



Canberra Airport Environment Strategy

Approved 21 June 2010



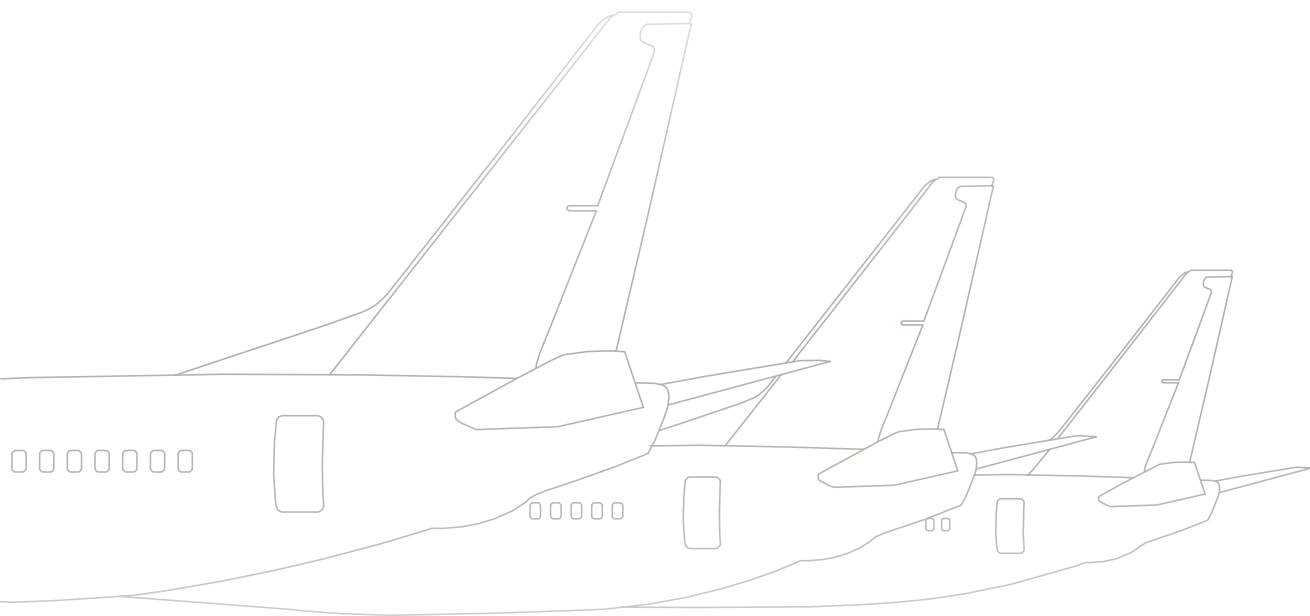


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Chapter one | Overview



1.1 Introduction

The Canberra Airport 2010 Environment Strategy strengthens Canberra Airport's ongoing commitment to manage and develop the Airport in a safe and environmentally sustainable way. This is the third Environment Strategy for Canberra Airport since privatisation in 1998 and complements and builds upon Canberra Airport's 2005 Environment Strategy and facilitates the ongoing development of Canberra Airport as a contemporary Airport.

This Environment Strategy supports the main aims of Canberra Airport's 2009 Master Plan, to ensure infrastructure is ready for future aviation growth, to generate economic and employment growth and to meet the travel and social needs of the community, in an environmentally sensitive manner.

Canberra Airport is at the forefront of innovation in ecologically sustainable built environment and has generally applied the Green Building Council's Green Star principles and the National Australian Built Environment Rating System (NABERS) to developments across the Airport. The introduction of Trigeneration technology (significantly reducing greenhouse gas emissions) and water recycling systems (reducing the Airport's reliance on potable water supply) further demonstrates the Airport's commitment to innovation in environmental sustainability.

This Environment Strategy covers all issues raised in the Aviation White Paper and demonstrates Canberra Airport's commitment to reducing demand on our natural resources.

Canberra Airport has continued to manage natural temperate grassland and listed threatened species on Airport in accordance with the Airport's 2004 Grassland Management Plan. The ACT Commissioner for Sustainability and the Environment acknowledged the overall effective management of natural temperate grassland by Canberra Airport (2009).

Canberra Airport is also increasing the body of knowledge for the Grassland Earless Dragon and Golden Sun Moth through ongoing monitoring and joint venture studies with the University of Canberra.

The construction of the new terminal and the upgrade and development of other aviation infrastructure is ongoing and is required to meet aviation demand and ensure the safety, efficiency and regularity of the Airport. The

construction will also stimulate the local economy and provide much needed construction jobs. The world leading sustainable designed terminal will also be a focal entry point to the Nation's Capital ensuring the travel and social needs of visitors and the community are met.

This Environment Strategy outlines Canberra Airport's objectives to minimise environmental impacts during the implementation of infrastructure upgrades and construction in response to the 2009 Master Plan and details the ongoing high quality environmental management of the Airport. The specific objectives outlined in this Environment Strategy will provide a framework to ensure that social, economic and environmental goals are reflected in the development and everyday running of the Airport.

1.2 Achievements

Canberra Airport has investigated and implemented a range of environmental initiatives in the past five years. Major environmental, social and economic achievements include:

- Implementation and annual review of the Environment Management System, consistent with AS/NZS ISO14001:2004;
- Implementation of the Green Star accreditation programme run by the Green Building Council resulting in Australia's first Green Star rated office building, and achieving a 5 stars rating;
- Installation of gas-powered Trigeneration plants, producing low-emission electricity and capturing fugitive emissions to heat and cool buildings;
- Monitoring of greenhouse gas emissions from Canberra Airport operations;
- Implementation of waste and stormwater recycling, reducing the demand on potable water supply;
- Implementation of water conservation initiatives, ensuring ongoing compliance with local ACTEW Water Restrictions;
- Development of a Water Management Plan (February 2009) considering both the quality and quantity of water, including further stormwater detention and re-use opportunities;
- Duplication of Pialligo Avenue (joint venture with the ACT Government), reducing regional and Airport traffic congestion;
- Extension and strengthening of Runway 17/35 in 2006 to increase capacity for wide bodied aircraft;
- Completion of the Fairbairn Heritage Management Plan;
- Revitalisation of Fairbairn, by adaptive re-use of existing buildings and developing the precinct in a campus style manner;
- Approval of the Threatened Species Management Plan, updating the 2004 Grassland Management Plan;
- Contributing to the research for the Grassland Earless Dragon by ongoing monitoring and joint venture studies with the University of Canberra;
- Active participation in Friends of the Grasslands and the University of Canberra Golden Sun Moth monitoring & research program;
- The planting of over 3,000 trees and over 10,000 shrubs beautifying the Airport, as the gateway to the National Capital¹;
- Ongoing development and review of Safety, Security and Environmental Procedures, to protect and mitigate environmentally impacts;
- Incremental implementation of the ACT Government's "No Waste by 2010" policy, receiving recognition by the ACT Government with the 2005 Gold Award in its No Waste Awards and inclusion in the ACTNow Waste Network;
- Ongoing review of aircraft ground running guidelines in consultation with operators and Air Traffic Control; and
- Role as a major economic driver and the major public transport gateway of the region, providing employment opportunities including growth for Aviation, construction workers and new businesses on and off Airport.

¹It is noted that Canberra Airport reserves the right to remove any tree or shrub on Airport for development. The usual processes of the Airport Building Controller will be complied with.

1.3 Future direction

This Environment Strategy builds upon the 2005 Environment Strategy. Additional issues raised in this 2010 Environment Strategy include:

- Reducing energy consumption per capita by investigating and implementing energy reduction technology, such as Trigeneration Plants and use of solar technologies;
- The monitoring of greenhouse gas emissions from Canberra Airport operations;
- The ongoing implementation of Canberra Airport's February 2009 Water Management Plan, in compliance with the *Airport (Environment Protection) Regulations 1997*, which demonstrates all reasonable and practicable measures are in place to ensure water quality on Airport and compliance with local ACTEW Water Restrictions;
- The ongoing development and implementation of the Fairbairn Heritage Management Plan, managing the Fairbairn Precinct in a culturally sensitive manner; and
- Ongoing review and development of management procedures (including approvals under the EPBC Act) to ensure approved infrastructure upgrades and construction at Canberra Airport mitigate the impact on listed threatened species and the total environment including reducing the demand on natural resources.

1.4 Background

Canberra Airport is the major public transport gateway to Australia's National Capital and has an important role in the transport of politicians, dignitaries, government officials and the Australian travelling public.

Canberra Airport hosted over 3 million passengers in 2009 and passenger growth is expected to continue as set out in the 2009 Master Plan.

In the next five years, there will be significant upgrades to aviation infrastructure in addition to the construction of the new Airport terminal. This is necessary to ensure the secure, safe and efficient management of future aviation growth.

The aim of this Environment Strategy is to provide an environmental framework that will continue to ensure that the development and ongoing management of the Airport is conducted in an environmentally sustainable and accountable manner.

Location

Canberra Airport is located in the Majura Valley, eight kilometres east of Canberra's central business district and four kilometres north-west of Queanbeyan. The location of the Airport including Airport precincts and major runway, taxiway and road systems is shown in Figure 1.1.

History

Prior to Airport operations commencing at Majura in 1927, the land formed part of the Limestone (treeless) Plains which was comprised mainly of natural temperate grassland.

At that time a number of rural leases had been granted by the Commonwealth Government (following acquisition of former NSW freehold). The land had been used for cropping and grazing of pastures.

The Commonwealth began developing the airfield from the 1930's which included significant landplaning, regrading of contours and changes to hydrology. Sand and loam was also mined on Airport for the construction of Runway 17/35 in the mid 1940s.

A major earth formed water diversion bank was also constructed in the 1930's to divert stormwater from the north and east of Fairbairn to the northern tip of Runway 17/35, significantly changing the hydrology of the northern part of the Airport.

Similar works were undertaken by the Commonwealth Government in the early 1970's when the main Runway 17/35 was extended to the south of the former Canberra-Queanbeyan road, requiring the construction of the current alignment of Pialligo Avenue, which included further stormwater diversion works.

Figure 1.1
CANBERRA AIRPORT LOCATION MAP



In 1998, Canberra Airport Pty Ltd, a Canberra-based family business, acquired the lease of the aviation facilities and infrastructure on the current Canberra Airport site.

Canberra Airport (since its privatisation in 1998) has progressively upgraded and constructed aviation infrastructure to meet the demands of users, safety and security requirements and to improve efficiency.

These works included the extension of the main Runway 17/35 and Taxiway Bravo to the south in 2006, which also included further stormwater detention and diversion works.

Infrastructure and operations

The Airport has two runways: the main runway (Runway 17/35) is 3,283 metres long after its most recent extension in 2006, while the intersecting (or cross) runway (Runway 12/30) is 1,679 metres long.

The runways are supported by a taxiway system which provides access to the aprons, each runway end and intermediate points along the runways. The taxiway system and aprons will be progressively upgraded to improve the operational efficiency, capacity and safety of the Airport in response to aviation growth set out in the 2009 Master Plan.

Airport businesses

More than 180 businesses currently operate at Canberra Airport. These largely fall into seven main general activities:

- **Infrastructure:** the Airport (owner and manager), Airservices Australia (provider of air traffic control, navigation aids and fire fighting services), Australian Federal Police, private security, terminal maintenance, terminal cleaning, telecommunications, runway maintenance and a mowing contractor;
- **Air transport:** Qantas, Qantaslink, Virgin Blue, Tiger Airways, Brindabella Airlines, RAAF SPA Fleet, General Aviation and charter operators as well as airfreight (such as Australian Air Express) and courier companies.
- **Aviation support services:** in-flight and terminal catering suppliers, aircraft maintenance and operators

of aircraft hangars and fuel providers;

- **Retailing/Wholesaling:** shopping centre, cafes, supermarkets, bulky goods, wholesale, convenience, service stations and terminal franchises (and other major and minor retail operators);
- **Office:** a range of public and private sector office tenants; and
- **Airport-related activities off-airport site:** this group of activities is more diverse, and includes the Airport components of taxi, bus and coach service businesses, freight and aircraft charter firms, limousine companies, booking agencies of the major airlines and air crew transport, training and short-term accommodation.

Figure 1.2
CANBERRA 'H PLAN' EMPLOYMENT LOCATION STRATEGY



Socio-economic impact

Since 1998, Canberra Airport has invested over \$600 million in developing an Airport that is truly worthy of the Nation's Capital in a socially, economically, and environmentally sustainable manner.

Canberra Airport is located in the East-West Transport Corridor defined in the National Capital Plan and on the major East-West Employment Corridor defined in the Canberra Spatial Plan, which contains 70% of Canberra's Employment (see Figure 1.2).

In addition, the Airport is located on the North-South Employment Corridor running through the Majura Valley connecting the Airport, Fyshwick and Hume and intersecting the two East-West corridors described above.

The development of the Airport's precincts including office, retail and aviation support services responds to the increasing preference of businesses to be located at or near the Airport. This diversification of assets also ensures the long term economic viability of the Airport.

The 2009 Master Plan forecast, expects that up to 25,000 people will be directly employed at Canberra Airport by 2029/30, up from the current 8,000 jobs currently located on Airport.

In addition to permanent on Airport employment, over 100 local construction firms have been involved in the rebuilding of the Airport on an ongoing basis over the last ten years. In turn this has delivered ongoing employment for over 500 construction workers onsite, with a further estimated 500-700 workers offsite.

The roads around the Airport have experienced significant growth over the last ten years and congestion due to their key location in the region and overall regional population growth, especially in Gungahlin and nearby NSW.

The Airport in partnership with the ACT Government has duplicated the roads between the Airport and the city, including a grade-separated intersection access to and from the new Airport terminal. These works were completed in 2009, with the exception of the extension of the Monaro Highway (See Figure 1.3).

The Minister for Infrastructure, Transport, Regional Development and Local Government, the Hon Anthony Albanese, officially launched the construction of the Southern Concourse of the Canberra Airport Terminal on 7 April 2009.

The new \$350m Airport terminal is designed to create a 'sense of arrival' in the Nation's Capital and to showcase Canberra Airport's commitment to environmental sustainability and to the social and economic growth of the region.

Figure 1.3
AIRPORT ROADS UPGRADE

AIRPORT ROADS UPGRADE

EXPECTED COMPLETION DATES

Stage 1a - Pialligo Ave Duplication
• Construction Complete

Stage 1c - Pialligo & Fairbairn Ave Upgrade
• Construction Complete - Mid 2010

Stage 1b - Morshead, Morshead & Fairbairn Upgrade
• Construction Complete

Stage 2 - Monaro Highway Extension
• Planning & Design - 2009/2010
• Construction Starts - 2011
• Target Completion - 2012



Chapter two | Legislation and Statutory Obligations



2.1 Commonwealth Legislation

The key pieces of legislation controlling the environmental operations of the Airport are the *Airports Act 1996*, *Airports (Environment Protection) Regulations 1997* and the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

Section 115 of the *Airports Act 1996* requires the operator of an airport to prepare an Airport Environment Strategy every five years with the following purposes:

1. To ensure that all operations at the airport are undertaken in accordance with relevant environmental legislation and standards; and
2. To establish a framework for assessing compliance at the airport with relevant environmental legislation and standards; and
3. To promote the continual improvement of environmental management at the airport.

Section 116 of the *Airports Act 1996* also states that the Environment Strategy for an Airport must include:

- Environmental management objectives for the airport;
- Identification of environmentally significant areas;
- The source of environmental impact associated with airport operations;
- Studies, reviews and monitoring to be carried out in connection with the environmental impact associated with Airport operations including timeframes for reporting;
- The specific measures to be carried out for the purpose of preventing, controlling or reducing the environmental impact associated with airport operations including timeframes for completion; and
- Details for consultation undertaken in preparing the strategy (including outcomes).

In addition to the *Airports Act 1996*, the *Airport (Environment Protection) Regulations 1997* states additional matters are required to be specified in the Environment Strategy, which include:

- Identification of sites of Indigenous significance after consultation with relevant Indigenous communities and Commonwealth and State bodies;

- Environmental management for areas of the airport that are, or could be, used for the purpose that is not connected, or directly connected, with airport operations or aviation related development;
- Training necessary for appropriate environment management by airport employees.

The Environment Strategy also addresses the environmental issues that might reasonably be expected to be associated with the implementation of the Airport's Master Plan and plans to prevent or elevate these environmental impacts.

Issues such as noise and air pollution generated by aircraft movements are covered by the *Air Services Act 1995*, *Air Navigation (Aircraft Engine Emissions) Regulations* and *Air Navigation (Aircraft Noise) Regulations*. The Airport 2009 Master Plan addresses off-Airport aircraft noise issues in detail.

Airport Environment Officer

The Department of Infrastructure, Transport, Regional Development and Local Government (DITRD LG) has appointed an Airport Environment Officer (AEO) who manages the administration of environmental legislation at the Airport.

The Airport has monthly progress meetings and works closely with the AEO to ensure environmental objectives and compliance with statutory obligations are achieved.

Annual Environment Report

The Airport is required to submit an Annual Environment Report (AER) to the DITRD LG that details the Airport's performance against the policies, targets and statutory obligations as set out the Environment Strategy. The AER also includes the Environment Site Register which is a table of all reports, monitoring results, remedial plans and any occurrences of environmental significance at the Airport.

2.2 Environmental Significant Areas

Canberra Airport has identified an environmental significant area, in accordance with the *Airports Act 1996* and the *Airport (Environment Protection) Regulations 1997*. This includes:

- A Biodiversity Zone north of the Runway 17/35 undershoot road (see Figure 2.1) containing natural

temperate grassland and listed threatened species, such as the Grassland Earless Dragon and Golden Sun Moth (as discussed in section 4.10).

The area north of the undershoot road has had the least disturbance from the construction and ongoing development of the Airport, prior to privatisation in 1998. The Biodiversity Zone also has bio-connectivity to the Majura Military Training Area grassland.

The Biodiversity Zone will be managed in accordance with a signed Conservation Agreement with DEWHA in response to EPBC Act approval conditions.

2.3 Environmental Sensitive Areas

Canberra Airport has identified environmental sensitive areas on Airport. This includes:

- A potential Indigenous Heritage site in the south-east corner of the Glenora Precinct of the Airport (as discussed in section 4.3).

The potential Indigenous heritage site is unlikely to be affected by development during the five year life of this Environment Strategy.

Procedures are in place (if required) with the ACT Heritage Unit for the assessment, relocation and recording of Indigenous artefacts.

- The balance of the natural temperate grassland and potential habitat for listed threatened species on Airport (not affected by approved development).

These grasslands and potential habitat are managed in accordance with the Threatened Species Management Plan.

2.4 Environmental Approvals

Natural temperate grasslands of the ACT and Southern Tablelands are listed as an endangered ecological community under the EPBC Act. Furthermore, the grasslands are habitat for vulnerable and endangered fauna such as Grassland Earless Dragon (*Tympanocryptis pingicollis*) and Golden Sun Moth (*Synemon plana*). These are listed as endangered and critically endangered respectively under the EPBC Act.

The requirements to upgrade and construct additional

infrastructure are identified in the 2009 Master Plan and are necessary to meet aviation demand and ensure the safety, efficiency and regularity of aviation and other traffic on and around the Airport.

Two referrals have been approved with conditions under the EPBC Act (EPBC 2008/4170 and EPBC 2009/4748), as shown in Figure 2.1. The conditions of approval, as summarised in Table 2.1 below, include the development, approval and implementation of the Threatened Species Management Plan, Offset Strategies and Standard Construction Environment Management Plan.

Figure 2.1
BIODIVERSITY ZONE AND APPROVED DEVELOPMENTS (SUBJECT TO CONDITIONS) UNDER THE EPBC ACT

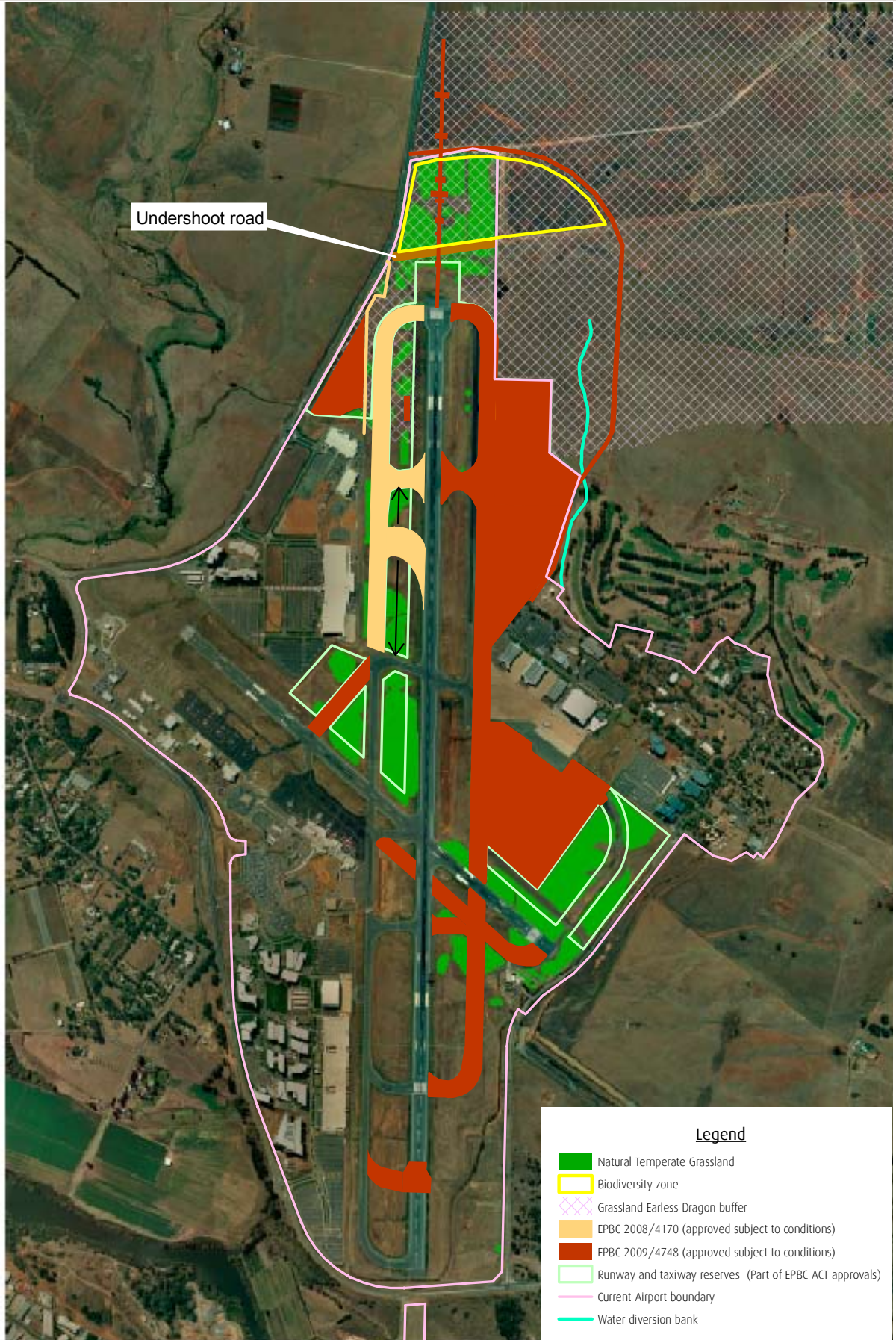


Table 2.1
Conditions of referral approvals

CONDITION OF REFERRAL APPROVAL EPBC/	DOCUMENT	CONDITION APPROVED
2009/4748	Threatened Species Management Plan	March 2010
2009/4748	Master Plan Offset Strategy	February 2010
2008/4170	Taxiway Bravo Biodiversity Offset Strategy	February 2010
2009/4748	Conservation Agreement	Subject to land transfer
2009/4748	Northern Road Strategy (Construction and Operation)	Subject to land transfer
2008/4170 & 2009/4748	Standard Construction Environment Management Plan	February 2010

The Conservation Agreement and Northern Road Strategy (Construction and Operation) will be submitted for approval if the land for the Northern Road is transferred into the Canberra Airport lease.

Copies of the approved Environment Strategy will be made available to relevant Government agencies, major stakeholders, local environmental groups and Airport tenants. Hard and electronic copies of the Environment Strategy are also available for purchase at the Canberra Airport reception.

2.5 Major Development Plans

The Airports Act 1996 outlines certain environmental triggers which may result in the undertaking of a Major Development Plan (MDP) by the Airport.

Environmental approvals under the EPBC Act (including EPBC referrals 2008/4170 and 2009/4748) will be a significant factor to be taken into account when determining whether an MDP would be required under the Airports Act for relevant works.

2.6 Consultation on this Strategy

Canberra Airport conducted pre-consultation on the 2010 Environment Strategy with Airport tenants and lessees.

DITRD LG and DEWHA provided comment on the Exposure Draft 2010 Environment Strategy and their comments were incorporated in the Preliminary Draft.

The Preliminary Draft Environment Strategy was advertised in the Canberra Times and The Chronicle advising that the 60 business day public consultation period commenced on 29 September 2009 and ended on 23 December 2009.

Submissions received have been reviewed and due regard has been given to the submissions prior to submitting the Draft Environment Strategy to the Minister for Infrastructure for approval.

Chapter three | Environmental Management Framework



3.1 Environment Policy

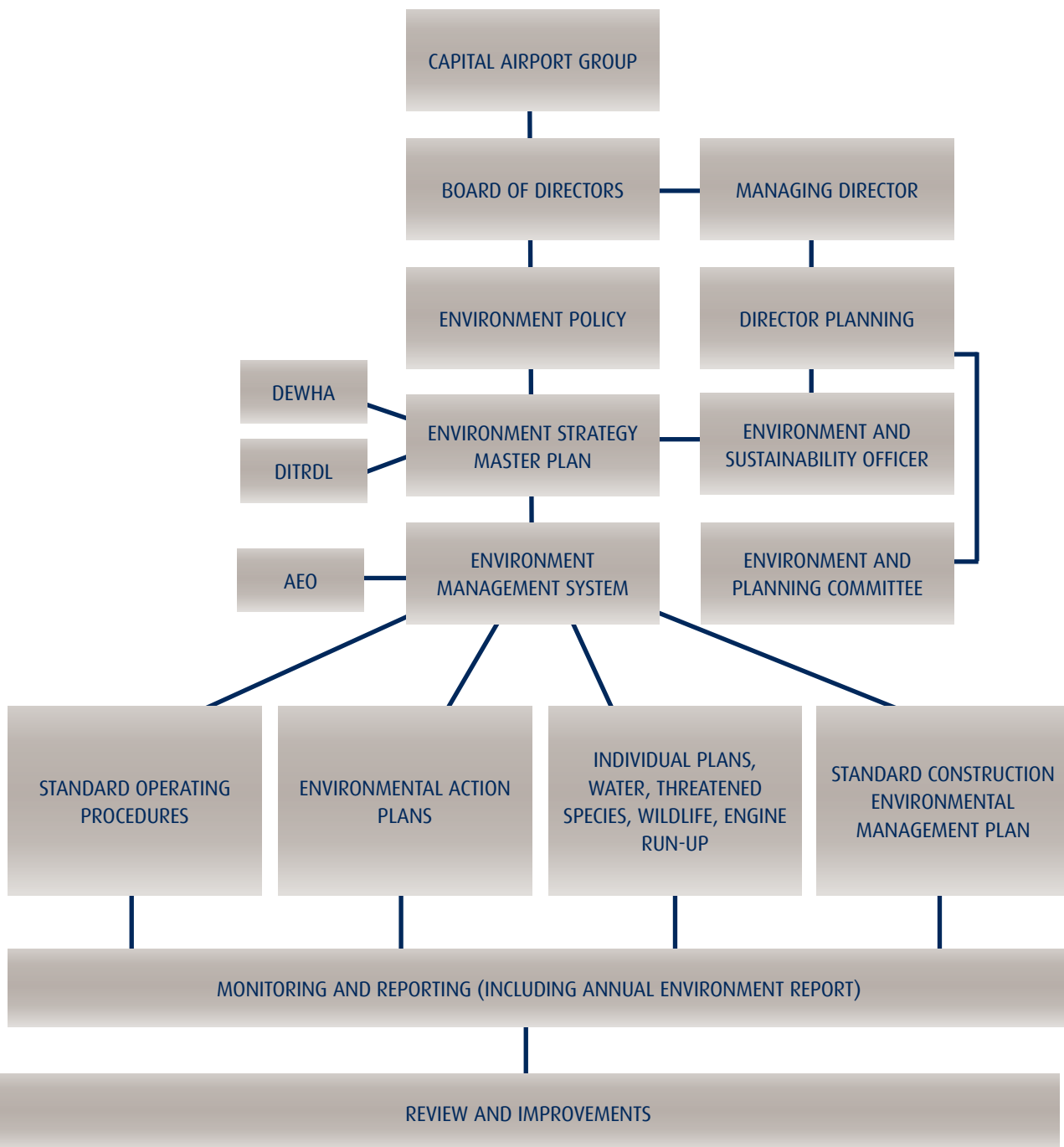
The Airport Board of Directors has established and endorsed the following Environmental Policy:

- Leadership and promotion of the commitment to sustainable environmental management to all stakeholders including employees, tenants, adjacent landholders and the community at large;
- Compliance with relevant environmental legislation;
- Continual improvement of environmental management, consequences and activities;
- Identification, prevention, control and minimisation of environmental performance impacts associated with Airport operations;
- Integration of environmental issues with Airport Operations Plans;
- Measurement, monitoring, reporting and improvement of environmental issues arising from Airport operations;
- Sustainable management of resources;
- Appropriate management of matters of natural, Indigenous or heritage values;
- Contribution to research on natural temperate grasslands and associated endangered species; and
- Broad consultation with the community, government agencies and other major stakeholders.

3.2 Environmental Management Framework

The Environmental Management Framework at Canberra Airport is based on a system of continuous learning and improvement as summarised in Figure 3.1 and 3.3. Individual components of the environmental management framework are updated as required to ensure consistency with regulations and evolving best practice standards.

Figure 3.1
INTEGRATION OF OPERATIONAL AND ENVIRONMENTAL ACTIVITIES AT THE AIRPORT



3.3 Environmental objectives

The Airport’s environmental objectives derive from its Environment Policy and provide the basis for its environmental management. The objectives are to:

- Maintain a systematic approach to environmental management consistent with evolving best practice and international standards and promoting continuous improvement;
- Review and continuously improve environmental management by:
 - > Adopting environmental best practice;
 - > Demonstrating new environmental initiatives;
 - > Sustainable natural resource use including waste minimisation and emission reduction;
 - > Monitoring and responding to changing Australian Legislation and practices;
 - > Conforming with relevant Australian and international standards;
 - > Mitigating impact on natural, Indigenous and heritage values; and
 - > Disseminating strategy information to sub-lessees, airport users, major stakeholders and the local community.

Progress towards achieving the above objectives is constantly under review and reported annually to DITRD LG.

3.4 Structure and responsibility of Canberra Airport

Environmental management at the Airport is the responsibility of Canberra Airport. The delegation of responsibility is shown in Figure 3.2 and described below.

Figure 3.2
**STRUCTURE AND RESPONSIBILITY AT
CANBERRA AIRPORT**



3.4.1 Board of Directors

The Board of Directors is responsible for:

- Providing the financial, personnel and technological resources to successfully implement the Environment Strategy;
- Periodic performance reviews of the Environment Policy and Strategy; and
- Providing leadership on future environmental sustainability initiatives.

3.4.2 Director of Planning

The Director of Planning is responsible for:

- Monitoring the performance of Canberra Airport with respect to the Environmental Policy and the objectives and performance of the Environment Strategy and advising the Board of trends and performance;
- Facilitating the Board's commitment to sustainable development;
- Ensuring that the Airport employees including managers are aware of their responsibilities under Canberra Airport's Environment Policy and Strategies;
- Ensuring the Airport Environment Strategy is implemented;
- Providing strategic advice to the Board on environmental performance and continual improvement; and
- Co- management of consultation meetings with ACT Government agencies, other major stakeholders and the public with the Environment & Sustainability Officer.

3.4.3 Environment & Sustainability Officer

The Environment & Sustainability Officer is responsible for:

- Ensuring the environmental requirements of DITRDLG and DEWHA are met;
- Ensuring the Airport's actions are consistent with the Environment Strategy;
- Developing, implementing and monitoring compliance with the Environment Management System (EMS);

- Preparation of reports detailing the Airport's environmental performance;
- Co- management of consultation meetings with ACT Government agencies, other major stakeholders and the public with the Director of Planning; and
- Investigating new environmental practices and principles.

3.4.4 Environment and Planning Committee

The specific duties of the Committee include:

- Establishing procedures and standards to ensure effective delivery of policies;
- Manage Airport environmental impacts and full compliance with all applicable environmental obligations;
- An annual review of objectives and targets;
- Review and provide staff education and training;
- A review of tenant leases, operating permits and other agreements to ensure compliance with Airport environment programs; and
- Monitoring of management and tenant actions in response to performance deficiencies.

3.4.5 Water Strategy Committee

The Committee which includes Director of Planning, Environment and Sustainability Officer, Airport Project Managers, Property Management and contractors, operates to:

- Monitor and review water consumption;
- Reduce potable and non-potable water consumption;
- Research and identify additional water saving initiatives;
- Form a cooperative relationship with Airport staff and contractors to ensure water conservation initiatives are successfully implemented; and
- Regularly consult with ACTEW to ensure compliance with Water Restrictions.

3.4.6 Environmental Site Management Committee

The Committee which includes Director of Planning, Environment and Sustainability Officer and Airport Project Managers operates to:

- Ensure that the Standard Construction Environment Management Plan (CEMP) is implemented and remains relevant and effective;
- Ensure the impact on the environment is minimised; and
- Research and identify further initiatives to reduce natural resource usage.

3.5 Environment Management System

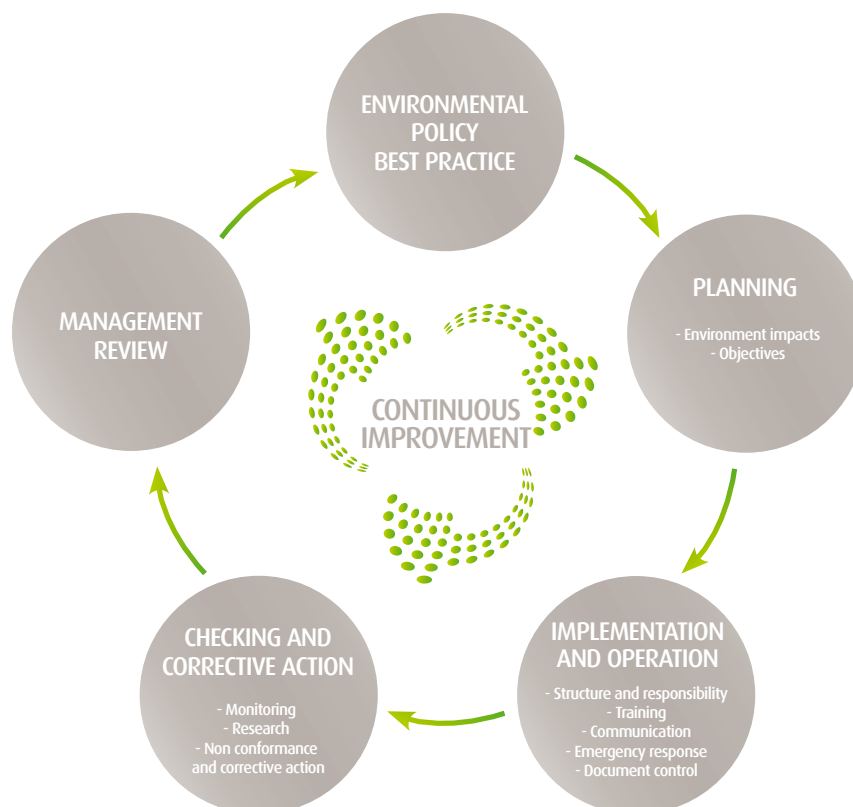
The EMS which has been established in accordance with AS/NZS ISO14001:2004, is the Airport’s means to ensuring all future development and operations are carried out according to industry best practice through a

system of continual improvement. It provides staff and external contractors with detailed guidance in relation to environmental systems and procedures at Canberra Airport.

The EMS is more than a single document; it provides an overarching framework for managing environmental impacts at the airport, environmental procedures, risk assessment, incident and hazard reporting, staff and contractor training and general day-to-day responsibilities of staff. The EMS is the basis for a culture of ecologically sustainable work practices amongst Canberra Airport staff, tenants and contractors.

Figure 3.3 shows the cycle of continual improvement embodied in the EMS. This continuous cycle of planning, implementation, checking, and review allows the EMS to respond to the changing situation at Canberra Airport, and ensures the policies and procedures outlined in the EMS remain as effective and efficient as possible.

Figure 3.3
THE CYCLE OF CONTINUOUS IMPROVEMENT EMBEDDED IN THE EMS



3.6 Environmental Training and Development

All Capital Airport Group employees are required to understand the Environment Policy as part of operational and environmental awareness training. The Airport's Environment Policy and Environment Strategy are discussed during the workplace induction process and employees are required to report environmental matters to the Airport's Environment & Sustainability Officer.

Performance reviews are used to determine the necessary training for all staff. Environmental training includes induction training for employees and contractors as well as other job-specific environmental training as required.

Operational staff, undergo training in their specific areas of duty, including the use of equipment and emergency procedures. The Grounds, operations staff and on-site plumber have implemented a stormwater swale and outlet inspection program and report any visible anomalies such as excess flows, turbidity or oil and grease. Such incidents are immediately investigated.

Training is also provided on bird identification as part of the Bird Hazard Management Plan and on weed identification so that control measures are targeted appropriately.

Canberra Airport aims to encourage all staff, tenant and contractors to participate in environmental training so that there is grass roots awareness and commitment to the implementation of the Environment Strategy through the EMS. As required, staff and contractors attend Green Building training courses, including the Green Star Accreditation program.

The Airport Environment and Sustainability Officer is also undertaking a Post Graduate Degree in Environmental Science to broaden the Airports knowledge on environmental issues, such as, natural resources, listed threatened species and environmental policy.

3.7 Airport Tenants and Contractors

Tenants and contractors are responsible for the environmental management of their own activities and are encouraged to develop and maintain their own EMS in accordance with AS/NZS ISO 14001:2004.

Canberra Airport works with tenants and contractors at the Airport to ensure environmental management procedures

are in place to meet the requirements of the *Airport (Environment Protection) Regulations 1997* and to ensure best practice procedures and timely outcomes.

3.8 Incident reporting and clean-up procedures

Standard Operating Procedures (SOPs) are in place for hazardous material incidents and handling of unknown substances. The Standard Contractors Safety, Security and Environment Procedures which incorporates the Standard CEMP are also in place to mitigate environmental impacts during construction including procedures for cleanup and incident reporting.

Canberra Airport encourages its staff and contractors to maintain ongoing vigilance of aircraft and ground service equipment. Airport staff are required to report any environmental issues including hazards and/or incidents to the Airport's Environment & Sustainability Officer.

All airside vehicles are required to provide proof of annual maintenance checks to Canberra Airport. This continues to have a positive impact on reducing oil, fuel and hydraulic fuel spills from ground-based equipment and vehicles.

Environmental Incident Report forms are completed in the event of any environmental incident and hazard identification on Airport. These are received by the Environment & Sustainability Officer, who manages the investigation and appropriate response, as well as entering the incident into the Airport's Incident Reporting database.

The Environment Incident Report Form is supplied to the AEO and the incident included in the AER.

3.9 Construction Environment Management Plan

Canberra Airport's Standard CEMP fulfils the requirements of the *Airport (Environment Protection) Regulations 1997* and Environmental Management Systems: Guidelines (NSW Government, 1998), and is consistent with the aims and practices required under the Green Star Certification Scheme.

The CEMP, in conjunction with the project-specific Erosion and Sediment Control Plan provided by the contractor and approved by the Airport Environment Officer, forms the basis of environmental management during the planning and construction of a project.

3.10 Environment Monitoring

All studies and monitoring are designed and undertaken by persons with qualifications and experience relevant to the subject of the particular study or monitoring being conducted. Qualifications and experience are consistent with legislated requirements where these exist.

Studies and monitoring are conducted in accordance with the relevant Australian Standards and applicable legislation. Where standards and legislation are not identified, the professional judgement of the appropriately qualified and experienced person will form the basis of testing, measuring and sampling programs.

Canberra Airport staff have a cooperative relationship with tenants and conduct regular inspections, ensuring environmental measures are implemented and environmental incidents are promptly reported.

3.11 Environment Auditing

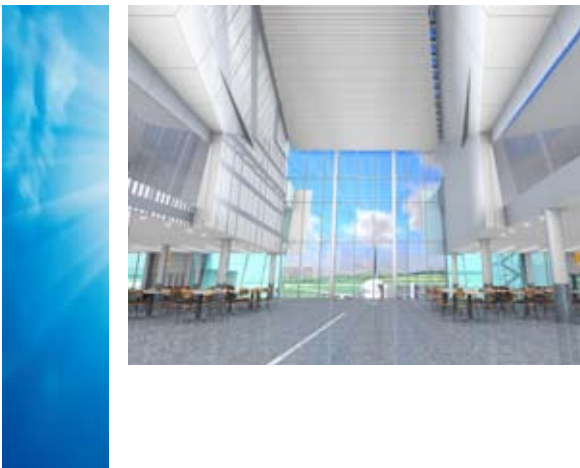
Internal audits of the EMS are conducted annually as part of the review necessary for the preparation of the AER. The purpose of the audits is to verify that:

- Environment Management Procedures are being developed and implemented;
- Procedures have been established to monitor and control environmental issues;
- Documentation and records are maintained to demonstrate implementation of EMS; and
- Environmental issues are being effectively managed through the application of the EMS.
- Tenant audits are conducted biennially to ensure that tenants:
 - Understand the Airport's Environment Policy and Strategy;
 - Understand their responsibilities in response the *Airport (Environment Protection) Regulations 1997*; and
 - Ensure environmental management procedures are in place.

The latest tenant audits were conducted in 2009 and included pre-consultation on this Environment Strategy.

The tenant audits demonstrated that Regulation 3.11 of the *Airport (Environment Protection) Regulations 1997* has been met and informed and reassured the AEO that Canberra Airport was in control of the tenants for their environmental commitments at Canberra Airport.

Chapter four | Environmental Action Plans



4.1 Environmental Action Plans

Environmental Action Plans have been developed by the Airport in the following way to:

- Provide an overview of current ongoing management practices for each environmental issue;
- Review and amend the objectives of the Environment Strategy for each environmental issue, where necessary;
- Review and establish an action plan for each issue which contributes to the sustainable management of the airport environment; and
- Identify monitoring and measurement programs, where necessary, to allow for reporting of the environmental issues in the future;
- Priority for completion for each objective has been categorised in each action plan as follows:
 - > O – Ongoing through implementation of Airport Environment Strategy period
 - > S – Short term, first two years of Airport Environment Strategy period
 - > M – Medium term, third to fourth year of Airport Environment Strategy period
 - > L – Long term, fifth year of Airport Environment Strategy period or beyond

Table 4.1 summarises the environmental objectives of the 2005 approved Airport Environment Strategy, and those changes proposed in the Draft 2010 Environment Strategy. Table 4.1 also comments on the achievements, additions or changes to the objectives between the 2005 and 2010 strategies.

**Table 4.1
Environmental Objectives of the 2005 and 2010 Environment Strategies**

2005 OBJECTIVES	2010 OBJECTIVES	IMPROVEMENTS AND COMMENTS
Environment Management System		
Develop EMS consistent with ISO14001:2004	Continue implementation and review of EMS	EMS provides an overarching framework for the management of environmental impacts at the Airport and a culture of continuous improvement in environment and sustainability work practices
Air Quality		
Monitor air quality every 2.5 years	Monitor air quality every 5 years	All results are consistently below relevant standards and consistent with ACT air quality results
Not included in 2005 AES	Continue to reduce emissions from airside vehicles and equipment	Increased efficiency and awareness of greenhouse gas emissions from airside vehicle and equipment, including replacement with new age technologies
Upgrade equipment to meet contemporary emission standards (including ozone and greenhouse gas)	No change	With the exception of R22, all Ozone Depleting Substances (ODS) have been phased out. R22 is a commonly used refrigerant in split air-conditioning systems
Implementation of CEMP	No change	Implementation of CEMP is ongoing and has been successful in reducing dust and emissions
Not included in 2005 AES	Continue to promote sustainable transport options for Airport users and tenants	Increase in bus services to all Airport locations
Not included in 2005 AES	Continue to assist Airlines to reduce fuel burn and greenhouse gas emissions	Supporting ongoing implementation of CDA, SIDS, STARS, RNP and GPS flight path procedures by Airservices Australia and the Airlines at Canberra Airport.
Not included in 2005 AES	Memorandum of understanding (MOU) between ARFF and DITRDLG regarding Dark Smoke Emissions	MOU in place and regular notification of emissions of dark smoke training by ARFF
Indigenous Heritage		
Record and relocate archaeological artefacts found in south east corner of airport prior to development	No change	Archaeological assessment not required to date as site has not been developed and unlikely to be developed within the 5 year period
Report, record and relocate any archaeological artefacts found during construction	No change	All potentially archaeological sensitive sites west of the Airport have been surveyed by the RAO's and qualified archaeological consultants. No artefacts have been located during construction

Table 4.1
Environmental Objectives of the 2005 and 2010 Environment Strategies (Continued)

2005 OBJECTIVES	2010 OBJECTIVES	IMPROVEMENTS AND COMMENTS
European Heritage		
Liaise with DITRDLG and NCA to develop Heritage Management Plan by 2006	Implement Fairbairn Heritage Management Plan and continue liaison with DEWHA	The Fairbairn Heritage Management Plan has undergone public consultation and meets Schedule 7A and 7B of the EPBC Act. The Plan provides management policies for the development of Fairbairn
On Airport Noise		
Development of on Airport Noise Strategy	Ongoing implementation of Engine Ground Running Guidelines and CEMP	Implementation and constant review of Engine Ground Running Guidelines and CEMP has reduced the number of on Airport noise complaints
Not included in 2005 AES	Continue to reduce noise from airside vehicles and equipment	Reduction in noise of airside equipment and vehicles through regular servicing and reporting and replacement with new age technologies
Continued implementation of initiatives e.g. mounding and landscaping to reduce noise impacts	No change	Implementation of initiatives successful in reducing aircraft and road noise impacts on and off Airport
Monitoring of noise complaints and conduct noise monitoring if significant increase in on- Airport noise complaints	No change	C130J run-up noise monitoring conducted to ensure new Airport activity (Aircraft maintenance) was not impacting on nearby residents
Water Management		
Stormwater and groundwater monitoring	Water quality monitoring to be undertaken in accordance with the Water Management Plan.	Stormwater and groundwater monitoring sites added or updated to improve analysis of monitoring results Recycled water added to monitoring regime
Development and implementation of Stormwater Strategy	Implementation and ongoing review of the Water Management Plan	Development of Water Management Plan, approved February 2009, builds upon and supersedes the 2005 Stormwater Management Plan. Plan more comprehensive and demonstrates compliance under Regulation 4.01 of the <i>Airport (Environment Protection) Regulations 1997</i>
Investigate contaminated plume under southern end of Airport	Removed from 2010 commitments	Site assessed in 2006 and no contamination was present. Removed from Environment Strategy commitments
Development of Waste Water Discharge Policy	Adoption of local ACTEW standard trade waste agreements	Local standard adopted for trade waste and recycled water monitoring

**Table 4.1
Environmental Objectives of the 2005 and 2010 Environment Strategies (Continued)**

2005 OBJECTIVES	2010 OBJECTIVES	IMPROVEMENTS AND COMMENTS
Natural Resources		
Apply Green Building Council Green Star Principles	No change	Continued improvement in efficiency of new buildings. First 5 Green Star building in Australia
Improve water and energy efficiency by adapting new technology, recycling and reuse	No change	Installation of water recycling and Trigeration plants
Not included in 2005 AES	Monitoring of energy and water efficiency in all new buildings	Regular monitoring continues to identify opportunities for operational improvement to efficiency
Not included in 2005 AES	Report greenhouse gas emissions from Canberra Airport operations	Monitor greenhouse gas emissions annually Reporting under NGER is not required
Improve water efficiency	No change	Introduction of two water recycling plants and additional stormwater storage tanks Continued compliance with ACTEW Water Restrictions
Reduce, reuse and recycle	No change.	Airport has won two ACTNow Waste Awards, Gold and Silver Twin bin system in office park continues to encourage recycling
Expand reuse opportunities in construction	No change	Recycled products used in new buildings (subject to building regulations) Adaptive reuse of buildings at Fairbairn (subject to building regulations)
Record construction waste	No change	Contractors report on waste generated and resulted in reduction of waste to landfill
Develop Plastic Bag Policy	Continued implementation of Plastic Bag Policy	Airport staff are provided with calico bags and biodegradable bags are used in waste bins
Monitor ground transport	Continue to promote sustainable transport options for Airport users and tenants	Contribution to Pialligo Avenue duplication including bike paths ACTION bus services Additional bike facilities Providing facilities for regional bus services Subsidisation of Deane's Airliner Service
Not included in 2005 AES	Continue to assist Airlines to reduce fuel burn and greenhouse gas emissions	Implementation of CDA, SIDS, STARS and RNP at Canberra Airport

Table 4.1
Environmental Objectives of the 2005 and 2010 Environment Strategies (Continued)

2005 OBJECTIVES	2010 OBJECTIVES	IMPROVEMENTS AND COMMENTS
Soil Pollution		
Maintain Contaminated Site Register	No change Maintain Contaminated Site Register	The Contaminated and Groundwater Site Registers have been updated and provides an overview of groundwater quality and any remediation undertaken or still required on Airport
Undertake groundwater monitoring	Groundwater monitoring undertaken in accordance with Water Management Plan	Additional groundwater monitoring wells have been installed to provide baseline testing and to monitor and assess contamination and groundwater water flow directions
Soil testing after lease expiry	No change	Soil testing has been useful in identifying and remediating sites in a efficient and timely manner
Not included in 2005 AES	Ongoing education, training of staff and review of mitigation measures	Prompt reporting of incidents and cleanup procedures
Hazardous Products		
Review and update hazardous waste disposal information	No change	MSDS and hazardous waste information updated as required in accordance with relevant ACT Regulations
Remove asbestos where physically and commercially feasible	No change	Asbestos removal ongoing in accordance with Asbestos Control Management Plan
Monitor, clean up and report environmental incidents and educate staff and tenants	No change	Incident and clean-up procedures and reporting successful in reducing hazardous substance loss to stormwater
Review procedures in response to outcomes from exercises and incidents	No change	Incident and clean-up procedures reviewed in response to outcomes from exercise and incidents
Continue education of staff and tenants on leading best practice risk minimisation, including spill response and chemical handling	No change	Continued education of staff and tenants successful in reducing hazardous substance loss to stormwater
Substitute hazardous products with non-hazardous alternatives	No change	Cleaning products substituted with biodegradable products. Tenants also undertaking own initiatives

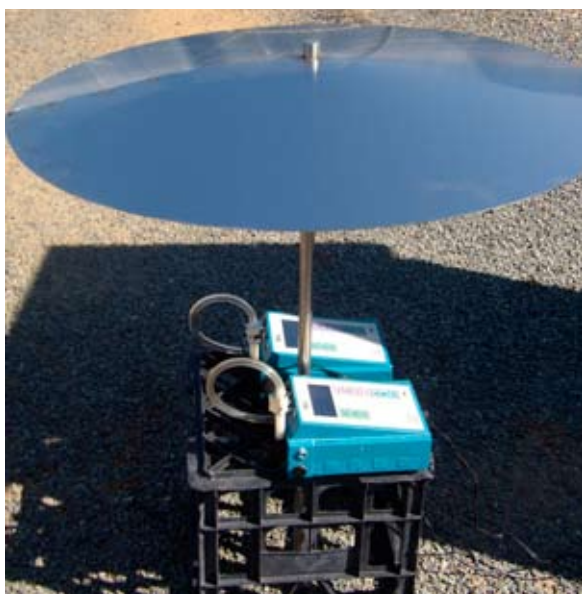
**Table 4.1
Environmental Objectives of the 2005 and 2010 Environment Strategies (Continued)**

2005 OBJECTIVES	2010 OBJECTIVES	IMPROVEMENTS AND COMMENTS
Land Management		
Manage Natural Temperate Grassland and listed threatened species on Airport	Manage the natural values on Airport in accordance with the Threatened Species Management Plan	Acknowledgement of effective grassland management. Grassland and listed threatened species will be managed in accordance with Threatened Species Management Plan.
Not included in 2005 AES	Ongoing review of the Threatened Species Management Plan	The 2004 Grassland Management Plan updated by the Threatened Species Management Plan to include outcomes of EPBC Act referrals and research
Not included in 2005 AES	Comply with approval and conditions under the EPBC Act	Comply with conditions of approvals under the EPBC Act
Natural Temperate Grassland and listed threatened species monitoring	Grassland surveys to be undertaken every five years in accordance with the accepted survey standards and methodology	Grassland surveys postponed due to recent ongoing drought which hindered the flowering and identification of sensitive species. Survey conducted in 2008/2009
Not included in 2005 AES	Grassland Earless Dragon surveys to be undertaken every two years in accordance with the accepted survey standards and methodology	GED surveys undertaken in 2007, 2008, 2009 and 2010. No GED found
Not included in 2005 AES	Golden Sun Moth surveys to be undertaken every two years in accordance with the accepted survey standards and methodology	GSM surveys undertaken in 2006, 2007 and 2009
Weed management	Weed management will be undertaken in accordance with the Threatened Species Management Plan	Annual weed spraying in areas of high quality grassland (weather dependent) Cables placed in conduits to minimise soil disturbance Mowing machinery is cleaned to minimise weed transfer Mowing of grassland from highest to lowest quality reducing weeds spreading Ongoing research on best practice
Review and update Bird & Animal Hazards and Wildlife Hazards Management Plan	Same. Implementation of re-seeding protocol.	Management Plans reviewed annually Re-seeding protocol has reduced bird activity Ongoing monitoring of bird and animal activity
Landscape Master Plan	No change	Enhancement of the parkland design
Retention of high quality grassland, enhancement and revegetation of lower quality areas	Rehabilitation and remediation works will be conducted in response to the Threatened Species Management Plan	Translocation was conducted in September 2005 (Permit No.E2005-58339) High quality grassland managed in accordance with the Threatened Species Management Plan
Implementation of Grassland Earless Dragon (GED) Protocol	No change	The GED protocol was successful in locating 8 GED during runway works in 2001

Table 4.1
Environmental Objectives of the 2005 and 2010 Environment Strategies (Continued)

2005 OBJECTIVES	2010 OBJECTIVES	IMPROVEMENTS AND COMMENTS
Investigation of mowing heights to benefit Golden Sun Moth (GSM)	Provide information and in kind support for GSM research	Supporting the University of Canberra Golden Sun Moth Counter program to obtain information on standardised monitoring protocols and definition of GSM habitat
Social and Community Engagement		
AES advertised and made available to public	No change	AES available free of charge on Airport website and hardcopy and CD available for purchase at Airport reception
Update Airport website	No change	Airport website recently updated to include an overview of environment and sustainable initiatives on Airport
Formal and informal liaison with airlines, aviation operators, tenants and local community	No change	<p>Increased awareness of environmental issues on Airport. Tenants implementing their own environmental initiatives</p> <hr/> <p>Tenant audits</p> <hr/> <p>Noise and communication forums ongoing</p> <hr/> <p>Public consultations as required under the Airports Act</p>
Not included in 2005 AES	Funding and information sharing to build the body of knowledge for listed threatened species	<p>Funding has been provided to the University of Canberra for a Post Doctorate Research Fellowship for GED research</p> <hr/> <p>Data and additional monitoring has also been contributed for the GED and GSM research projects</p>
Not included in 2005 AES	Provide opportunities for the community to learn about the Airport	<p>Opens days and tours have been held to increase the awareness of Airport Operations and environmental initiatives on Airport</p> <hr/> <p>Grassland Earless Dragon ceramic located in foyer at Brindabella Business Park to educate tenants and visitors</p> <hr/> <p>Monthly (by appointment) consultation meetings with the Environment and Planning committee</p>

4.2 Air Quality and Ozone Depleting Substances



Objective

To maintain an overview of air quality at Canberra Airport and in the context of the ACT and to minimise Airport Operation impact on air emissions.

Overview

The maintenance of good air quality at Canberra Airport is important for the well being of Airport users and workers as well as the surrounding community. Air quality monitoring at Canberra Airport shows results well below the National Environmental Protection Measures (NEPM), Ambient Air Quality guidelines.

The sources of air emissions at the Airport can be generally categorised as follows:

- Aircraft related including emissions from Auxiliary Power Units (APU) and Ground Power Units (GPU) (hydrocarbons, nitrogen oxide, lead and particulates). The *Airport (Environment Protection) Regulations 1997* (and therefore this Environment Strategy) do not apply to air pollution generated by aircraft movements. Aircraft emissions are covered by the *Air Services Act 1995* and *Air Navigation (Aircraft Engine Emissions) Regulations*. However Air Quality Monitoring conducted by the Airport captures all gases including Aircraft emissions and the following;

- Ground transport related i.e. motor vehicles and ground equipment. (nitrogen oxides, sulphur oxides, particulates, carbon monoxide, lead and hydrocarbons);
- Airport industry (e.g. solvents from aircraft maintenance) and any other on Airport industrial activities;
- Dark Smoke emissions from fire training activities;
- Ozone Depleting Substances (e.g. refrigerants);
- Dust from construction activities (e.g. particulates); and
- Emissions from the production of electricity (e.g. Trigenation).

The Airport supports the airlines renewing their aircraft fleet over time with new generation aircraft. Australian airlines have some of the most modern aircraft fleets in the world, resulting in lower noise and emissions.

Airservices Australia, as the manager of aircraft flight paths in Australia, continues to work with the airlines, Bureau of Metrology, airports and the Australian community to achieve greater aircraft efficiencies.

Constant Descent Approach (CDA), Standard Instrument Departures (SIDs) and Standard Terminal Arrival Routes (STARs), Required Navigation Performance (RNP) approaches and departures are some of the environmental initiatives that have been introduced by Airservices Australia at Canberra Airport over the past five (5) years which have resulted in lower noise and emissions.

Emissions from motor vehicles are the major source of pollution in the ACT. Canberra Airport requires evidence of regular servicing and maintenance of airside vehicles and equipment prior to annual Airside licence and registration renewals.

The duplication of Pialligo Avenue and road upgrades in the Majura Valley (which included financial contribution by Canberra Airport) will significantly reduce traffic congestion and therefore local air emissions from vehicles.

Canberra Airport's Sustainable Ground Transport Policy, currently includes subsidising the Airliner Bus service, assisting ACTION bus route growth and promoting growth in bicycle use and facilities, and provides Airport users and tenants with sustainable transport options.

The Aviation Rescue and Fire Fighting (ARFF) Service are required to conduct "hot fire training" to ensure ARFF staff are trained to respond to Airport emergencies in a timely and efficient manner. A Dark Smoke Agreement has been signed between Airservices Australia (who is responsible for ARFF Services) and DITRDGL. The Dark Smoke Agreement monitors the conditions under which hot fire training occurs and allows ARFF to exceed standards set out in the *Airport (Environment Protection) Regulations 1997*.

A CEMP is required for all developments on Airport. The CEMP addresses air quality issues including excessive exhaust emissions from construction machinery and airborne dust. Contractors are required to submit evidence of vehicle servicing to ensure equipment is running efficiently and fumes are minimised. Gravel or recycled material is placed at locations which experience heavy vehicle traffic and ground watering, using non-potable water, is used for dust suppression.

The only Ozone Depleting Substance (ODS) on the Airport's Refrigerant Register is R22 which is commonly used in air conditioning split unit systems.

Natural gas fired Trigeneration plants on Airport produce electricity and the fugitive heat from this process is captured to heat buildings in winter and cool the buildings in summer using absorption chillers. Canberra Airport is investigating using Trigeneration to provide power at the new Terminal to stationary aircraft and ground based aircraft movements, thereby reducing air emissions from these activities.

The upgrades and construction of aviation infrastructure will reduce taxiing times for aircraft, thereby reducing fuel burn and emissions.

Air quality monitoring was conducted in and around the Airport in 2005, 2007 and 2009. The monitoring schedule includes Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Nitrogen Dioxide (NO₂) and Particulates (PM₁₀ and PM_{2.5}).

All air quality monitoring results are well below the National Environment Protection Measure (NEPM), Ambient Air Quality, goals and consistent with local ACT air quality results.

This was again supported by the latest air quality monitoring conducted in and around the Airport in

October-December 2009.

Air quality monitoring will be increased to every 5 years as results are consistently well within NEPM guidelines.

AIR QUALITY ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Maintain an overview of air quality at Canberra Airport and in the ACT	M	Air quality monitored every five years and outcomes compared to relevant regulations and ACT results	Report in the AER and copy of results forwarded to ACT EPA
Continue to reduce emissions from airside vehicles and equipment	0	Upgrade vehicles and equipment when required to meet contemporary emission standards	Report upgrades in AER
	0	Regular servicing and maintenance of airside vehicle and equipment	Evidence required prior to annual Airside licence and registration renewals
Continue to upgrade equipment to meet contemporary standards (including ozone and greenhouse gas emissions)	0	Continued investigation in new technologies to meet contemporary standards e.g. Trigeration plants	Report new technologies in AER
	0	Maintain the refrigerant (including ozone depleting substance) database.	Database reviewed and updated annually
Implementation of the Construction Environmental Management Plan	0	Dust suppression to be implemented throughout the CEMP process	To be monitored through the CEMP process
	0	Air emissions mitigation to be implemented throughout the CEMP process	To be monitored through the CEMP process
Continue to promote sustainable transport options for Airport users and tenants	0	Continue to encourage public transport (including interstate services) through advertising and promotions	Report new services in AER
	0	Continue to provide bicycle spaces and locker facilities	Report new facilities in AER
	0	As part of the 2009 road upgrade, connect the Airport cycleway with the Canberra cycleway system	Report new cycle ways in AER
Continue to assist Airlines to reduce fuel burn and greenhouse gas emissions	0	Ensure infrastructure is in place, as far as practicable and commercially feasible, to reduce taxiing times for aircraft	Report new infrastructure in AER
	0	Support the airlines renewing their aircraft fleet over time with new generation aircraft	Report additional support in AER
	0	Work with Airservices Australia to implement Australian Air Traffic (AATM) Management Procedures	Report new AATM procedures in AER
Dark Smoke Agreement for ARFF	0	Ensure MOU is in place for Dark Smoke Agreement between the ARFF and DITRD LG	Report in AER

4.3 Indigenous Heritage



Objective

To continue to manage Indigenous heritage sites in a culturally sensitive manner and in accordance with the *Environment Protection and Biodiversity Conservation Act 1999*.

Overview

In accordance with the previous Environment Strategies, cultural heritage assessments have been undertaken in areas of potentially low archaeological sensitive areas

affected by development as identified in the 2001 archaeological assessment of the Airport.

Two sites located in the southern end of Brindabella Business Park were assessed in 2007 by the four Registered Aboriginal Organisations (RAO's) and qualified archaeological consultants. The surveys, which included scraping, did not find any significant items, and there were no archaeological constraints or requirements identified. All reports were supplied to the AEO and the ACT Heritage Unit.

The only remaining potential archaeological site is located in the south-east corner of the Airport which is listed on the ACT Interim Heritage Places Register. The area was clearly marked and protected by the Airport so as not to be impacted by works associated with the 2006 Runway extension to the south.

The potential archaeological site in the south-east corner of the Airport is not likely to be affected by development during the life of this Environment Strategy. Additional monitoring, review and assessments are therefore not required at this stage.

INDIGENOUS HERITAGE ACTION PLAN

OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Record and relocate archaeological artefacts found in south east corner of airport prior to development	0	Consult with the ACT Heritage Unit and RAO's regarding protocol for recording and relocation of artefacts	Report in AER and copy of reports forwarded to ACT Heritage Unit
Report, record and relocate any archaeological artefacts found during construction	0	Contractors are required to report any artefacts unearthed during construction works to Canberra Airport and the AEO.	Report in AER and copy of reports forwarded to ACT Heritage Unit
	0	Consult with the ACT heritage Unit and RAO's regarding protocol for recording and relocation of artefacts	Report in AER and copy of reports forwarded to ACT Heritage Unit

4.4 European Heritage



Objective

To manage the heritage values of the Fairbairn precinct in a culturally sensitive manner.

Overview

The Fairbairn Precinct is one of a number of permanent RAAF bases that were developed in World War II and continuously altered from the 1950s through to the 1990s. The former RAAF base was sold as part of the Canberra Airport lease in May 1998. The Commonwealth Government retained a five (5) year lease of Fairbairn as a condition of that sale. Fairbairn became a Defence (ADF) facility in 2004.

Vacant possession of Fairbairn was handed over to Canberra Airport by the Commonwealth Government in June 2004 and the Airport has developed and revitalised Fairbairn since vacant possession in June 2004.

Demountable buildings have been removed, new buildings have been developed, the tree and townscape enhanced and existing buildings have been modernised with upgraded services and a contemporary veneer for adaptive reuse.

This revitalisation program has provided Fairbairn with a new beginning.

A draft Fairbairn Heritage and Development Management Plan was submitted to DITRDLG and DEWHA in June 2006. Due to the establishment of the Commonwealth Heritage Management Principles in November 2006, Canberra Airport commissioned a heritage consultant in 2008 to assess the heritage values of the precinct against Commonwealth heritage criteria. The Heritage Management Plan for the Former RAAF Base Fairbairn,

known as the Fairbairn Heritage Management Plan (FHMP), will guide the management of the heritage values at Fairbairn.

The Commonwealth Heritage Values for Fairbairn as assessed in the FHMP can be summarised as follows:

- The precinct has significant historic heritage value as a former operational RAAF airbase established during World War II;
- The former RAAF Base Fairbairn precinct, originally RAAF Station Canberra, has significant representative heritage value for its remnant ability to demonstrate the primary orthogonal, operational and hierarchical planning characteristics of early to mid 20th century RAAF air bases in Australia;
- The former RAAF Base Fairbairn precinct has significant heritage value for its direct association with the RAAF, primarily during World War II and to a lesser extent subsequently as a continuing operational facility until 2002.

The FHMP contains future development management policies for Fairbairn which may include, but not be limited to, the management of:

- The landscape character;
- Individual buildings (including demolition, reuse or revitalisation);
- New building guidelines; and
- The ongoing management of the site.

Ongoing and future development of Fairbairn must comply with the Building Code of Australia (BCA) and provide modern facilities to future tenants, including retrofitting and upgrades over time.

The development of Fairbairn to date has revitalised the precinct in a way that acknowledges the history of the former RAAF Base. The revitalisation program has brought back employment and training to Fairbairn that was lost after the vacating of Defence personnel.

The FHMP was accepted by DEWHA on 26 March 2010, with the inclusion of EPBC Act compliance checklists, as a Tool for the management of Heritage Values, during the ongoing development and revitalisation of Fairbairn.

European Heritage Action Plan

EUROPEAN HERITAGE ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Implement Fairbairn Heritage Management Plan and continue liaison with DEWHA	0	Manage and develop Fairbairn in accordance with the Fairbairn Heritage Management Plan	Report changes in AER
	0	If required, obtain approvals under the EPBC Act	Report in AER
	0	Continued liaison with DEWHA and DITRDLG - ABC and AEO	Report in AER

4.5 On Airport Noise



Objective

To minimise noise generation on Airport and to comply with the noise standards as stated in the *Airport (Environment Protection) Regulations 1997*.

Overview

Aircraft in flight (which includes aircraft taxiing) is regarded as off Airport noise and is the major contributor of aircraft noise in and around the Airport. This issue is addressed in detail in the Canberra Airport 2009 Master Plan. Vehicle traffic along Pialligo Avenue is also a significant contributor to off Airport noise levels. The main contributors to on Airport noise are from:

- Ground running of aircraft;
- Construction activities; and
- Ground support operations.

Ground running of engines is generally required after aircraft maintenance. These engine run-ups are undertaken in accordance with the Airport's Engine Ground Running Guidelines and in the isolated north-eastern corner of the Airport. These guidelines are subject to regular review and have ensured nominal noise complaints due to engine run-ups.

Noise monitoring was conducted in the nearby suburb of Campbell during a round of C130J Hercules Aircraft engine run-ups to ascertain whether maintenance activities are contributing to on Airport noise. Testing concluded that the noise of the engine running was not discernable over background noise levels.

All airside ground service vehicles and equipment require evidence of regular servicing and maintenance prior to

annual registration for airside use. This includes meeting noise emissions standards.

Construction Environment Management Plans (CEMPs) also address and manage noise issues associated with construction and meets the requirements of the *Airport (Environment Protection) Regulations 1997*.

Earth mounds, blast fencing, positioning of some buildings and landscaping on Airport have been incorporated successfully into building and landscaping design to minimise on and off Airport noise.

ON AIRPORT NOISE ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Ongoing implementation of Engine Ground Running Guidelines and CEMP	0	Ongoing implementation of Engine Ground Running Guidelines	Report in AER
	0	Noise mitigation to be implemented through the CEMP process	To be monitored through the CEMP process
Continue to reduce noise from airside vehicles and equipment	0	Regular servicing and maintenance of airside vehicle and equipment	Evidence required prior to annual Airside licence and registration renewals
Continued implementation of initiatives e.g. mounding and landscaping to reduce noise impacts	0	Noise mitigation initiatives incorporated in design principles for new buildings	Report in AER
Monitoring of noise complaints and conduct noise monitoring if significant increase in on Airport noise complaints	0	Noise complaint register updated and reviewed as required	Report in AER

4.6 Water Management



Objective

To continue to undertake all reasonable and practicable measures to manage the quality of water on Airport in accordance with the Airport's Water Management Plan.

Overview

Canberra Airport's February 2009 Water Management Plan builds upon and supersedes the 2005 Stormwater Management Plan. The Plan outlines ongoing and new actions by Canberra Airport to demonstrate it will continue to undertake all reasonable and practicable measures to manage the quality of stormwater, groundwater and recycled water on Airport compliant with Regulation 4.01 of the *Airport (Environment Protection) Regulations 1997*. Factors that may affect the quality of water on Airport include:

- Superphosphate and lime application in the upper catchment (off Airport land) and subsequent release of metals in the catchment soil;
- Sediment, thatch and nutrients from native and exotic grassland;
- Sediment from construction activities;
- Animal and bird faeces and organic matter from the upper catchment (off Airport) and on Airport;
- Wear of tyres and brake pads and possible combustion of lubricating oils;
- Life cycle corrosion of roofs, roadside fittings, pipes and other metal objects;
- Fuel storage and transfer facilities; and
- Maintenance facilities.

Canberra Airport has applied a number of structural and natural treatments to ensure that there is no negative impact on stormwater quality exiting the Airport and on groundwater quality. This is shown in Figure 4.6.

The 2009 Water Management Plan is a living document and may be updated when required, in consultation with the AEO. A summary copy of the plan is available on the Canberra Airport website www.canberraairport.com.au.

4.6.1 Stormwater

The Canberra Airport site lies within three major catchments, including two catchments with upstream flows. These upstream catchment areas have been extensively modified since the 1930's to reduce the amount of runoff and sediment reaching Lake Burley Griffith and to reduce the impact of direct overland flows onto the Airport.

Historically, the upper catchment land uses have been for agriculture and horticulture. The application of superphosphate and overgrazing in the upper catchment has washed sediment, excess nutrients and animal and plant debris into the Airport swale system. The natural levels in the catchment soils and the natural biological breakdown of thatch and bird and animal faecal matter also contributes to nutrient and micro-organism levels in stormwater samples.

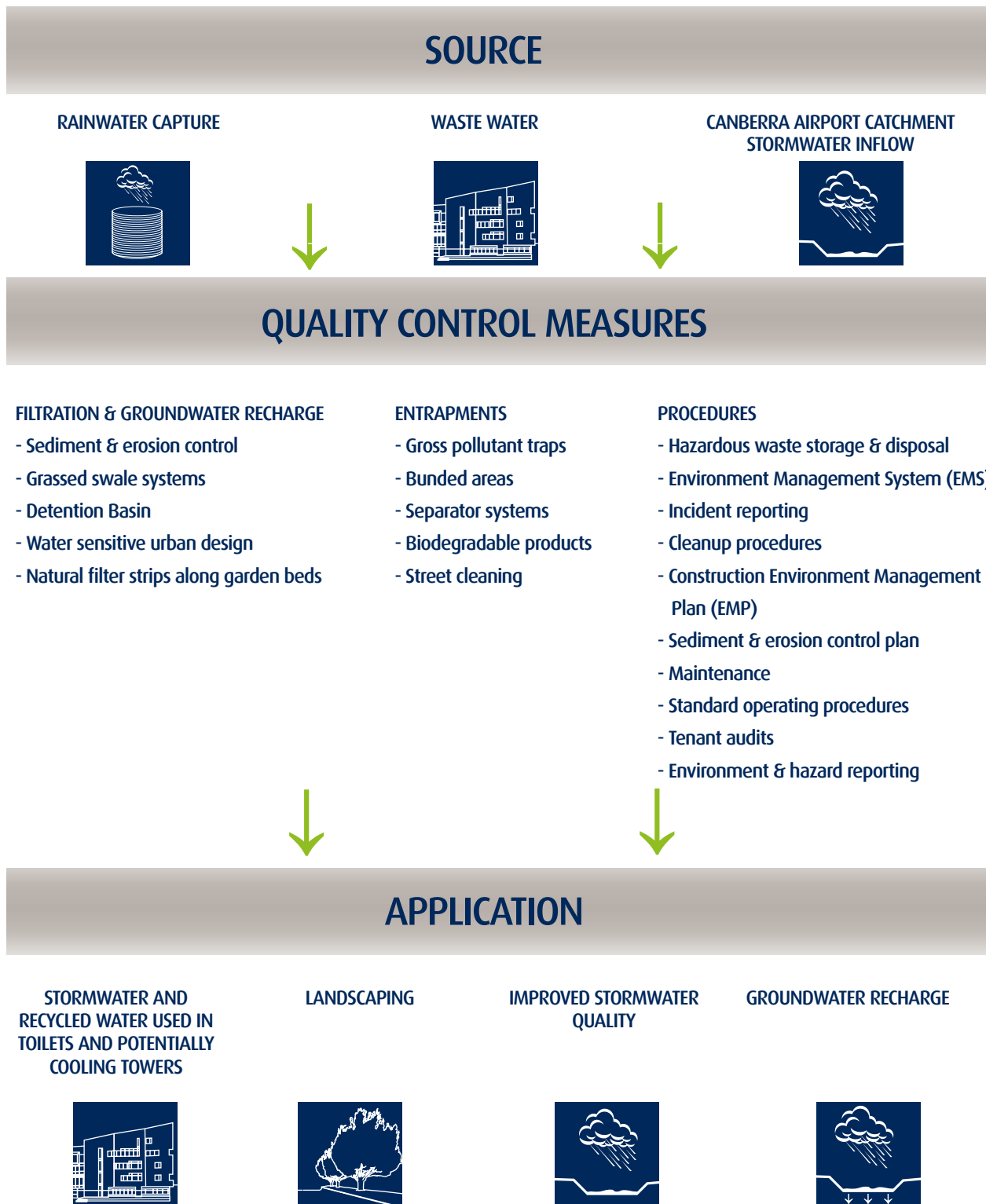
Water quality has been monitored at stormwater points entering and exiting the Airport since privatisation in 1998. Due to the ongoing drought, seasonal monitoring has been limited.

Historical and current monitoring results show naturally high levels of analytes in the catchment soil and in the stormwater entering the Airport. Canberra Airport itself does not contribute to elevated analyte levels in the lower catchment and has demonstrated compliance in 2009 the Water Management Plan under Regulation 4.01 of the *Airport (Environment Protection) Regulations 1997*.

Water quality control measures have been incorporated in the design of new buildings, infrastructure and landscaping as shown in Figure 4.6. These measures are designed to reduce the velocity of stormwater flow, allowing for the natural filtration of sediment, catchment metals and nutrients. The reduced flow also controls erosion and promotes infiltration and groundwater recharge.

Water quality exiting the Airport is generally the same or improved from the water quality entering the Airport.

Figure 4.6
CANBERRA AIRPORT NON-POTABLE WATER FLOWCHART



4.6.2 Groundwater

Canberra Airport requires fuel and maintenance facilities to have appropriate bunded areas, separator systems and/or pollutant traps to minimise fuel or hazardous substance loss to stormwater as shown in Figure 4.6. Tenants are required to service separator systems and pollutant traps on a regular basis and notify the Airport of any incidents that arise. All airside vehicles are required to provide proof of annual documented maintenance check prior to annual registration approval. Airport staff and contractors are encouraged to maintain ongoing vigilance of aircraft and ground service equipment and to report any incidents.

Groundwater monitoring wells are tested in accordance with the Water Management Plan to measure contamination levels or to provide indicators of contamination.

Refer to the soil pollution section for information regarding contaminated sites.

A contaminated groundwater plume from the former Pialligo landfill (south of the Airport and Pialligo Avenue) was disclosed to the Airport after privatisation. The site was assessed as part of the 2006 Runway extension works and no contamination was identified. The site has since been removed from the Contaminated Site Register and the 2010 Environment Strategy commitments.

4.6.3 Recycled Water

Two state-of-the-art water recycling systems have been installed at Canberra Airport to recycle waste water. Whilst the water following treatment is assessed as drinking quality, the recycled water will initially be used in toilet flushing and for irrigation.

As a standard for water recycling is not available under the *Airport (Environment Protection) Regulations 1997*, local standards and approvals from ACTEW and ACT Health and EPA have been adopted.

Subterranean water released by excavations of building sites will be treated whenever possible and used in toilets and cooling towers e.g. as proposed in the new terminal.

4.6.4 Trade Water Agreement

In the absence of a Commonwealth standard, Canberra Airport has adopted the ActewAGL local standard for Trade Waste agreements.

Individual agreements are obtained for each tenant including details on the installation and maintenance of waste disposal systems.

WATER MANAGEMENT ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Water quality monitoring to be undertaken in accordance with Water Management Plan.	0	Stormwater monitoring to be undertaken four times per year (once every season) subject to suitable rain events occurring	Report in AER and provide copy of results to ACT EPA
	0	Groundwater monitoring of baseline monitoring wells to be undertaken biennially	Report in AER and provide copy of results to ACT EPA
	0	Water Recycling monitoring to be undertaken in accordance with ACT Health, ACT EPA and ACTEW Agreements	Report in AER and provide copy of results to ACT EPA
Implementation and ongoing review of the Water Management Plan	0	Maintain existing or increase the quality of stormwater flows out of the Airport in partnership with land managers of upstream inflows	Report implementation of Water Management Plan in AER
	0	Provide detention mechanisms to manage any increased rain event peak flows arising from new Airport development	Provide details on detention mechanisms in AER
	0	Create the opportunity to irrigate landscape from rain events	Report opportunities in AER
	0	Harness rain events wherever feasible to recharge groundwater aquifers	Report changes in AER
	0	Undertake regular monitoring of surface and groundwater quality to measure effectiveness of management programs	Monitoring results reported in AER
	0	Review management programs in response to monitoring outcomes and evolving best practice	Review Water Management Plan as required.
	0	Minimise potable water consumption and comply with ACTEW Water Restrictions	Report compliance in AER
	0	Investigate reuse opportunities of subterranean water encountered in building basements	Report reuse opportunities in AER
	0	Harness rainwater for re-use in buildings and for irrigation	Report in AER
	0	Improve the management of waste water, including the installation of waste water recycling plants	Report in AER
Ongoing adoption of ACTEW local standard trade waste agreements	0	Expand initiatives relating to Water Sensitive Urban Design	Report expansions in AER
	0	Individual ACTEW trade waste agreements to be adopted as required	Report change to standard in AER

4.7 Natural Resources



Objective

To continue to minimise the use of natural resources by applying best practice conservation standards, Green Building Council's general principles and investigating new technologies.

Overview

Canberra Airport is developing the Airport in a social, economic and environmentally sustainable manner.

In the ACT, Canberra Airport, as the regions major public transport gateway and rising employment node, is a significant user of water, energy and material notwithstanding its ongoing regular monitoring regime and continuous investigation of evolving best practice.

The Airport is a leader in implementing ways to minimise consumption during construction and life cycle management of infrastructure by adopting more efficient technologies, reuse of product, procurement of long life cycle quality product, and adaptive reuse of existing buildings.

The Majura Office Park won the ACT Master Builders Commercial Building Environmental Best Practice Award in July 2009 acknowledging the Airport's role as a leader in environmental sustainability.

Canberra Airport's green initiatives, including actions taken to manage the Airport's carbon footprint are available in the Environmental Sustainability Report on the Canberra

Airport website, http://www.canberraairport.com.au/air_environment/report.cfm.

4.7.1 Carbon Reduction Strategy

The main areas in which energy is used, producing greenhouse gas emissions on Airport include:

- Aircraft operations (stationary aircraft and ground based aircraft movement);
- Heating and cooling buildings;
- Lighting of runways, aircraft apron, approach lighting, roads, car parks and buildings;
- Motor vehicles and plants (both airside and landside);
- Equipment including office and aviation;
- Public amenity services; and
- Maintenance activities.

Energy consumption is reduced by applying energy conservation initiatives as those shown in Figure 4.7. Canberra Airport's policy is to adopt Green Building Council's Green Star principles and to design new buildings to minimum 4 Star – Green Star and 5 Star – National Australian Built Environment Rating System (NABERS).

Tri-generation plants are being implemented in the new office precincts and in the new terminal, which will dramatically reduce energy use, carbon dioxide and greenhouse gas emissions. The plants are powered by natural gas, and excess heat is captured to heat the buildings in winter and cool them in summer.

The Tri-generation plants have the potential to produce a power surplus which can be sold back to the grid as green electricity.

The energy efficiency of new plant and equipment (including motor vehicles) is investigated to ensure that optimum efficiency can be achieved.

Lights for hazard beacons have been installed with solar panels, reducing electricity consumption. The airfield lighting is also controlled by Pilot Activated Lighting (PAL) after hours; thereby reducing electricity consumption.

Canberra Airport also supports aviation support operators using electric vehicles, such as tugs and baggage vehicles, and will provide Trigenation power for recharging, thereby significantly reducing greenhouse gas emissions.

Figure 4.7
CANBERRA AIRPORT SUSTAINABILITY MANAGEMENT FLOWCHART

SOURCE

ENERGY



WATER



MATERIAL



MITIGATION MEASURES

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> - Green Building Council of Australia - Green Star Principles - Tri-generation - Central Service Plants - Solar initiatives - Double glazed windows - Insulation - Active and passive chilled beam technology - Optimum building orientation - High thermal mass buildings - Building management system - Use of Natural Light - Energy efficient lighting - Energy use sub-metered - Quarterly review of energy usage - Elimination of Ozone Depleting Substances - Prominent stairways to minimise use of lifts | <ul style="list-style-type: none"> - Water Management Plan - Water Conservation Initiatives - Water Strategy Committee - Water recycling plants - Water efficient cooling towers - Waterless urinal system - Buildings sub-metered - Water consumption reviewed regularly - Irrigation management system - Non-potable water used for irrigation - Water sensitive urban design - 5A shower heads - 3/4.5 dual flush toilets - Mixer or infrared taps - Licensed plumber on staff | <ul style="list-style-type: none"> - Adaptive reuse of existing buildings - Use of recycled materials - Flexibility of internal spaces - Reuse of millings on Airside road - Conservation Council ACTNow Waste Network Members - Bitumen rejuvenation treatment - Flexibility of retrofitting new technology in base building - Public meeting rooms - Separating, recycling and recording construction waste - Low VOC products used - Relocation & reuse of diesel & water tanks - Relocation & reuse of buildings - Reuse of soil on site - Reuse of trees and mulch - Plastic Bag Policy - Co-mingled recycling system in office park |
|--|--|---|



KEY OUTCOMES AND PERFORMANCE MEASURES

REDUCTION IN ENERGY USE AND GREENHOUSE GAS EMISSIONS



REDUCTION IN POTABLE WATER CONSUMPTION



REDUCTION IN RAW MATERIAL USE AND INCREASE IN RECYCLING RATES



4.7.2 Carbon Accounting

Regular monitoring of energy usage is conducted to identify opportunities to ensure plant and equipment is running at optimum efficiency.

Canberra Airport calculates its greenhouse gas emissions from Canberra Airport operations (excluding aircraft operators) annually and reports trends in the Annual Environment Report.

Canberra Airport's emissions are well below the threshold for National Greenhouse and Energy Reporting (NGER) and annual reporting is not required and will not be required over the 5 year life of this Environment Strategy.

4.7.3 Sustainable Water Strategy

The main areas of potable and non-potable water usage on Airport include:

- Fire fighting purposes (including training);
- Car wash facilities;
- Cooling towers;
- Amenities in buildings; and
- Irrigation.

Potable water consumption has been reduced by implementing a number of water conservation measures as shown in Figure 4.7. A Water Strategy Committee was formed to monitor, investigate and implement further water saving measures.

The Airport also employs licensed plumbers on site to ensure leaks and pipe breakages are promptly attended to.

Water recycling systems have been installed to recycle waste water that is re-used in toilet flushing and for irrigation. The water recycling system has the potential to treat 100,000 litres of waste water every day.

Subterranean water from building basements will also be treated and utilised in the new terminal for use in the bathrooms and cooling towers.

Rainwater tanks have also been installed in the office parks and under the new terminal carpark to harvest rainfall. Rainwater will be treated and used in the new terminal to reduce reliance on potable water.

Airport grounds are irrigated using recycled water, groundwater and rainwater.

Canberra Airport remains in ongoing consultation with ACTEW on water saving initiatives and is compliant with ACTEW Water Restrictions.

The Airport was recognised by ACTEW Corporation on World Water Day 2008, as a Water Wise Achiever and as an organisation making significant water savings.

4.7.4 Materials and Waste Reduction Strategy

Canberra Airport has adopted the Green Building Council policy to reuse, reduce and recycle waste from Airport operations and won the ACT NoWaste Silver award in 2004 and the Gold award in 2005 for its waste reduction initiatives. Canberra Airport is a member of the ACTNow Waste Network, demonstrating and assisting local businesses to recycle, reuse and reduce. Some of the initiatives used on Airport are summarised in Figure 4.7 and include;

Adaptive reuse of existing buildings and materials

- Buildings at Fairbairn have been renovated and adapted for reuse where possible, significantly reducing demolition waste to landfill and saving embodied energy;
- Materials from an old blast fence reused in a new blast fence;
- Disused taxiway base materials recovered and used to form new or to consolidate existing Airside roads;
- Fuel tanks relocated to other sites off and on Airport;
- Steel, concrete and other building products from demolished buildings re-used or recycled;
- An old hangar was relocated off Airport to be used as a shed; and
- Water tanks (including a 1 million litre tank) relocated and reused off Airport.

Use of Recycled Materials

Buildings are constructed with a high percentage of recycled materials, including post-consumer concrete, fly ash, steel and timber.

Construction Waste

The Airport's Construction Environment Management

Plan (CEMP) requires all construction contractors to have construction waste sorted and recycled where possible.

Approximately 80% of construction waste is reused or recycled.

Twin bin (co-mingled recycling) system

The twin bin system at each employee's desk (additional bin supplied and managed by the Airport and its cleaning contractors) has been implemented successfully across Brindabella Business Park, Majura and Fairbairn (tenants are permitted to use other systems if they can demonstrate comparable or better recycling results).

Canberra Airport works closely with its cleaners and waste disposal contractors to monitor and encourage tenants to recycle. This includes reducing the amount of waste bins and replacing them with recycling bins or cardboard enclosures.

Plastic Bag Policy

Canberra Airport's Plastic Bag Policy was developed and implemented across the Airport. Airport staff are supplied with calico bags and biodegradable bin liners are used in the office parks.

Green Waste

Leaves, grass clippings and dirt swept from Airport roads and aerodrome are composted on site. Felled trees are mulched and used on gardens on and off Airport. Pruned materials are taken to green waste sites for mulching and reuse.

4.7.5 Sustainable Transport Strategy

Canberra Airport's Sustainable Ground Transport Policy which currently includes subsidising the Airliner Bus service, assisting ACTION bus route growth and promoting growth in bicycle use and facilities, provides Airport users and tenants with sustainable transport options.

4.7.6 Greenhouse Gas Emissions by Airlines

Airlines and other aviation operators emit greenhouse gasses in their operations. Globally, airlines contribute 1.6% to carbon dioxide emissions¹. While aircraft efficiency has and will continue to improve over time,

greenhouse gas emissions by airlines are expected to grow as the number of passengers and volume of airfreight grows over time.

The Airport has supported the airlines operating at Canberra to continue their renewal of the aircraft fleet over time with new age aircraft. Australian airlines have one of the most modern aircraft fleet mixes in the world resulting in lower noise and emissions. This increase in efficiency of aircraft from 1991 to 2005 alone has resulted in a reduction of 37.5% in greenhouse gas emissions per passenger tonne-km².

The Airlines also have initiatives in place to reduce fuel burn and hence greenhouse gas emissions, such as optimising aircraft take-off weight and by implementing Airservices Australia Air Traffic Management procedures.

Airservices Australia, as the manager of aircraft flight paths in Australia continues to work with the airlines, airports and the Australian community to achieve greater efficiencies.

Constant Descent Approach (CDA), Standard Instrument Departures (SIDS) and Standard Terminal Arrival Routes (STARs), Required Navigation Performance (RNP) approaches and departures are some of the environmental initiatives that have been introduced by ASA at Canberra Airport over the past five (5) years which have resulted in lower noise and emissions.

Canberra Airport actively supports the above procedures and is urging all operators with capable aircraft to expeditiously commence using these procedures.

Canberra Airport is also playing a major role in reducing the Airlines' greenhouse gas emissions by ensuring, as far as practicable and commercially feasible, that Airport infrastructure minimises the delays to aircraft while taxiing or at the terminal.

For this reason, the Airport plans to continue to work with the Airlines, Government agencies, Airservices Australia and the community to provide sufficient runway, taxiway, navigation aids, aprons, terminal and other aviation infrastructure capacity to ensure that aircraft can operate without delays in-flight or whilst taxiing.

¹ Stern Review on the Economics of Climate Change, Sir Nicholas Stern, October 2006.

² National Greenhouse Gas Inventory, Department of the Environment and Water Resources, September 2007

NATURAL RESOURCES MANAGEMENT ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Apply Green Building Council Green Star Principles	0	Base building modelled to minimum 4 Star Green Star	Monitor energy and water usage
	0	Base building modelled to minimum 5 Star NABERS	Monitor energy and water usage
Improve water and energy efficiency by adapting new technology, recycling and reuse	0	Continued installation of water and energy efficient technology i.e. Trigeneration plants	Report new technology in AER
Monitoring of energy and water efficiency in all new buildings	0	Active Water Leak Detection through Building Management System	Daily monitoring and resolution of issues.
	0	Buildings sub-metered for electricity and water use, quarterly review of energy and water usage	Usage monitored
Monitor Greenhouse Gas Emissions	0	Monitor Canberra Airport's operational greenhouse gas emissions	Report trends in AER
	S	Report emission under NPI if required.	Report to NPI
	L	Report greenhouse gas emissions under NGER if required.	Report to NGER
Improve water efficiency	0	Reduce the Airport demand on potable water supply	Monitor water usage
	0	Compliance with ACTEW Water Restrictions	Report in AER
	0	Install additional stormwater storage tanks	Report new tanks in AER
	0	The reuse of subterranean water from building basements	Report subterranean water use in AER
	0	Continued implementation of water conservation initiatives	Report new initiatives in AER
	0	Continued implementation of water sensitive urban design	Report new initiatives in AER
Reduce, reuse and recycle	0	Continue implementation and management of twin bin system in office park	Report changes in AER
	0	The use of water recycling plants	Report in AER
Expand reuse opportunities in construction	0	Investigate recycled products used in new buildings (subject to building regulations)	Report additional initiatives in AER
	0	Continued adaptive reuse of buildings at Fairbairn (subject to building regulations and asbestos)	Report in AER
Record construction waste	0	Contractors to report on waste generated and recycled	Monitor through CEMP process

Continue implementation and review of Plastic Bag Policy	0	Biodegradable liners to be used in bins	Report changes in AER
	0	Calico bags provided to Airport staff	Report changes in AER
	S	Review plastic bag policy	Report changes in AER
Continue to promote sustainable transport options for Airport users and tenants	0	Continue to encourage public transport (including interstate services) through advertising and promotions	Report new services in AER
	0	Continue to provide bicycle spaces and locker facilities	Report new facilities in AER
	0	Providing facilities for regional bus services	Report new services in AER
	0	Support of Deane's Airliner Service	Report additional support in AER
	S	Contribution to on/off road cycleway connectors to the Airport (part of 2009 road upgrades)	Report new cycle paths in AER
Continue to assist Airlines to reduce fuel burn and greenhouse gas emissions	0	Ensure infrastructure is in place, as far as practicable and commercially feasible, to reduce taxiing times for aircraft	Report new infrastructure in AER
	0	Supports the Airlines renewing their aircraft fleet over time with new generation aircraft	Report additional support in AER
	0	Work with Airservices Australia, airlines, CASA and the community to implement environmentally efficient Australian Air Traffic (AATM) Management Procedures	Report new AATM procedures in AER

4.8 Soil Pollution



Objective

To ensure that all occurrences of soil (and hence groundwater) contamination at the Airport are recorded and procedures are in place to minimise risk on the surrounding environment. Remediation and ongoing monitoring of existing contamination is the responsibility of the tenant.

Overview

The contamination of soil and hence groundwater can pose a health hazard and may adversely affect the surrounding environment. Sources that may cause soil pollution include:

- Fuel storage and transfer facilities;
- Aircraft maintenance facilities;
- Chemical and other Hazmat storage;
- Underground storage tanks;
- Vehicle maintenance and washing;
- Spills from aircraft and vehicles; and
- Landscaping.

The potential for soil contamination is mitigated at Canberra Airport by applying appropriate management measures such as:

- Installing and maintaining separator system and pollutant traps;
- Ensuring up to date MSDS;

- Appropriate hazardous waste storage facilities;
- Standard incident reporting and cleanup procedures;
- Staff and tenant education;
- Documentation of vehicle maintenance checks;
- Removing contamination sources and remediating sites; and
- Maintaining the Contaminated Site Register

These management measures have reduced the potential for new contaminated sites on Airport.

In addition to mechanical systems, sites that have the potential to cause contamination have groundwater monitoring wells installed as early detection mechanisms for groundwater contamination. The groundwater sites are listed on the Groundwater Site Register and provide valuable baseline data as well as monitoring any change to groundwater conditions.

The Airport has developed the Contaminated Site Register to list the location, type of contamination, test results and any remediation activities that have been undertaken or are still required. The sites listed on the Contaminated Site Register have had pollution caused by others, prior to the privatisation of the Airport, and are all decommissioned sites. The sites listed on the Contaminated Site Register include:

- The former fuel farm near the Qantas Terminal. This site will be reassessed and remediated if required as part of the Western Terminal concourse works;
- The former (Shell, Mobil and Caltex) fuel farms on Nomad Drive. These sites are undergoing remediation and/or assessment by the fuel companies. Canberra Airport may acquire the leases for these sites to speed up monitoring and remediation works;
- An underground storage facility at Fairbairn. The contamination source and material was removed as far as reasonable and practicable. Groundwater monitoring wells were installed to monitor and measure the extent of the contamination; however the wells have been continuously dry; and
- The former Fairbairn fuel facility. This site is currently undergoing assessment and remediation (if required).

History to date indicates that tanks and drums are likely to be unearthed during infrastructure and construction works at Fairbairn and around the Terminal.

All of the above sites are located landside and emanate from events prior to the privatisation of the Airport in 1998.

If underground storage tanks, underground pipes or drums are found, the contamination source and material will be removed as far as reasonably and practicably possible and replaced with clean consolidated fill.

The contaminated fill is disposed of in accordance with relevant ACT and NSW guidelines. The soil (and groundwater if encountered) is tested and results compared to the *Airport (Environment Protection) Regulations 1997* to demonstrate compliance.

If required, further testing and remediation is conducted subject to expert advice and in consultation with the AEO. If required, the site will then be listed on the Contaminated Site Register and will include further remediation actions (as required) and ongoing monitoring regimes.

The monitoring regimes for contaminated sites are developed in consultation with the AEO and are included in the 2009 Water Management Plan.

SOIL POLLUTION ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Maintain Contaminated Site Register	0	Continue to develop and maintain the Contaminated Site Register	Report in AER
	0	Remediation of contaminated sites (as required)	Report in AER
Undertake groundwater monitoring	0	Groundwater monitoring to be undertaken in accordance with the Water Management Plan	Report in AER
Soil testing after lease expiry	0	On potentially contaminated sites, soil testing will be undertaken in accordance with the <i>Airport (Environment Protection) Regulations 1997</i>	Report in AER
	0	All risks sites will be assessed prior to sublease expiry or termination for soil pollution and remediation, if required in accordance with the <i>Airport (Environment Protection) Regulations 1997</i>	Report in AER
Education and review of mitigation measures	0	Continue education of staff and tenants on the management of fuel and hazmat products	Report in AER
	0	Review tenant mitigation measures as part of tenant audits	Report in AER and Tenant Audit report

4.9 Hazardous Products



Objective

To minimise the use of hazardous products and thereby reducing any potential impacts on the surrounding environment.

Overview

The management of dangerous goods and hazardous substances and their disposal is governed by ACT legislation, as human health and safety is the primary issue. The sources of hazardous goods and substances on Airport that may have the potential to cause significant environmental damage if not handled stored or removed correctly includes fuels, oils, asbestos and chemicals.

Tenants are responsible for the disposal and storage of hazardous substances and are required to update their Occupational Health and Safety manuals, staff training and Material Safety Data Sheets (MSDS) as required.

Dangerous goods and hazardous substances must be stored in secure bunded areas and, if required, have regularly maintained separator systems or triple interceptor traps to minimise any substance loss to stormwater as a result of an incident or spill.

Efficient and prompt emergency response procedures are essential for good management of hazardous products. Emergency response procedures are contained in the Airport's Standard Operating Procedures (SOPs) developed in consultation with industry, government agencies and emergency organisations. These SOPs are incorporated in the Airport's EMS.

Spills and incidents have the potential to enter the stormwater system and enter waterways, pollute nearby soils and possibly impact on groundwater. Incident reporting procedures are in place, and all relevant tenants and Canberra Airport have spill procedures and equipment available for the prompt and efficient cleanup of spills.

Emergency response exercises are carried out annually with either a desktop or field exercise carried out as per CASA requirements.

An Asbestos Control Management Plan is in place and asbestos has been progressively removed from buildings at Fairbairn. Priorities are given to buildings in use, under renovation or that pose a significant health and safety risk.

Hazardous product substitution is ongoing and a number of products have been substituted where practical with non-hazardous and biodegradable products. These include office, vehicle cleaning products, fertilisers and aerobic bacteria to degrade oil instead of using harsh detergents.

HAZARDOUS PRODUCTS ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Review and update hazardous waste disposal information	0	Update MSDS and hazardous waste as required in accordance with relevant ACT Regulations	Report updates in AER
	0	Review MSDS and hazardous waste disposal information as part of tenant audits	Report in AER and Tenant Audit Report
Remove asbestos where physically and commercially feasible	0	Asbestos removal ongoing in accordance with Asbestos Control Management Plan	Report removal in AER
Monitor, clean up and report environmental incidents and educate staff and tenants	0	Continued implementation of incident and clean-up procedures and reporting	Report in AER
	0	Provide tenants with assistance to cleanup incidents	Report in AER
	0	Investigate and apply appropriate response to incidents	Report in AER
	0	Report incident to AEO	Report in AER
	0	Enter incident on Airport's Incident Reporting database	Report in AER
Review procedures in response to outcomes from exercises and incidents	0	Investigate and apply appropriate response to exercises and incidents	Report in AER
Continue education of staff and tenants on leading best practice risk minimisation, including spill response and chemical handling	0	Provide tenants with information and assistance to cleanup incidents	Report in AER and Tenant Audit Report
Substitute hazardous products with non-hazardous alternatives	0	Cleaning products substituted with biodegradable products.	Report in AER
	0	Assist tenants to substitute hazardous products with non-hazardous alternatives	Report in AER and Tenant Audit Report

4.10 Land Management



Objective

To ensure that land management practices at the Airport are consistent with the safe operations of the Airport and the protection of natural values at the site.

Overview

Canberra Airport is located at the edge of the south-west corner of the Majura Valley natural temperate grassland community which supports listed threatened species such as the Grassland Earless Dragon and Golden Sun Moth.

4.10.1 Natural Temperate Grassland

Natural temperate grassland of the Southern Tablelands and ACT is a listed threatened ecological community under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* and supports vulnerable and endangered fauna such as the Grassland Earless Dragon, Golden Sun Moth and the Perunga Grasshopper.

The Commonwealth progressively developed the Canberra Airport site as a commercial airfield and RAAF Base. The initial construction in the 1930's and subsequent maintenance and expansion of the Airport's runways and taxiway system have involved significant landplaning, re-grading of contours and alterations to hydrology.

Some disturbed areas have naturally regenerated over time to their present condition, which is assessed as Botanical Significance Rating (BSR) 3 or patches of moderately-modified natural temperate grassland and exotic and native pasture.

The first detailed survey and mapping of the Airport

vegetation was conducted in 2003/2004. Grassland surveys on Airport were scheduled and postponed twice as the prolonged drought hindered the flowering and identification of sensitive species. The Airport was surveyed and mapped again in 2008/2009 bringing the Airport mapping into line with current standards used in ACT, NSW and the *National Recovery Plan for Natural Temperate Grassland of the Southern Tablelands (NSW and ACT): An Endangered Ecological Community, January 2006*.

The 2004 Grassland Management Plan was successful in ensuring the overall effective management by Canberra Airport as acknowledged in the Report on the Lowland Native Grassland Investigation (ACT Commissioner for Sustainability and the Environment, 2009).

The Commissioner identified the area north of Canberra Airport as a potential Grassland Reserve for natural temperate grassland and listed threatened species. This land is located off Airport and Canberra Airport will continue to manage grassland on Airport to ensure a buffer and connectivity with the potential Grassland Reserve.

4.10.2 Grassland Earless Dragon

The Grassland Earless Dragons (GED) (*Tympanocryptis pinguicollā*) is listed as endangered under the EPBC Act. GEDs prefer natural temperate grassland that have inter-tussock spaces and burrows constructed by Wolf Spiders (*Lycosa spp.*) and the Canberra Raspy Cricket (*Cooraboorama canberrae*). On Airport, GED have been recorded in well-drained, minimally disturbed natural temperate grasslands, dominated by Wallaby Grass, Spear Grass and Kangaroo Grass.

GED were first recorded at the Airport in 1996 and comprehensive GED surveys have been conducted in 1999, 2001, 2004, 2007, 2008, 2009 and 2010. The last sighting of GED on Airport was in 2004. Historic surveys show that GED have predominately been sighted in the northern section of the Airport.

A protocol for GED was developed in 2001 for the identification of GED during construction works. This protocol has been successful in finding 8 GED in 2001 during runway widening works. The protocol has been used since and no GED have been found.

A ceramic mural of the Grassland Earless Dragon was erected in Brindabella Business Park in 2002. The mural

located in the foyer increases the awareness of the Grassland Earless Dragon to tenants and visitors.

4.10.3 Golden Sun Moth

The Golden Sun Moth (GSM) (*Synemon plana*) is listed as critically endangered under the EPBC Act.

GSM were first observed on Airport in November 1993. Surveys have been undertaken on Airport in 2000, 2003, 2006, 2007 and 2009.

Canberra Airport continues to work with the University of Canberra and ACT Government consultants to contribute to the body of knowledge for the Golden Sun Moth.

4.10.4 Perunga Grasshopper

The Perunga Grasshopper (*Perunga ochracea*) is listed as vulnerable under the *ACT Nature Conservation Act 1980*. The Perunga Grasshopper has been observed during grassland surveys.

4.10.5 Proposed development

Canberra Airport has a responsibility to the Airlines, aviation business including freight companies and the community to ensure that infrastructure including the construction and widening of runways, taxiways and aprons is in place to meet aviation demand and ensure the safety, efficiency and regularity management of aviation and other traffic on and around the Airport as shown in Figure 4.10.

In December 2008, the Taxiway Bravo and associated works (EPBC 2008/4170) referral was approved with conditions by DEWHA to construct the extension of Taxiway Bravo to the north, to join the Runway 17 threshold.

In November 2009, the Master Plan (EPBC 2009/4748) referral was approved with conditions by DEWHA for the Infrastructure upgrade and construction at Canberra Airport during the life of Canberra Airport's 2009 Master Plan.

The approval conditions required the development, approval and implementation of a number of documents, as set out in table 2.1.

4.10.6 Threatened Species Management Plan

Canberra Airport is committed to the management of natural temperate grasslands and threatened listed species on Airport.

The 2010 Threatened Species Management Plan updates and builds upon the 2004 Grassland Management Plan and includes the outcomes of the EPBC Act referrals and conditions.

The Threatened Species Management Plan was also developed to provide employees of Canberra Airport and the wider community with a better understanding of natural temperate grassland and listed threatened species on Airport and how they are managed in response to contemporary research and practices.

4.10.7 Bird and Animal Hazard Management

Canberra Airport's Bird and Wildlife Management Program is supported by the Bird and Wildlife Management Plan, incorporated within the Airport Operations Manual.

The Airport's consultant biologist and bird management expert conducts regular audits of bird activity on the airport and the surrounding areas, as well as providing ongoing training of Airport Operations staff in bird identification and harassment.

A re-seeding protocol has been developed and implemented and has successfully reduced the level of bird attractiveness of seed being sown for the purposes of soil stabilisation following works.

All development on airport is conducted in such a way as to minimise the risk of bird and animal attraction. Measures to reduce bird attraction include (but are not limited to):

- The briefing of Airport operations staff and contractors on measures to avoid bird attraction (e.g. waste minimisation, avoidance of water ponding etc);
- The installation of appropriate waste facilities during construction and around public areas, including secured bin lids;
- The use of non-bird attractant species of plants for landscaping;
- The use of wires, nets or spikes on exposed surfaces to minimise bird roosting opportunities;
- Training of Airport Operations staff in bird identification and harassment;
- The adoption of a Re-seeding and Soil Stabilisation Protocol to ensure that bird attractant plant and weed

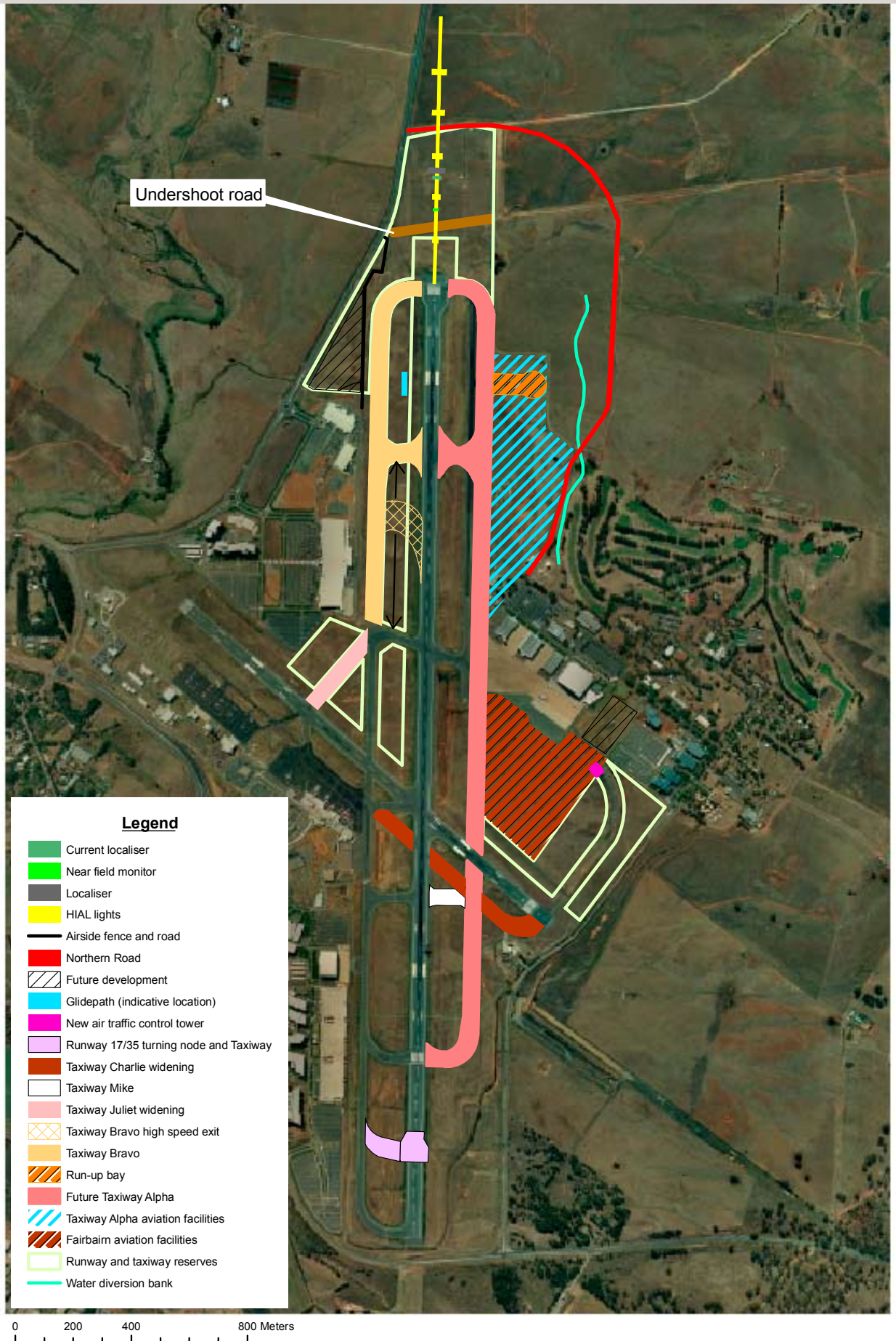
species are not sown or distributed;

- The minimisation of water ponding to reduce attraction to waterbirds (such as ducks);
- Mowing protocol with the objective to minimise the opportunity for grasses to set seed thereby deterring birds; and
- Ongoing involvement in the Australasian Aviation Wildlife Hazard Group (AAWHG)

4.10.8 Landscaping plan

The Landscaping Plan for the Airport has been developed under the guiding principle that the Airport is the focal entry point into the Nation's Capital and compliments and reinforces Burley Griffin's vision of Canberra as the Garden City. Plan species are sensitive to Bird Hazard Management.

Figure 4.10
PROPOSED DEVELOPMENTS APPROVED UNDER THE EPBC ACT WITH CONDITIONS



LAND MANAGEMENT ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
Manage Natural Temperate Grassland and listed threatened species on Airport	0	Manage the natural values on Airport in accordance with the Threatened Species Management Plan	Report changes in AER
	S	Ongoing review of the Threatened Species Management Plan	Report review in AER
	0	Comply with approval and conditions under the EPBC Act	Report in AER and to DEWHA
Natural Temperate Grassland and listed threatened species monitoring	L	Grassland surveys to be undertaken every five years	Report in AER and to DEWHA
	S	Grassland Earless Dragon surveys to be undertaken every two years	Report in AER and to DEWHA
	S	Golden Sun Moth surveys to be undertaken every two years	Report in AER and to DEWHA
Weed management	0	Annual weed spraying in areas of high quality grassland (weather dependent)	Report in AER
	0	Weed spraying along runway, taxiway and airside edges	Report in AER
	0	Cables placed in conduits to minimise soil disturbance	Report in AER
	0	Mowing machinery cleaned to minimise weed transfer	Report in AER
	0	Mowing of grassland from highest to lowest quality	Report in AER
	0	Ongoing research on best practice	Report in AER
Review and update Bird & Animal Hazards and Wildlife Hazards Management Plan	0	Management Plans reviewed annually	Report in AER
	0	Re-seeding protocol to reduce bird activity	Report in AER
	0	Ongoing monitoring of bird and animal activity	Report in AER
Landscape Master Plan	0	Enhancement of the parkland design	Report in AER
Retention of high quality grassland, enhancement and revegetation of lower quality areas	S	Review and monitoring of Translocation site (Permit No.E2005-58339)	Report in AER and annual Translocation Report to DEWHA
	0	Retention of High quality grassland	Report in AER
Implementation of GED Protocol	0	Implementation of GED Protocol during construction works	Report in AER
Investigation of mowing heights to benefit GSM	S	Support the University of Canberra Golden Sun Moth Counter program to obtain information on standardised monitoring protocols and definition of GSM habitat	Report outcomes in AER and update Threatened Species Management Plan as required

4.11 Social and Community Engagement



Aim

To ensure that the community is informed about the environmental initiatives that occur at the Airport, in terms of both the built and natural environment.

Overview

Canberra Airport is an active participant on numerous industry and professional associations and has proved itself to be a leader in the implementation of environmental and community initiatives such as:

- Tours and promotion of Australia's first 5 Star accredited sustainable office building using the Green Building Council's Green Star office design rating tool;
- Recognition by the ACTEW Corporation on World Water Day 2008, as a Water Wise Achiever and as an organisation making significant water savings;
- ACTNow Waste Network Member and winner of the Gold ACT No Waste Awards in 2005;
- Supporting existing noise abatement areas ensuring aircraft noise protection for 99.5% of the region's residents;
- Airport open days, showcasing the Airport to 15,000 people;
- The publication of "The Hub" and "Airport Talk" informing tenants and the community of news and developments on Airport; and
- The Snow foundation provides significant funding for local disadvantaged individuals, groups and families.

4.11.1 Noise Abatement Areas

Canberra Airport works closely with Airservices Australia, CASA, Airlines and the community to expand and maintain the Noise Abatement Areas.

Canberra Airport is also actively campaigning against proposals for new houses under the flight paths at Tralee and Environs. If these proposals go ahead, it may result in noise sharing across Canberra and Queanbeyan to provide relief for the residents in the new proposed housing developments. (See the 2009 Master Plan for further details.)

4.11.2 Consultation

Canberra Airport consults with Government agencies and public community groups to understand and ensure the needs of the community are met. Consultation bodies include:

- ACT Government Chief Minister's Department;
- ACT Environment Protection Authority;
- ACT Commissioner for Sustainability and the Environment;
- ACT Heritage Unit;
- Department of Environment, Water, Heritage and the Arts;
- Department of Infrastructure, Transport, Regional Development and Local Government;
- Department of Defence;
- Department of Climate Change;
- Department of Innovation, Industry, Science and Research;
- Green Building Council of Australia;
- Friends of Grasslands;
- Conservation Council, ACT Region;
- Southern Tablelands Ecosystem Park Inc;
- Peak ACT and NSW community organisations including the Pialligo Residents Association;
- Airport tenants and users; and
- Registered Aboriginal Organisations.

4.11.3 Public awareness

Canberra Airport increases public awareness of initiatives implemented on the Airport by;

- The Canberra Airport website, which is regularly updated;
- The publication of the HUB and Airport Talk newsletters;
- Media releases, including radio and television interviews;
- Personalised tours of the Airport;
- Open Days;
- Public meetings;
- Monthly (by appointment) consultation meeting with the Environment and Planning committee; and
- Guest speakers at community and industry meetings.

4.11.4 Airport Metropolis Research

Canberra Airport is joint funding the Queensland University of Technology's research into 'The Airport Metropolis: Managing the Interfaces' project. The project focuses on the importance of cooperative planning, to ensure urban and regional development outcomes that are economically efficient, sustainable, resilient, coordinated and equitable. This study is due for completion in 2010.

4.11.5 Snow Foundation

The Snow Foundation was established in 1991 to assist those in need in the Canberra regional community whose needs are not covered by government sources.

A wide variety of applications have been approved for funding since the establishment of the Foundation, with the main emphasis on providing specifically targeted grants in the fields of social welfare, health and disabilities and education and recreation.

In the 18 years since being established, The Snow Foundation has reached out to help more than 125 different Canberra organisations and individuals.

4.11.6 Economic involvement

Since its privatisation in 1998, Canberra Airport has

undergone a massive transformation which has had a profound and positive impact on the ACT and regional economy.

In the eleven years since privatisation, well in excess of \$800 million has been spent on redeveloping the Airport into a true gateway for our national capital. This investment represents a very significant financial commitment to the long-term success of Canberra as a city and regional centre of a region.

A study (updated in April 2009) by independent consultants URS, commissioned by Tourism Transport Forum (TTF), estimated that Canberra Airport's \$600m investment in the Airport had direct benefits to a range of different industries and has resulted in over:

- \$2.1 billion in gross output;
- \$882 million in value added; and
- \$480 million in wage and salary incomes to Australian workers.

This is a huge economic contribution to Canberra and the surrounding region.

4.11.7 Grassland Earless Dragon Research

Canberra Airport is funding a joint Post Doctorate Fellowship for GED research with the Australian Research Council and the University of Canberra. Canberra Airport also contributes the Airport's consultants knowledge and advice, ongoing GED monitoring and previous monitoring reports with the aim of collecting population data to be used in the University of Canberra's GED research project. Any information obtained from GED specimens located on Airport will be included in the research project to further increase the body of knowledge of this species.

The outcomes of the research will include clear guidelines for the ongoing management of GED habitat so as to maximise the rate of population increase and to restore habitat.

The research is also expected to provide key insights into the habitat management mechanism for the GED and the effect that climate change might play on those mechanisms through the combination of extreme drought events and habitat degradation. This work will therefore provide essential management information that will maximise the long term changes of conservation for the

GED. This study is due to be completed in 2010.

4.11.8 Golden Sun Moth Count Program

Canberra Airport is contributing its consultant knowledge and time to assist in collecting data on Airport for the Golden Sun Moth count program.

The program is financially supported by the World Wide Fund for Nature (WWF) in collaboration with the Friends of Grassland and the Institute for Applied Ecology at the University of Canberra.

The proposal includes the examination of the influences of habitat and landscape characteristics on the distribution of the species and the development and evaluation of reliable monitoring techniques.

Results of this survey will provide conservation managers with a rational approach to the seasonal detection and monitoring of the Golden Sun Moth.

SOCIAL AND COMMUNITY ENGAGEMENT ACTION PLAN			
OBJECTIVES	PRIORITY (REFER TO CHAPTER 4)	INITIATIVES	MONITORING & REPORTING
AES advertised and made available to public	0	AES available free of charge on Airport website. Hardcopy and CD available for purchase at Airport reception	Report upload of AES in AER
Update Airport website	S	Airport website updated to include overview of environment and sustainable initiatives on Airport	Report changes in AER
Formal and informal liaison with Government departments, airlines, aviation operators, tenants and local community	0	DEWHA consultation meetings	Report in AER
	0	Community group consultation meetings	Report in AER
	0	Increased awareness of environmental issues on Airport.	Report in AER
	0	Tenant audits and ongoing consultation	Report in AER
	0	Meet Airport Management	Report in AER
	0	Development Planning Liaison Meeting	Report in AER and tenant audit report
	0	Canberra Airport Consultative Forum	Report in AER
	0	Public consultations	Report in AER
	S	The local community has been formally consulted during the 60 business day public consultation period of the Preliminary Draft 2010 Environment Strategy	Report in AES
Funding and information sharing to build the body of knowledge for threatened listed species	S	Funding to the University of Canberra for a Post Doctorate Research Fellowship to research GED	Report in AER and to DEWHA
	0	Data and additional monitoring for the GED and GSM	Report in AER and to DEWHA
Provide opportunities for the community to learn about the Airport	0	Opens days and tours to increase the awareness of Airport Operations and environmental initiatives on Airport	Report in AER

Abbreviations

AATM – Australian Air Traffic Management
ABC – Airport Building Controller
ADF – Australian Defence Force
AEO – Airport Environment Officer
AER – Annual Environment Report
AES – Airport Environment Strategy
ARFF – Aviation Rescue and Fire Fighting
ASA – Airservices Australia
BCA – Building Code of Australia
BSR – Botanical Significance Rating
CASA – Civil Aviation Safety Authority
CEMP – Construction Environment Management Plan
CDA – Constant Descent Approach
CO – Carbon Monoxide
DEWHA – Department of Environment, Water, Heritage and the Arts
DITRDG – Department of Infrastructure, Transport, Regional Development and Local Government
EMP – Environment Management Plan
EMS – Environment Management System
EPBC Act – Environment Protection and Biodiversity Conservation Act 1999
FHMP – Fairbairn Heritage Management Plan
GED – Grassland Earless Dragon
GPS – Global Positioning System
GSM – Golden Sun Moth
ICAO – International Civil Aviation Organisation
MDP – Major Development Plan
MOU – Memorandum of Understanding
MSDS – Material Safety Data Sheets
NABERS – National Australian Built Environment Rating System
NEPM – National Environment Protection Measures
NGER – National Greenhouse and Energy Reporting
NO₂ – Nitrogen Dioxide
NPI – National Pollution Inventory
O₃ – Ozone
ODS – Ozone Depleting Substances
PM – Particulates
RAAF – Royal Australian Air Force
RAO – Registered Aboriginal Organisations
RNP – Required Navigation Performance
SIDS – Standard Instrument Departures
SOPS – Standard Operating Procedures
STARS – Standard Terminal Arrival Routes
TTF – Tourism Transport Forum
UC – University of Canberra

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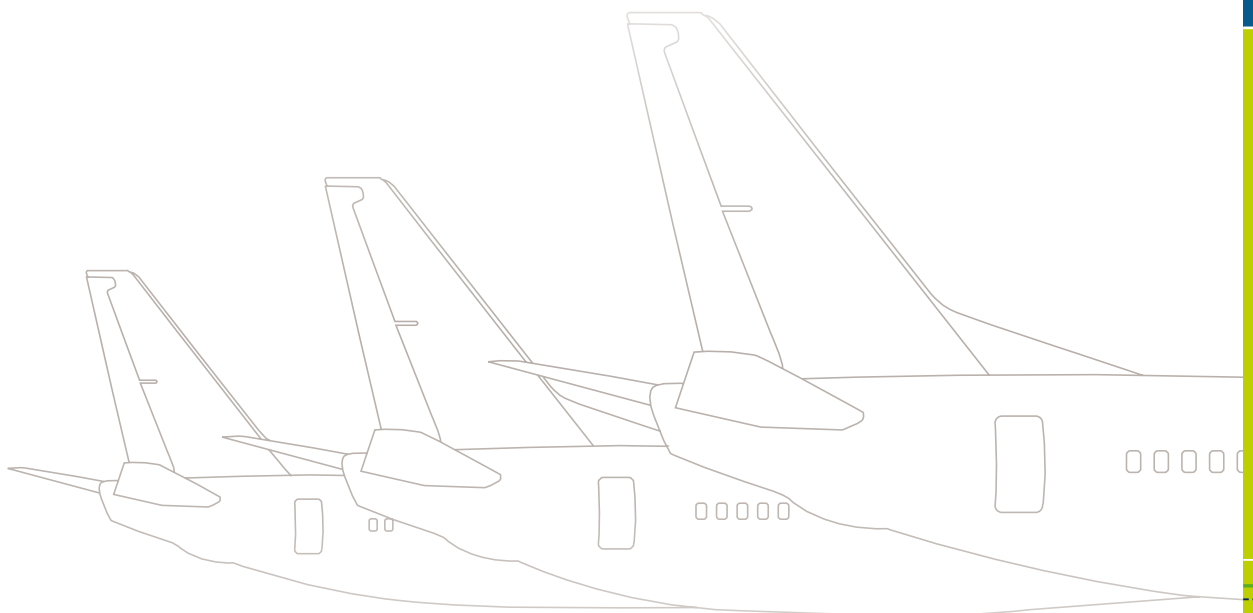
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