.</p> <p>More needs to be done to manage biodiversity on rural lands. There is a lack of attention to compliance, and management relies on the knowledge of rangers about issues, rather than an organised monitoring and auditing process.</p>	Workshop discussions

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Appendix 2 *continued*

Topic: Land	Score	Evidence	Source
<b>Delivery of outputs</b>			
Implementation/operation plans (or activities) have progressed appropriately (time and budget)	3	There is no reporting on outcomes of LMAs or plans of management. The operational plans of the ACT Nature Conservation Strategy relevant to rural lands (eg complete soils mapping, develop baseline information on landscape function, restore and manage priority landscapes) have not yet been completed or reported on.	Workshop discussions TAMS Annual Report <i>Conservation Planning and Research Program Report 2011–2013</i>
The results have achieved their stated management objectives for the topic	3	The objective of effective management of contaminated land is to ensure protection of human health and the environment. This object is detailed in the Act. There are no major contaminated land problems. Management of contaminated sites is in line with objectives for management of the issue. There appears to be no evaluation of the plans of management developed for public lands.	Workshop discussions
<b>Achievement of outcomes</b>			
The outputs are on track to achieve stated outcomes	3	Limited data on outcomes are available; however, there are no concerns with contaminated lands.	Workshop discussions TAMS Annual Report
The outputs are reducing the major risks and threats for the topic	3	The contaminated lands framework and guidance for the management of contaminated sites are based on qualitative and quantitative risk, which includes scientifically developed robust human health and ecological parameters. For rural lands generally, data indicate that risks and threats from weeds and pest animals are being managed.	Staff feedback
The condition of values is within the acceptable range	3	Management of contaminated lands meets national standards. The outcomes generally for rural lands are not yet clear; management is currently focusing on improving monitoring to enable better understanding and reporting.	Staff feedback

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Appendix 2 *continued*

Topic: Water	Score	Evidence	Source
<b>Context</b>			
Managers know and understand the environmental values and attributes that management is seeking to maintain or enhance relevant to the topic	4	The ACT Water Strategy includes comprehensive background information about water issues. Knowledge about environmental values and attributes associated with water includes information on flows EPD, ALS Environmental), lake and river water quality monitoring (EPD, TAMS, ALS), and AUSRIVAS (Australian River Assessment System) macro-invertebrate monitoring (EPD, University of Canberra, Catchment Health Indicator Project, Upper Murrumbidgee Waterwatch).	<i>ACT Water Strategy 2014–44: Striking the Balance</i>
Managers understand the threats and pressures (direct, indirect and cumulative) affecting the topic	4	Threats and pressures are articulated in the ACT Water Strategy, ACT Basin Priority Project (BPP) studies (water quality monitoring program for 6 priority catchments), the ACT-wide water quality monitoring program, and the audit of stormwater infrastructure.  There is community concern over water quality issues in Lake Tuggeranong and network, and lakes in the ACT.  The possible impact of development in Queanbeyan on water quality is an issue.  Focus has changed from concentrations to loads and their implications.	<i>ACT Water Strategy 2014–44: Striking the Balance</i>
Managers are aware of, and understand, the broader regional, national and international (if relevant) influences relevant to the topic	4	The ACT Water Strategy clearly articulates the policy drivers, including the National Water Reform Initiative, Council of Australian Governments urban water reform and the Murray–Darling Basin Plan. It also describes the relationship with NSW, including the MOU with NSW on regional collaboration	<i>ACT Water Strategy 2014–44: Striking the Balance</i>  Murray–Darling Basin Plan 2012  Draft ACT Water Resources Plan (September 2014)
Managers understand the stakeholders' perspectives about the topic	4	Stakeholder engagement includes a technical panel for review of water-sensitive urban design (WSUD) regulation, BPP project advisory groups (community, peak and professional, experts and academic), the Upper Murrumbidgee Catchment Coordinating Committee, the ACT and Region Catchment and Landcare Association, and the Environmental Flows Technical Advisory Group. Stakeholders are very actively engaged.	

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Appendix 2 *continued*

Topic: Water	Score	Evidence	Source
<b>Planning</b>			
A planning system and/or policy framework is in place that effectively addresses the topic	4	<p>There are a number of planning documents at the national, regional and Territory levels to guide strategic direction for water management in the ACT. They include the Murray–Darling Basin Plan 2012, the draft ACT Water Resources Plan and the ACT Water Strategy. The ACT Water Strategy commits the ACT Government to the preparation of an integrated catchment management strategy for the ACT and regions to guide land and water management for protection of water quality and water supply.</p> <p>Links between water quality and health are now being made – for example, understanding the long-term health risks associated with blue–green algae blooms, rather than the short-term impacts on water quality and recreation.</p> <p>The operation of the Waterways WSUD and Catchment general codes was reviewed during 2013–14 to improve their effectiveness in achieving triple-bottom-line outcomes.</p> <p>The <i>Lake Burley Griffin Action Plan</i> and implementation plan (August 2012) are in place.</p> <p>Commitment to the Murray–Darling Basin Plan requires completion of:</p> <ul style="list-style-type: none"> <li>• Water Resources Plan (Jan 2015)</li> <li>• Water Quality and Salinity Management Plan (2017)</li> <li>• water trading rules (came into effect in July 2014).</li> </ul>	<p>Murray–Darling Basin Plan 2012</p> <p>Draft ACT Water Resources Plan (September 2014)</p> <p>Territory Plan</p> <p><i>Water Use And Catchment General Code</i></p> <p><i>Waterways: Water-Sensitive Urban Design General Code</i></p> <p><i>ACT Water Strategy 2014–44: Striking the Balance</i>, and implementation plan (August 2014)</p> <p><i>Lake Burley Griffin Action Plan</i> (2012)</p>
Clear, measurable and appropriate objectives, outputs and outcomes for management of the topic have been documented	4	<p>The new ACT Water Strategy is the most contemporary document, containing clear objectives, actions and targets.</p> <p>The ACT Nature Conservation Strategy includes strategies associated with water management.</p> <p>The <i>ACT Aquatic Species and Riparian Zone Conservation Strategy</i> includes implementation actions.</p> <p>The annual Water Report will become more important in future by providing consolidated information on water supply and water quality.</p>	<p><i>ACT Water Strategy 2014–44: Striking the Balance</i></p>

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Appendix 2 *continued*

Topic: Water	Score	Evidence	Source
<b>Planning <i>continued</i></b>			
The main stakeholders and/or the local community are appropriately engaged in planning to address the topic	4	<p>Stakeholders (both researchers and the broader community) are very actively engaged.</p> <p>An engagement and communication strategy is being developed for the BPP.</p> <p>There are close links between the ACT Government and universities.</p> <p>The ACT and Region Catchment Coordination Group is established and engaged.</p>	
<b>Financial, staffing and information inputs</b>			
Financial resources are sufficient to meet objectives	3	<p>The Environment and Sustainable Development Directorate annual report and BPP business case provide details of budget allocations.</p> <p>The AQUA action plan has been developed through the Upper Murrumbidgee Catchment Group, but the issue of who pays for implementation remains, and only 5% of the plan is being implemented because of resource limitations.</p> <p>Many projects are on short-term funding (eg Waterwatch is now secure until 2018).</p> <p>There are financial limitations on operations management (eg gross sediment traps).</p>	
Skills and expertise are adequate to inform and implement management decisions	4	Staff are skilled, but need to build skills in stormwater modelling.	Workshop discussions
Adequate information (eg biophysical, socioeconomic, heritage) is available to inform management decisions	3	<p>The BPP is refining and expanding the data available for decision-making, and guiding the development of catchment management, water policy and associated targets.</p> <p>The knowledge base is generally good, but information on sources leading to water quality issues is deficient in some areas.</p>	<i>ACT Water Strategy 2014–44: Striking the Balance</i>
<b>Management systems and processes</b>			
The main stakeholders and/or industry(ies) and/or the community are effectively engaged in the ongoing management of the topic	4	<p>A community engagement strategy was used for the ACT Water Strategy and the WSUD review.</p> <p>Stakeholders are very actively engaged (eg Waterwatch, catchment management group and pond carers group, which have a broad understanding of community participation in stormwater management).</p> <p>There is a large volunteer base, including Waterwatch, Landcare, ParkCare and schools.</p>	<i>ACT Water Strategy 2014–44: Striking the Balance</i>

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Appendix 2 *continued*

Topic: Water	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
An appropriate governance system is in place to address the topic	4	<p>The ACT and Regional Catchment Management Group has been established. The group will advise the ACT Environment Minister on:</p> <ul style="list-style-type: none"> <li>• regional collaboration and coordination (including an ACT and NSW MOU on regional collaboration)</li> <li>• opportunities to align investment</li> <li>• opportunities for joint/coordinated activities.</li> </ul> <p>The group will have an independent chair and be established under the <i>Water Resources Act 2007</i>. An interim group will be established with the Director-General EPD as chair.</p> <p>However, the Auditor-General's (2015) report on the Lower Cotter Catchment concluded that 'It was not evident that the four agencies: the Environment and Planning Directorate, the Environment Protection Authority, Icon Water (ACTEW Water, ACTEW AGL) and the Territory and Municipal Services Directorate who shape the plans for or undertake management actions in the catchment, had a shared knowledge of the cascading effect of risks and their potential consequences'.</p>	<i>Restoration of the Lower Cotter Catchment</i>
There is effective and timely performance monitoring of plans or programs	4	<p>Policies and strategies are subject to regular review, with a 5-yearly implementation plan for the ACT Water Strategy.</p> <p>The EPD manages a monitoring program for the ACT's water resources that includes the collection of water quality, stream-flow and biological data. The monitoring program is based on regular sampling of lakes and rivers. This information is used to determine whether waters flowing through the ACT are of appropriate quality, and if the management strategies used to achieve or maintain such water quality are adequate.</p> <p>The information is not intended to identify specific pollution incidents but rather provides information about changes in water quality over time.</p> <p>Quarterly considerations of water quality management are through the Senior Executives Water Group (3 levels of governance).</p>	Senior Executives Water Group and Directors General Water Group Minutes Workshop discussions

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Appendix 2 *continued*

Topic: Water	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
Impacts (direct, indirect and cumulative) of threats and pressures associated with the topic are appropriately considered	3	<p>The ACT Water Report 2011–12 provides a summary of water quality for a number of parameters (eg P, N, suspended solids, threatened fish) and community engagement.</p> <p>The extent of community concern around water quality in Lake Tuggeranong has driven change in water quality management.</p> <p>Compliance with bore licences and other regulatory aspects of the <i>Water Resources Act 2007</i> is high, with no prosecutions in the past 3 years. Any issues have generally been dealt with through advisory or formal warning letters.</p> <p>Required environmental flows are defined in the Water Resources Act and Environmental Flow Guidelines. Environmental flows are monitored and are generally met, although requirements are reduced during periods of drought.</p> <p>The future of the Water Report is being considered to recognise some of the water quality issues from the past, such as the cumulative impacts of stormwater assets.</p> <p>Erosion and sediment control are of concern.</p>	<p>ACT Water Report 2011–12</p> <p>Workshop discussions</p> <p>Compliance information from <a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/compliance_and_enforcement">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/compliance_and_enforcement</a></p> <p><a href="http://www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/environmental_flows">www.environment.act.gov.au/environment/environment_protection_authority/legislation_and_policies/environmental_flows</a></p>
The most current and relevant available information (eg biophysical, research and/or monitoring, socioeconomic, heritage) is applied appropriately to make relevant management decisions regarding the topic	4	<p>The ACT Water Report 2011–12 provides a summary of water quality for a number of parameters (eg P, N, suspended solids, threatened fish) and community engagement, and this information is used to improve management decision-making.</p> <p>There is good flow of information through technical advice, the BPP, linkages to universities and use of the ACT for research purposes.</p>	ACT Water Report 2011–12
Approaches and methods used in managing the topic are appropriate and in line with best practice	4	Key programs such as the ACT Water Strategy and the BPP are in line with best practice. The WSUD review included benchmarking with other jurisdictions.	<p>ACT Water Strategy 2014–44: <i>Striking the Balance</i></p> <p><i>Water-Sensitive Urban Design: Review Report</i></p>
Relevant standards and targets are identified and are being met regarding the topic	4	The WSUD review included benchmarking with other jurisdictions.	<i>Water-Sensitive Urban Design: Review Report</i>

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Appendix 2 *continued*

Topic: Water	Score	Evidence	Source
<b>Delivery of outputs</b>			
Implementation/operation plans (or activities) have progressed appropriately (time and budget)	3	<p>Progress report on implementation of the ACT Water Strategy is provided to the Senior Executives Water Group and appears to have progressed within timeframes.</p> <p>However, there are issues of flow-through to operation and maintenance.</p> <p>Policy and planning are progressing well, but on-ground actions are an issue.</p> <p>The Auditor-General's Report (2015) has identified that progress with restoration of the Lower Cotter Catchment has been good.</p>	<p>Senior Executives Water Group and Directors General Water Group Minutes</p> <p><i>Restoration of the Lower Cotter Catchment</i></p>
The results have achieved their stated management objectives for the topic	3	<p>Generally, it is too early to tell if the results are achieving the objectives.</p> <p>Over the long term, the water quality in ACT streams and lakes has tended to be good, as assessed against the water quality standards. However, in recent years, rivers and streams have been stressed by the extreme events of drought and fire. Compared with sites in the urban area, rural sites appear to be now enjoying the return of reliable soil moisture and better waterway flow patterns.</p> <p>There continue to be issues with water quality and algal blooms in Lake Tuggeranong.</p>	<p>Workshop discussions</p> <p><i>Restoration of the Lower Cotter Catchment</i></p>

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Appendix 2 *continued*

Topic: Water	Score	Evidence	Source
<b>Achievement of outcomes</b>			
The outputs are on track to achieve stated outcomes	3	To date, the BPP has met all the project milestones that are set out in the joint project schedule agreement between the Australian and ACT governments. (Milestone 6 is due to the Department of the Environment on 15 May 2015 and has not been included to date.) However, there is a need to look beyond the BPP. For example, water quality in Lake Tuggeranong is an issue.	Senior Executives Water Group and Directors General Water Group Minutes Workshop discussions
The outputs are reducing the major risks and threats for the topic	3	It is too early to determine if the outputs from the ACT Water Strategy are reducing threats. Many of the actions either are ongoing or have completion dates later than 2015.  Threats to water quality in the Lower Cotter Catchment have been identified in the Auditor-General's Report (2015).	<i>ACT Water Strategy 2014–44: Striking the Balance</i> , and implementation plan  <i>Restoration of the Lower Cotter Catchment</i>
The condition of values is within the acceptable range	3	The Water Report indicates that the condition of rivers, lakes and ponds is generally within statutory limits.  The BPP audit will provide additional data on the performance of specific stormwater infrastructure elements.	<i>ACT Water Report 2011–12</i> Workshop discussions

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Context</b>			
Managers know and understand the environmental values and attributes that management is seeking to maintain or enhance relevant to the topic	4	<p>The ACT <i>Nature Conservation Strategy</i>, Plans of Management, business plans, works plans, the Invasive Weeds Operational Plan, threatened species recovery action plans and biodiversity offset management plans provide good knowledge and understanding of values and attributes.</p> <p>The ACT Parks and Conservation Service (PCS) establishes strategic partnerships with third parties – including Conservation Volunteers Australia, the Australian National University Fenner School and the University of Canberra – to assist in the preservation of biodiversity. These relationships yield formal and informal scientific information, which is applied in biodiversity conservation.</p> <p>The <i>Nature Conservation Act 2014</i> and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> provide the statutory basis for management and regulatory response. The <i>Planning and Development Act 2007</i> prescribes management objectives for public land reserves.</p> <p>Knowledge of species and species distributions is at a level of detail that is rare in other jurisdictions. Considerable amounts of the available data come from community and consultants but are still suitable for some decision-making.</p> <p>The <i>Bushfire Operations Plan</i> (BOP) outlines the bushfire environment, including types of bushfire fuels, the influence of weather, the importance of fire in ecological communities, and future risks, including climate change, population and land-use changes.</p> <p>The ecological guidelines provide a set of actions to guide the conservation of the ACT's ecological assets during the planning and implementation of the annual Territory and Municipal Services (TAMS) BOP.</p>	<p><i>Nature Conservation Act 2014</i></p> <p><i>Environment Protection and Biodiversity Conservation Act 1999</i></p> <p><i>Planning and Development Act 2007</i> (management objectives for public land reserves)</p> <p>Threatened species recovery action plans</p> <p><i>Kangaroo Management Plan, Namadgi National Park Plan of Management, Tidbinbilla Plan of Management, Murrumbidgee River Corridor Management Plan, Lower Molonglo River Corridor management plan, Canberra Nature Park Plan of Management</i> (1999), <i>Jerrabomberra Wetlands Nature Reserve Plan of Management</i> (2010)</p> <p><i>ACT Nature Conservation Strategy</i></p> <p><i>ACT Pest Animal Management Strategy</i></p> <p><i>Bushfire Operations Plan</i> (<a href="http://www.tams.act.gov.au/parks-conservation/bushfire_management/fuel_management/bushfire-operations-plan">www.tams.act.gov.au/parks-conservation/bushfire_management/fuel_management/bushfire-operations-plan</a>); Regional Fire Management Plans; <i>Strategic Bushfire Management Plan for the ACT</i> (SBMP)</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Context <i>continued</i></b>			
Managers understand the threats and pressures (direct, indirect and cumulative) affecting the topic	4	<p>The Environment and Planning Directorate (EPD) has produced a number of threatened species and communities recovery action plans, which document the threats to species of particular concern. The <i>Namadgi National Park Plan of Management</i>, the <i>Tidbinbilla Plan of Management</i>, other Plans of Management, the <i>ACT Nature Conservation Strategy</i> and the <i>ACT Weeds Strategy 2009–2019</i> clearly outline threats to biodiversity and the means by which these can be mitigated.</p> <p>A Biosecurity Strategy has been drafted.</p> <p>Yearly Business Plans respond to identified risks, as outlined in the PCS Risk Plan. Some of these risks specifically relate to biodiversity conservation, and the resulting treatments relate to mitigating the risks.</p> <p>Threats and pressures from bushfire are identified in the following documents that managers use:</p> <ul style="list-style-type: none"> <li>• Australasian Fire and Emergency Service Authorities Council reports</li> <li>• Bureau of Meteorology weather reports</li> <li>• Cooperative Research Centre reports</li> <li>• reports on incidents and safety lessons learnt from Australia, the United States and Canada.</li> </ul> <p>Ongoing research is being conducted into improved management practices through monitoring and trials.</p>	<p><i>Nature Conservation Act 2014</i></p> <p><i>Environment Protection and Biodiversity Conservation Act 1999</i></p> <p>Threatened species recovery action plans</p> <p><i>Kangaroo Management Plan, Namadgi National Park Plan of Management, Tidbinbilla Plan of Management, Jerrabomberra Wetlands Nature Reserve Plan of Management (2010), Canberra Nature Park Plan of Management (1999), Murrumbidgee River Corridor Plan of Management (1998), Lower Molonglo River Corridor Plan of Management (2001), Lower Cotter Catchment Strategic Management Plan (2007) (nonstatutory)</i></p> <p><i>ACT Nature Conservation Strategy</i></p> <p><i>ACT Pest Animal Management Strategy</i></p> <p><i>ACT Weeds Strategy 2009–2019</i></p> <p>Draft biosecurity strategy</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Context <i>continued</i></b>			
Managers are aware of, and understand, the broader regional, national and international (if relevant) influences relevant to the topic	4	<p>Nationally listed threatened species or ecological communities are considered.</p> <p>The ACT is currently preparing a comprehensive climate change mitigation strategy. Modelling is used to identify potential climate change impacts.</p> <p>The ACT protects areas subject to international agreements such as Ramsar-protected wetlands in Ginini.</p> <p>Researchers are actively involved, and access to reports informs management of biodiversity, fire, etc.</p> <p>Fire management activities are consistent with regional fire management works in NSW and national work being undertaken in Victoria.</p> <p>The Cross Border Emergency Services and Disaster Recovery Working Group is the primary high-level forum for managing fire between ACT and NSW emergency services. It includes representation by the Commissioner, the ACT Chief Minister, the Treasury and Economic Development Directorate, and the NSW Department of Premier and Cabinet.</p> <p>The SBMP (version 3) does not comment on, or take account of, potential impacts of prescribed burning on air quality, although exceedences caused by prescribed burning are monitored through the air quality management system and are relatively rare.</p>	<p>Climate change mitigation strategy</p> <p>SBMP</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Context <i>continued</i></b>			
Managers understand the stakeholders' perspectives about the topic	4	<p>PCS hosts a number of forums, which are discipline specific, and designed to engage with stakeholder opinion and expertise: Rural Landholders Forum, recreational users groups, Equestrian Users Group, ParkCare groups; Bush on the Boundary group; Canberra Off-Road Cyclists and many more.</p> <p>On a more strategic level, the Conservation Council of the ACT and Region is engaged on policy matters relating to biodiversity conservation.</p> <p>Formal committee structures for consultation are in place (eg Flora and Fauna Committee for threatened species and communities, Natural Resource Management [NRM] Advisory Committee for broader landscape, land management, pest and weed issues).</p> <p>The ACT research community, including universities, CSIRO and PhD students, reports on projects and provides advice to Government on biodiversity issues.</p> <p>There is an annual forum on Australian Research Council projects, and expert reference groups for all ecological monitoring.</p> <p>Key stakeholders in relation to fire management include:</p> <ul style="list-style-type: none"> <li>• ESA</li> <li>• Rural Fire Service</li> <li>• Bushfire Council</li> <li>• Conservation Research and Conservation Planning Units within the Environment and Planning Directorate</li> <li>• ACT/NSW post-fire recovery team</li> <li>• communities adjacent to prescribed burns</li> <li>• interagency working groups.</li> </ul> <p>There is good general community engagement in fire management, conservation and community groups, and rural lands associations.</p> <p>The development of burning operations plans provides stakeholder perspectives.</p>	<p>Terms of reference of Flora and Fauna Committee</p> <p>Workshop discussions</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Planning</b>			
A planning system and/or policy framework is in place that effectively addresses the topic	4	<p>The ACT Nature Conservation Strategy, Plans of Management, Business Plans, Works Plans, the Invasive Weeds Operational Plan, Threatened Species Recovery Action Plans, Biodiversity Offset Management Plans and the draft Biosecurity Strategy all provide a strong framework for managing biodiversity.</p> <p>New legislation, by requiring review of plans and strategies, and reporting on programs and plans, will improve the planning system.</p> <p>Connectivity analysis informs the woodland restoration program.</p> <p>The SBMP (version 3) outlines objectives and specific actions that are required to deliver outcomes, and provides an overall policy framework for fire management, although these objectives do not include biodiversity conservation.</p> <p>Private landholders are engaged in the Farm Firewise program.</p>	<p><i>Nature Conservation Act 2014</i></p> <p><i>Environment Protection and Biodiversity Conservation Act 1999</i></p> <p>Threatened Species Recovery Action Plans</p> <p>Aquatic Action Plan</p> <p>Woodlands Program</p> <p>SBMP (version 3)</p>
Clear, measurable and appropriate objectives, outputs and outcomes for management of the topic have been documented	4	<p>Previously, plans have been criticised for setting aspirational goals without follow-through implementation; aspirational goals that lack immediate funding for implementation are still included but are identified as such.</p> <p>The ACT is moving to develop implementation plans for all strategies – for example, the Invasive Weeds Operational Plan, the <i>ACT Weeds Strategy 2009–2019</i> and the <i>ACT Nature Conservation Strategy</i> all have objectives, outputs and milestones.</p> <p>The SBMP (version 3) outlines broad objectives, while the BOP details specific actions, including mapped location, fuel management zone and subzone, area involved, type of work, who undertakes the work, when the work is to be finished and ecological advice (ie which ecological guidelines should be used).</p> <p>An audit and monitoring program is outlined in the BOP.</p>	<p><i>Planning and Development Act 2007</i></p> <p>Invasive Weeds Operational Plan</p> <p><i>ACT Weeds Strategy 2009–2019</i></p> <p>Plans of Management for public land reserves</p> <p><i>ACT Nature Conservation Strategy</i></p> <p>SBMP</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Planning <i>continued</i></b>			
The main stakeholders and/or the local community are appropriately engaged in planning to address the topic	4	<p>Formal committee structures for consultation are in place (eg Flora and Fauna Committee for threatened species and communities, NRM Advisory Committee for broader landscape issues such as pest and weed issues).</p> <p>Communication strategies are generally produced on a topic-by-topic basis. Although the ACT Government has a higher-order framework document, specific initiatives are planned with an accompanying communications plan that is tailored to a project's particular objectives.</p> <p>The Parks Care Forum, the Conservation Council and the ACT Catchment and Landcare Association all have regular communication and connection with the government concerning biodiversity issues.</p> <p>Good ongoing consultation occurs with universities and CSIRO.</p> <p>A formal combined public consultation process was held, with a number of public meetings seeking input and feedback on the SBMP (version 3) and the 2014–19 regional fire management plans, and consultation occurred with conservation groups and the ACT Bushfire Council.</p> <p>Media releases and/or targeted letterbox drops are made when prescribed burn or physical removal activities are undertaken.</p>	<p>Formal statutory consultation on Plans of Management for public land reserves</p> <p>SBMP</p> <p>Terms of reference of Flora and Fauna Committee</p> <p>Workshop discussions</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Financial, staffing and information inputs</b>			
Financial resources are sufficient to meet objectives	3	<p>The enhanced Biodiversity Stewardship Program budget initiative provides project funding. This funding is for the short-term life of the initiative and is not necessarily ongoing.</p> <p>A base budget for the management arm of government with operational responsibility was included in an Expenditure Review Committee investigation, which validated the need for base funding.</p> <p>Business cases are proposed as needed and linked to the delivery of a particular outcome.</p> <p>Funding for environmental offsets required under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> is also subject to government budget consideration.</p> <p>Given that 60% of land in the ACT is managed by TAMS – mostly with high levels of recreational use – adequate resourcing for management of weeds, pests, recreational use and emerging climate change impacts is a challenge.</p> <p>The area of responsibility has been increased through land transfer; however, budgets for weed management (for example) may not accompany the land transfer.</p> <p>The transition of the ex-forestry estate is also unfunded in terms of rehabilitation, following the cessation of the 2003 insurance funding.</p> <p>The view was expressed that, although project funding is well managed, prioritisation of expenditure – especially redirection of funds from historically funded activities to higher-priority and emerging tasks – could be improved.</p> <p>Additional resources are needed to improve functioning of small reserves that currently receive less attention and resources, but are important for connectivity and conservation of remnant woodlands.</p> <p>Management of pest plants and animals is subject to wide fluctuations. Base funding is low, and is supplemented with specific program funding. Such programs are heavily reliant on Commonwealth funding, which is not assured after 2018. Uneven funding can affect long-term effectiveness of control programs. <i>(Continued next page)</i></p>	Workshop discussions SBMP

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Financial, staffing and information inputs <i>continued</i></b>			
		<p>(Continued from previous page) A recent Treasury review indicated that TAMS was, at best, only adequately funded.</p> <p>In relation to fire management, the SBMP (version 3) outlines the resources available to undertake the work planned. Annual TAMS BOPs include funding information.</p> <p>Business cases for SBMP (version 3) implementation are submitted, and the TAMS annual report outlines resources for fire management. 'Government payment for outputs' funding allocated to the TAMS Fire Management Unit is fixed. Reporting is usually at the Parks and Conservation level.</p> <p>Generally, after the SBMP (version 3) is reviewed and revised, actions require additional funding for the term of the plan. These bids are subject to the ACT Government budget process.</p> <p>The budget allows fire management to meet its legislative requirements. However, as additional land is transferred to TAMS, extra funding to manage fire is not included.</p>	
Skills and expertise are adequate to inform and implement management decisions	4	<p>Administrative structures vest decision-making responsibilities across all layers of conservation management staff; complexity and responsibility increase with seniority.</p> <p>A large proportion of staff have undergraduate or higher degrees, and a personalised training and development plan is a feature of all staff performance agreements.</p> <p>PCS is supported by a training and development team that delivers strategic training requirements.</p> <p>The staff in Fire Management are highly skilled and trained in all aspects of fire management.</p> <p>Training needs are articulated in the BOP. Fifteen competency courses were identified in the 2013–14 BOP, of which 13 were completed (one was not required).</p>	Workshop discussions

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Financial, staffing and information inputs <i>continued</i></b>			
Adequate information (eg biophysical, socioeconomic, heritage) is available to inform management decisions	4	<p>Databases in conservation agencies do not integrate effectively, and hence consolidated data management is not currently possible. Considerable community and consultant data are available.</p> <p>Conservation and Planning and Research generate a lot of available data. Confidence in the data is reasonable, however integration of data into databases and mapping systems could improve.</p> <p>The PCS Portal is a recent initiative to bring together a number of decision-making tools that facilitate day-to-day decision-making.</p> <p>A low level of social and economic data is available.</p> <p>There is poor Indigenous knowledge with respect to biodiversity, with a lack of systems and funding for Indigenous input, although knowledge of landscape values is increasing.</p> <p>Ecological profiles, fire strategies and risk management plans include good data used to manage fire risk.</p> <p>Post-fire systems are not integrated as well as they could be, and need to be on a GIS platform</p>	Workshop discussions
<b>Management systems and processes</b>			
The main stakeholders and/or industry(ies) and/or the community are effectively engaged in the ongoing management of the topic	4	<p>The Flora and Fauna Committee considers threatened species and communities, and is involved in listing species, reviewing action plans and strategies, and monitoring and reporting on the state of biodiversity and the effectiveness of management.</p> <p>The NRM Advisory Committee considers broader landscape, pest and weed issues, and advises on community engagement.</p> <p>The development of the various biodiversity and conservation strategies included consultation.</p> <p>All statutory management planning includes a mandatory consultation element.</p> <p>Policy changes are typically made in light of formal public consultation or the engagement of specialist committees, such as the Weeds Working Group, the NRM Advisory Committee and the Scientific Committee.</p> <p>There is no overall communication plan in relation to fire management; however, media releases and letterbox drops occur at sites where controlled burns are to take place.</p> <p>The Bushfire Council and the Emergency Services Agency (ESA) are engaged during the development and implementation processes for bushfire management.</p> <p>The BOP is on the TAMS website for community access</p>	<p>Workshop discussions</p> <p>BOP</p> <p>Terms of reference of Flora and Fauna Committee</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
An appropriate governance system is in place to address the topic	4	<p>The <i>Nature Conservation Act 2014</i> (ACT) and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth) are the key pieces of legislation governing biodiversity.</p> <p>Formal committee structures for consultation are in place (eg Flora and Fauna Committee for threatened species and communities, NRM Advisory Committee for broader landscape issues such as pest and weed issues). MOUs are retained with a number of partner agencies, including the Woodlands and Wetlands Trust, and the Fenner School.</p> <p>The ACT <i>Emergencies Act 2004</i> is the key legislation responsible for fire management, with the ESA as lead agency.</p> <p>The SBMP (version 3) outlines the governance and accountability processes. This includes three tiers of reporting:</p> <ul style="list-style-type: none"> <li>• ESA SBMP Implementation Working Group</li> <li>• agency reporting under s. 85 of the <i>Emergencies Act</i></li> <li>• ACT Bushfire Council providing independent oversight of bushfire management, consistent with its role in advising the Minister for Police and Emergency Services under s. 130 of the <i>Emergencies Act</i>.</li> </ul> <p>There is an MOU between TAMS and the ESA.</p>	<p><i>Nature Conservation Act 2014</i> (ACT)</p> <p><i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth);</p> <p><i>Emergencies Act 2004</i> (ACT)</p> <p>Workshop discussions SBMP</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
There is effective and timely performance monitoring of plans or programs	3	<p>PCS is investing considerable resources in addressing its monitoring capacity by participating in a Fenner School PhD project, which will look to adapt the Canadian model of base monitoring in protected areas.</p> <p>A PCS employee is embedded in the EPD to develop a fast, simple and rigorous condition monitoring protocol.</p> <p>Opinion varied among workshop attendees on monitoring of plans and programs. Some believed that considerable improvement is needed in the ability to show impacts of implementation of plans and programs.</p> <p>Generally, there is reporting on implementation of plans and programs.</p> <p>Debriefs are held after any major fire event or prescribed burn and include an assessment to consider if objectives were achieved.</p> <p>External audits of BOP activities are conducted by the ACT Rural Fire Service, and Audit Reports are produced.</p> <p>Quarterly and annual reports are made to the ACT Bushfire Council.</p> <p>The TAMS Annual Report articulates the fire reduction burns and processes (such as slashing or grazing) that have been implemented against what was proposed.</p>	<p>Workshop discussions</p> <p>TAMS annual report</p> <p>ACT Auditor-General (2013). <i>Performance Audit Report: Bushfire Preparedness</i> (report 5/2013)</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
Impacts (direct, indirect and cumulative) of threats and pressures associated with the topic are appropriately considered	4	<p>Connectivity issues exist for Box–Gum Woodland patches.</p> <p>Urban-edge and Box–Gum Woodland protection continues to be a problem because of the need for protection burns, which lead to decline of values. Buffers tend to be in the reserves in older development areas rather than in urban areas, which again reduces the values. New development areas include the buffer zones within the development area.</p> <p>Work is needed to understand thresholds of change with respect to climate change. For example, changes from C3 to C4 plants are recognised. There is a need to identify species that are likely to be lost with climate change and manage for that change. Management input into these issues is occurring – for example, reintroducing species that have been lost from some areas.</p> <p>The Territory-Wide Risk Assessment was undertaken in accordance with the principles and generic guidelines on risk management provided in standard AS/NZS ISO 31000:2009 – <i>Risk Management: Principles and Guidelines</i>. The <i>National Emergency Risk Assessment Guidelines</i> (2010) identify the likelihood and impact of bushfire as extreme.</p> <p>The BOP outlines the bushfire environment, including types of bushfire fuels, the influence of weather, the importance of fire in ecological communities, and future risks, including climate change, population and land-use changes.</p> <p>The ecological guidelines provide a set of actions to guide the conservation of the ACT's ecological assets during the planning and implementation of the annual TAMS BOP.</p> <p>The recent Auditor-General's report on the Lower Cotter Catchment concluded 'Wildfire is a significant risk which will increase with climate change and requires persistent and effective management efforts. The controls which regulate public access to the LCC are inadequate; increasing the risk of fire, landscape damage and erosion'.</p>	<p>Workshop notes</p> <p>ACT Auditor-General (2015). <i>Restoration of the Lower Cotter Catchment</i>, Report 3/2015</p> <p>Territory-Wide Risk Assessment</p> <p>BOP</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Management systems and processes</b> <i>continued</i>			
The most current and relevant available information (eg biophysical, research and/or monitoring, socioeconomic, heritage) is applied appropriately to make relevant management decisions regarding the topic	4	<p>The <i>ACT Nature Conservation Strategy</i> and similar documents collate much of the relevant known information that is used as a basis for strategy development.</p> <p>Reserve Operational Plans have been completed for most Canberra Nature Park reserves. These bring together the latest scientific research, most of which has been collated collaboratively within government.</p> <p>Reserve Plans of Management identify the biodiversity values of the reserves, and the most current and relevant information is used to assess the significance of these values.</p> <p>Advice is provided on weed and pest management, which brings the latest scientific understanding to operational practice. This is available interactively to field staff through the PCS Portal Canberra Nature Park Hub.</p> <p>The SBMP (version 3) outlines the current information used to make fire management decisions. This third version has built on previous work; the SBMP is updated every 5 years.</p> <p>The ecological guidelines provide information to guide the conservation of the ACT's ecological assets during the planning and implementation of the annual TAMS BOP. All Fire Operational Plans are required to consider environmental issues and are reviewed by a fire ecologist before approval.</p>	<p>Workshop discussions</p> <p>SBMP (version 3)</p> <p>Environment and Sustainable Development Directorate 2012–13</p> <p><i>Ecological Guidelines for Fuel and Fire Management Operations</i></p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Management systems and processes</b> <i>continued</i>			
Approaches and methods used in managing the topic are appropriate and in line with best practice	3	<p>There is a focus on reserve management using best practice and based on the latest research. Management of smaller reserves is based on prioritisation of need.</p> <p>Greater attention to management of the boundary between reserves and urban areas in relation to impacts and asset protection is needed.</p> <p>Management of biodiversity in the broader landscape receives less attention, apart from rare and threatened plants and communities; however, significant work has been done in the establishment of key corridors.</p> <p>Improvements in monitoring and reporting are being addressed, but are not yet complete.</p> <p>The SBMP (version 3) outlines the current information used to make management decisions, in line with best practice.</p> <p>The Territory-Wide Risk Assessment was undertaken in accordance with the principles and generic guidelines in standard AS/NZS ISO 31000:2009 – <i>Risk Management: Principles and Guidelines</i>.</p> <p>These documents provide a platform for a systematic approach to identifying, analysing, evaluating and treating emergency risks to effectively determine the most appropriate strategies for managing such emergencies and mitigate the impact on the community, its social fabric and its surroundings.</p>	<p>Territory-Wide Risk Assessment</p> <p>BOP</p> <p>Workshop discussions</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
Relevant standards and targets are identified and are being met regarding the topic	3	<p>Threat abatement and recovery plans are complete.</p> <p>Greater attention to compliance and monitoring would improve knowledge about targets.</p> <p>A master operational plan is in place but not linked to field reporting.</p> <p>Information is known but not well organised for internal or external use.</p> <p>Bushfire management standards are prepared under the SBMP (version 3). They detail the measurable outcomes required under the current and ongoing management policies and procedures in Part 2 of the plan. This document supports the Fire Services, land managers, developers and the general community in achieving effective results in reducing bushfire risk.</p> <p>The recent Auditor-General's report on the Lower Cotter Catchment concluded 'Wildfire is a significant risk which will increase with climate change and requires persistent and effective management efforts. The controls which regulate public access to the LCC are inadequate; increasing the risk of fire, landscape damage and erosion'.</p>	<p>Workshop discussions</p> <p>ACT Auditor-General (2015). <i>Restoration of the Lower Cotter Catchment</i>, Report 3/2015</p> <p>SBMP</p>
<b>Delivery of outputs</b>			
Implementation/operation plans (or activities) have progressed appropriately (time and budget)	3	<p>Implementation of plans has been an issue but is improving. Implementation plans are now standardised on a 10-year timeframe. Program reporting is now standardised.</p> <p>The TAMS BOP is reported on annually. Generally, it is difficult to fully meet 100% completion on the BOP. The completion rate varies from 9% to 100%, depending on the weather. For example, although planned burns were undertaken at 61% of the sites, only 9% of the area of planned burns was achieved in 2013–14, as a result of wet weather in autumn. In the previous year, 100% of the area of planned burns was completed. It is unclear whether the ecological outcomes are met.</p>	<p>Workshop discussions</p> <p>TAMS Annual Report</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Delivery of outputs</b> <i>continued</i>			
The results have achieved their stated management objectives for the topic	3	<p>Results are in various stages of compilation and depend on the maturity of the tracking systems used.</p> <p>Yearly operational plans for ParkCare group projects are on track for completion.</p> <p>A PhD study has been looking at the recovery of ecosystems following fire and determined that there has been 100% recovery of vegetation following fire.</p> <p>The recent Auditor-General's report on the Lower Cotter Catchment concluded 'Wildfire is a significant risk which will increase with climate change and requires persistent and effective management efforts. The controls which regulate public access to the LCC are inadequate; increasing the risk of fire, landscape damage and erosion'.</p>	<p>Workshop discussions</p> <p>ACT Auditor-General (2015). <i>Restoration of the Lower Cotter Catchment</i>, Report 3/2015</p>
<b>Achievement of outcomes</b>			
The outputs are on track to achieve stated outcomes	3	<p>The ACT has the 'finest and last woodlands' that are being managed, with the conservation estate increasing. These areas are not grazed or fertilised.</p> <p>Threatened species and communities are generally in good condition, although some species declines continue (eg recent listing of Scarlet Robin as vulnerable).</p> <p>Program connectivity and restoration work is taking place.</p> <p>However, it is difficult to assess whether the outputs are delivering their management objectives, or whether the desired outcomes are being achieved, because there is a lack of evidence, linked to a lack of monitoring and reporting.</p> <p>The outputs for fire management are in line with the SBMP (version 3).</p> <p>Fuel loads have been used as a surrogate for fire risk (see <i>ACT Bushfire Management Standards</i>). The actions to reduce fuel loads (burns, slashing, grazing) have been shown to reduce the fuel loads, in line with the risk management. It is therefore considered that the outputs are reducing the major risk. However, as there has not been a bushfire in the ACT since 2003, it is difficult to test the program.</p>	<p>Workshop discussions</p> <p><a href="http://www.cmd.act.gov.au/open_government/inform/act_government_media_releases/corbell/2015/scarlet-robin-recognised-as-vulnerable-species">www.cmd.act.gov.au/open_government/inform/act_government_media_releases/corbell/2015/scarlet-robin-recognised-as-vulnerable-species</a></p> <p>SBMP</p> <p><i>ACT Bushfire Management Standards</i> (2014)</p>

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Appendix 2 *continued*

Topic: Biodiversity	Score	Evidence	Source
<b>Achievement of outcomes</b> <i>continued</i>			
The outputs are reducing the major risks and threats for the topic	3	<p>Specific reports, such as the report on uncommon plants, report a significant improvement in condition across the surveyed lands over approximately 10 years. There has been an overall substantial increase in the distribution and abundance of uncommon plants within the survey areas.</p> <p>However, there are still concerns about the urban–woodland interface, and the viability of Box–Gum Woodlands and other lowland communities. ‘State of parks’ reporting, as proposed, would improve understanding.</p>	<p>Mulvaney M (2014). <i>Uncommon Plant Survey of Canberra Nature Park</i>, Technical Report 29, ACT Government</p> <p>Workshop discussions</p>
The condition of values is within the acceptable range	3	<p>Outcomes are not yet clear; the current focus is on improving monitoring to enable better understanding of, and reporting on, main areas of responsibility.</p> <p>The outputs are generally in line with the SBMP (version 3) and show evidence that values are in the range required for managing fuel loads.</p> <p>In workshops, a view was expressed that prescribed burning in areas close to habitation is having deleterious impacts on biodiversity values.</p>	<p>Workshop discussions</p> <p>TAMS Annual Report SBMP (version 3)</p> <p>ACT Auditor-General (2013). <i>Performance Audit Report: bushfire Preparedness</i>, report 5/2013</p>

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Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
<b>Context</b>			
Managers know and understand the environmental values and attributes that management is seeking to maintain or enhance relevant to the topic	3	<p>Staff in ACT Heritage have a good understanding and knowledge of the Australia International Council on Monuments and Sites (ICOMOS) Burra Charter, 2013. Staff dealing with advice on heritage matters refer to the statutory Heritage Guidelines when considering changes that might affect heritage places or objects, and when preparing advice on development at heritage places.</p> <p>ACT Heritage maintains a library of published literature, unpublished reports and other related documents to provide information about heritage places in the ACT. A Heritage Strategy is currently under development. A priority list is used to determine which nominations to the Heritage Register will be considered. This can include looking at building types, such as woolsheds, or thematic themes for what is represented (or under-represented).</p> <p>General conservation policies exist, although heritage themes are not fully developed or documented.</p> <p>Conservation Management Plans include detailed policies about management of heritage places.</p> <p>The Heritage Assessment Policy provides guidance for preparing nominations, including thresholds required to obtain nomination status.</p> <p>A Cultural Heritage Reporting Policy also provides a clear outline of the ACT cultural heritage assessment and reporting process, and the requirements for information submission at each stage of development.</p>	<p>Heritage Assessment Policy (2014)</p> <p>General conservation policies (<i>Conservation Management Plan – Guiding Principles</i>; Policies 1–5) (<a href="http://www.environment.act.gov.au/heritage/publications-and-resources">www.environment.act.gov.au/heritage/publications-and-resources</a>)</p> <p>Heritage Guidelines</p> <p>Workshop discussions</p>

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Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
Managers understand the threats and pressures (direct, indirect and cumulative) affecting the topic	3	<p>Before new urban areas are developed, studies of the Indigenous and non-Indigenous heritage of the development area are prepared by external consultants on behalf of the development proponent and submitted to ACT Heritage for approval.</p> <p>These studies are used to inform decisions on future actions at the place, such as excavation permits, statements of heritage effects and development applications. The studies may also include recommendations for actions such as nomination of places to the ACT Heritage Register.</p> <p>Older nominations lack detail and hence the capacity to identify threats; however, the backlog of old nominations has been substantially reduced.</p> <p>Once an area or site is nominated, a development proponent must seek comment from the Heritage Council before any development, thus ensuring consideration of threats and pressures.</p>	Workshop discussions
Managers are aware of, and understand, the broader regional, national and international (if relevant) influences relevant to the topic	4	<p>Influences on heritage management include updates to key documents on heritage policy, such as Australia ICOMOS, including the Burra Charter.</p> <p>Managers and the Chair of the Heritage Council attend regular meetings of the Heritage Chairs and Officials of Australia and New Zealand.</p>	Workshop discussions
Managers understand the stakeholders' perspectives about the topic	4	<p>Review of the heritage system before the amendments to the <i>Heritage Act 2004</i> included significant consultation.</p> <p>Workshops were held in relation to the implementation of the Heritage Act.</p> <p>Community groups and consultants nominate places to the Heritage Register. The public also provides submissions on provisional registration and the Heritage Guidelines.</p>	Amendments to the <i>Heritage Act 2004</i>

*continued*

Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
<b>Planning</b>			
A planning system and/or policy framework is in place that effectively addresses the topic	3	<p>The Heritage Council has developed a number of general (non-statutory) conservation policies for managing heritage. Heritage Guidelines prepared under the Heritage Act must be considered over these policies.</p> <p>An ACT heritage business plan covers how work is done. The Heritage Council has strategic plans to address the work of the council.</p>	<p>Workshop discussions www.environment.act.gov.au/heritage/development-at-heritage-sites</p>
Clear, measurable and appropriate objectives, outputs and outcomes for management of the topic have been documented	3	<p>Heritage Guidelines provide statutory requirements for individual heritage places and clear guidance for owners about what development they can do. A much higher level of guidance is provided than in other jurisdictions.</p> <p>Conservation Management Plans provide additional guidance. The Heritage Council approves these plans, which have statutory power.</p> <p>Heritage Council general conservation policies also provide guidance.</p>	<p>Blandfordia 5 Housing Precinct: entry to the ACT Heritage Register (www.environment.act.gov.au/__data/assets/pdf_file/0008/148355/403.pdf)</p> <p><i>General Conservation Policy 1: external solar, water, air conditioning and other services in heritage places</i></p> <p><i>Sydney &amp; Melbourne Buildings Conservation Management Plan (2011)</i></p> <p>www.environment.act.gov.au/heritage/development-at-heritage-sites</p>
The main stakeholders and/or the local community are appropriately engaged in planning to address the topic	4	<p>Processes for community consultation on registration decisions and Heritage Guidelines are guided by the <i>Heritage Act 2004</i>.</p> <p>Consultation is also reported annually in the Environment and Planning Directorate's Annual Report. Consultation guidelines are in place.</p> <p>The Heritage Strategy that is under development will include a comprehensive consultation strategy.</p> <p>Workshops with developers on Aboriginal heritage on greenfield sites provided constructive feedback about how to manage Aboriginal landscape sites.</p> <p>Development of policy documents includes stakeholder consultation by the consultant developing the policy.</p> <p>A stakeholder workshop on conservation management plans assisted in the development of guidelines.</p>	<p><i>Heritage Act 2004</i></p> <p>Workshop discussions www.environment.act.gov.au/heritage/development-at-heritage-sites</p>

*continued*

Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
<b>Financial, staffing and information inputs</b>			
Financial resources are sufficient to meet objectives	3	Staff resources in ACT Heritage are small, but adequate to undertake the prioritised work schedule.  Urgent nomination applications to the Heritage Register are accompanied by fees, which enable employment of consultants.	Workshop discussions
Skills and expertise are adequate to inform and implement management decisions	4	The staff in ACT Heritage have appropriate expertise to implement decisions and achieve stated objectives.  Two staff are trained in compliance and can prepare briefs of evidence.  The Heritage Council has relevant skills and expertise, and members are appointed for their expertise in a relevant discipline.	Workshop discussions
Adequate information (eg biophysical, socioeconomic, heritage) is available to inform management decisions	3	For urban estate development and developments such as solar farms, the developer is required to commission cultural heritage assessments, which can be used to support decisions in relation to future heritage management.  Cultural heritage assessments are used to inform decisions on other applications, such as excavation permits and statements of heritage effects.  Information is normally provided with the development application or the nomination to the register. If the information provided is inadequate to assess the application against the heritage criteria, additional information is requested or the nomination is rejected.  The wide range of people who can appeal means that the register entry is of very high quality, to avoid appeals. The developer is responsible for providing the required level of information.  Staff have access to a range of reports on heritage places and to relevant conservation management plans that provide additional information to inform advice.  The Heritage Assessment Policy assists with preparing nominations of high quality, has reduced the need for additional information, and makes decisions easier and clearer.	Workshop discussions  <a href="http://www.environment.act.gov.au/heritage/development-at-heritage-sites">www.environment.act.gov.au/heritage/development-at-heritage-sites</a>

*continued*

Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
<b>Management systems and processes</b>			
The main stakeholders and/or industry(ies) and/or the community are effectively engaged in the ongoing management of the topic	4	<p>Community consultation is guided by the requirements of the <i>Heritage Act 2004</i>. This includes engagement with the Aboriginal community.</p> <p>Consultants undertaking cultural heritage assessments that are likely to involve Aboriginal heritage are expected to show evidence of consultation with the Representative Aboriginal Organisations (RAOs).</p> <p>All consultation with RAOs is reported to the Heritage Council. The council must consider the issues and report the consultation to the Minister.</p> <p>Consultation, which is currently application driven, is also reported in the Environment and Planning Directorate Annual Report.</p> <p>The community has the opportunity to comment on development applications through the <i>Planning and Development Act 2007</i>.</p> <p>Consultation also occurs through the registration process, which is advertised through local media.</p> <p>Some registration decisions are likely to attract many submissions. Public workshops may be held, depending on the place.</p> <p>Grants and funding are provided to community groups and events, and archaeological works.</p> <p>There is a close association with universities (eg on Canberra Tracks).</p>	<p>Workshop discussions</p> <p><i>Heritage Act 2004</i></p> <p><a href="http://www.environment.act.gov.au/heritage/development-at-heritage-sites">www.environment.act.gov.au/heritage/development-at-heritage-sites</a></p>
An appropriate governance system is in place to address the topic	4	Sound governance is in place through the Heritage Act, the nomination and development process, and the role of the Heritage Council.	

*continued*

Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
There is effective and timely performance monitoring of plans or programs	3	<p>The amendments to the Heritage Act have changed the requirements for government agencies audit. Any changes are to be detailed in annual reports. The Heritage Council has to report back to agencies and to the Minister.</p> <p>Auditing of government buildings is conducted through Development Applications (DAs). DAs also provide the means to establish monitoring requirements.</p> <p>Monitoring also relies on the community and staff. Garden City precincts are well monitored by the community.</p> <p>Compliance is based on complaints from the public and general awareness by staff.</p> <p>The Business Plan is reviewed every 6 months to check on its direction and outcomes.</p>	Workshop discussions www.environment.act.gov.au/heritage/development-at-heritage-sites
Impacts (direct, indirect and cumulative) of threats and pressures associated with the topic are appropriately considered	4	<p>Impacts are considered during the development approval process. Statements of heritage effects, excavation permits and statutory documents can be requested for major projects.</p> <p>All Aboriginal places are protected and can be registered for cultural or landscape value, although for the focus has been on physical sites, rather than landscape and sense of place. The Aboriginal Workshop indicated the potential for Aboriginal places to provide a sense of identity to a new suburb.</p> <p>Adaptive reuse has been used appropriately. There is room to move, and adaptation to change is still possible.</p> <p>Priorities for assessment of nominations to the register include places subject to threats from impending development, and urgent nominations.</p>	Workshop discussions www.environment.act.gov.au/heritage/development-at-heritage-sites

*continued*

Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
<b>Management systems and processes <i>continued</i></b>			
The most current and relevant available information (eg biophysical, research and/or monitoring, socioeconomic, heritage) is applied appropriately to make relevant management decisions regarding the topic	4	<p>Greenfield site development requires a high-quality report prepared by consultants using all available information and data.</p> <p>More rigorous policies are being developed for Aboriginal heritage consideration of landscape. This is improving (eg Story of Three Rivers). The Aboriginal reporting process to the Heritage Council is also improving.</p> <p>The Planning and Development Act and the Heritage Act both provide good processes for management.</p> <p>A threshold for high-quality nominations is in place.</p>	Workshop discussions
Approaches and methods used in managing the topic are appropriate and in line with best practice	4	<p>Heritage precincts, and guidelines for new dwellings on what can and cannot be done are appropriate.</p> <p>For Aboriginal heritage, a detailed policy for salvage and 'return to country' of artefacts is under development.</p> <p>A statement regarding heritage effects and excavation must be provided before starting work, in line with ICOMOS, including the Burra Charter.</p> <p>The Heritage Act has an independent council rather than a Minister; therefore, decision-making is more independent.</p> <p>There are no call-in provisions for heritage decisions; this is considered best practice.</p> <p>The Heritage Act separates heritage from development.</p>	<p>Workshop discussions</p> <p><a href="http://www.environment.act.gov.au/heritage/development-at-heritage-sites">www.environment.act.gov.au/heritage/development-at-heritage-sites</a></p> <p><i>Heritage Act 2004</i></p>
Relevant standards and targets are identified and are being met regarding the topic	3	<p>Standards for managing Aboriginal heritage are improving.</p> <p>Applications for heritage listing considered by the Heritage Council must be of high quality, because of the potential for appeal through the ACT Civil and Administrative Tribunal (appeals tribunal).</p> <p>The backlog of nominations is being managed through an audit process.</p> <p>The Heritage Assessment Policy backs up Heritage Council assessment.</p>	<p>Workshop discussions</p> <p><a href="http://www.environment.act.gov.au/heritage/development-at-heritage-sites">www.environment.act.gov.au/heritage/development-at-heritage-sites</a></p>

*continued*

Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
<b>Delivery of outputs</b>			
Implementation/operation plans (or activities) have progressed appropriately (time and budget)	3	The Heritage Register, Heritage Council and Heritage Guidelines are in place, and approval processes require consideration of heritage significance; therefore, the objectives of the Act are being met. Amended heritage legislation has been introduced, and the team is now working on policy-focused issues. Actions in the business plan are being checked every 6 months with regard to direction and outcomes.	Workshop discussions <a href="http://www.environment.act.gov.au/heritage/development-at-heritage-sites">www.environment.act.gov.au/heritage/development-at-heritage-sites</a>
The results have achieved their stated management objectives for the topic	3	The majority of advice on development affecting heritage places has been provided within statutory timeframes.	Workshop discussions

*continued*

Appendix 2 *continued*

Topic: Heritage	Score	Evidence	Source
<b>Achievement of outcomes</b>			
The outputs are on track to achieve stated outcomes	3	<p>The outputs for development application advice are on track to achieve ACT Government objectives for the provision of advice within statutory timeframes.</p> <p>The amended heritage legislation is in place, consultation has occurred, and the backlog has been reduced.</p> <p>Heritage Grants have been delivered.</p> <p>The Heritage Festival, Canberra Tracks and capital works have been undertaken.</p> <p>Annual reports have been provided.</p> <p>Places managed by Territory and Municipal Services have had conservation works and signage completed, and an artist in residence program has been undertaken.</p>	Workshop discussions <a href="http://www.environment.act.gov.au/heritage/development-at-heritage-sites">www.environment.act.gov.au/heritage/development-at-heritage-sites</a>
The outputs are reducing the major risks and threats for the topic	3	Continued progress on nominations to the Heritage Register provides statutory protection to heritage places and objects. The Heritage Guidelines reduce the threats by setting limits to development.	<a href="http://www.environment.act.gov.au/heritage/development-at-heritage-sites">www.environment.act.gov.au/heritage/development-at-heritage-sites</a>
The condition of values is within the acceptable range	3	<p>Cumulative changes are starting to be looked at; however, photographic baseline information is lacking. Most registrations have at least one photo, and subsequent photos are then taken (although this is not done in a systematic way). The advice team uses these photos when assessing development proposals and compliance matters.</p> <p>Very few government buildings have been reported as in poor condition through the audit process.</p> <p>There is high public engagement, acceptance, understanding and awareness of heritage values.</p> <p>General heritage condition is being maintained, with guidelines allowing for sympathetic changes.</p>	Workshop discussions

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Red Box (*Eucalyptus polyanthemus*), and  
Blakely's Red Gum (*E. blakelyi*)

Photo: © Rod Burgess

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