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Airport**

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2.0

**AIRPORT
ENVIRONMENT
STRATEGY**

CHAPTER 2: AIRPORT ENVIRONMENT STRATEGY



2.1 Airport Environment Strategy requirements

In accordance with the Airports Act 1996, Sydney Airport is required to prepare and implement an Airport Environment Strategy. This provides the strategic direction for the environmental management of the airport over a five year period. After this period, the existing strategy must be reviewed and updated. The new strategy outlines Sydney Airport's strategic approach to environmental management for the next five years and now forms part of the Sydney Airport Master Plan.

Once approved by the minister, the strategy is a legally binding document for the environmental management of operations at the airport. Sydney Airport and any person carrying on an activity at the airport must take all reasonable steps to ensure that the strategy is complied with. Compliance with the strategy is enforceable by the Department of Infrastructure and Regional Development (DIRD) through its airport environment officers (AEO) or by the minister administering the Airports Act 1996 issuing proceedings in the Federal Court of Australia.

Sydney Airport's first Airport Environment Strategy was approved in 1999 and covered the five year period to 2004. The second Airport Environment Strategy covered the five year period to 2010. The third Airport Environment Strategy was to have covered the period 2010 to 2015. However, due to changes to the Airports Act 1996 in 2010 requiring airport environment strategies to be included in airport master

plans, and due to a direction issued by the minister requiring that Sydney Airport submit a Draft Master Plan sooner than originally scheduled, the third Airport Environment Strategy has not been in place for the full five year period. This is Sydney Airport's fourth Airport Environment Strategy and will cover the period 2013 to 2018.

The purpose of the strategy is to:

- Ensure that all operations at the airport are undertaken in accordance with relevant environmental legislation and standards
- Establish a framework for assessing compliance at the airport with relevant environmental legislation and standards
- Promote the continual improvement of environmental management at the airport and build on the achievements and goals of previous strategies

The Airports Act 1996 and the Airports Regulations 1997 set out specific requirements to be addressed in the strategy. It has been developed to comply with these laws and to provide a best practice environmental management and reporting framework. The strategy, in accordance with s71(2)(h) of the Airport Act:

- Outlines the existing environment and nature of operations at the airport
- Identifies the environmental aspects and potential environmental impacts associated with ground-based airport activities

- Identifies those areas considered to be environmentally significant
- Lists the key environmental achievements during the previous three strategy periods to demonstrate both continual environmental improvement and continuity between the various strategies
- Details an overall framework for effective environmental management at the airport
- Establishes five year environmental action plans covering the period 2013 to 2018

Further detail of the regulatory framework for the development of the strategy is provided in **Chapter 3**.

2.1.1 Environmental aspects covered by the strategy

The strategy covers all ground-based environmental aspects associated with the operation of the airport including:

- Sustainability and environmental management
- Climate change and energy management
- Water management
- Air quality
- Ground-based noise
- Ground transport
- Biodiversity and conservation management
- Heritage
- Waste and resource management
- Soil and land management
- Spills response and hazardous materials

The management of these specific environmental aspects is outlined in a separate environmental action plan (EAP) as detailed in **Chapter 4** of this strategy.

2.1.2 Environmental aspects addressed by other organisations

Managing noise impacts at the airport is shared by many organisations. As well as Sydney Airport itself, the International Civil Aviation Organisation (ICAO), the Australian, NSW and local governments, airlines, aircraft and engine manufacturers, and regulators all play important roles. Together, they work to balance the economic and social benefits our society derives from aviation, ensuring aviation safety and the need to minimise noise impacts.

The Airports (Environment Protection) Regulations 1997 do not apply to noise or other pollution generated by an aircraft in flight or when landing, taking off or taxiing at an airport, except in the case of aircraft ground running.

Sydney Airport acknowledges, however, that these issues are extremely important to the community and other stakeholders. They are addressed elsewhere

in Sydney Airport's Master Plan 2033 (see Chapter 14) and are regulated by other laws such as the Air Services Act 1995, Air Navigation Act 1920, Air Navigation (Aircraft Engine Emissions) Regulations and Air Navigation (Aircraft Noise) Regulations. These laws are administered by the Australian Government through DIRD or Airservices Australia.

For further information, contact:

Department of Infrastructure and Regional Development

GPO Box 594

Canberra ACT 2601

Tel: 02 6274 7111

Fax: 02 6274 7614

Web: www.infrastructure.gov.au

Airservices Australia

To contact the Noise Complaints and Information Service, phone 1800 802 584 (free call) or 1300 302 240 (local call)

or write to:

Noise Complaints & Information Service

PO Box 211

Mascot NSW 1460

Email: ncis@airservicesaustralia.com

Fax: 02 9556 6641

Web: www.airservicesaustralia.gov.au

International Civil Aviation Organisation

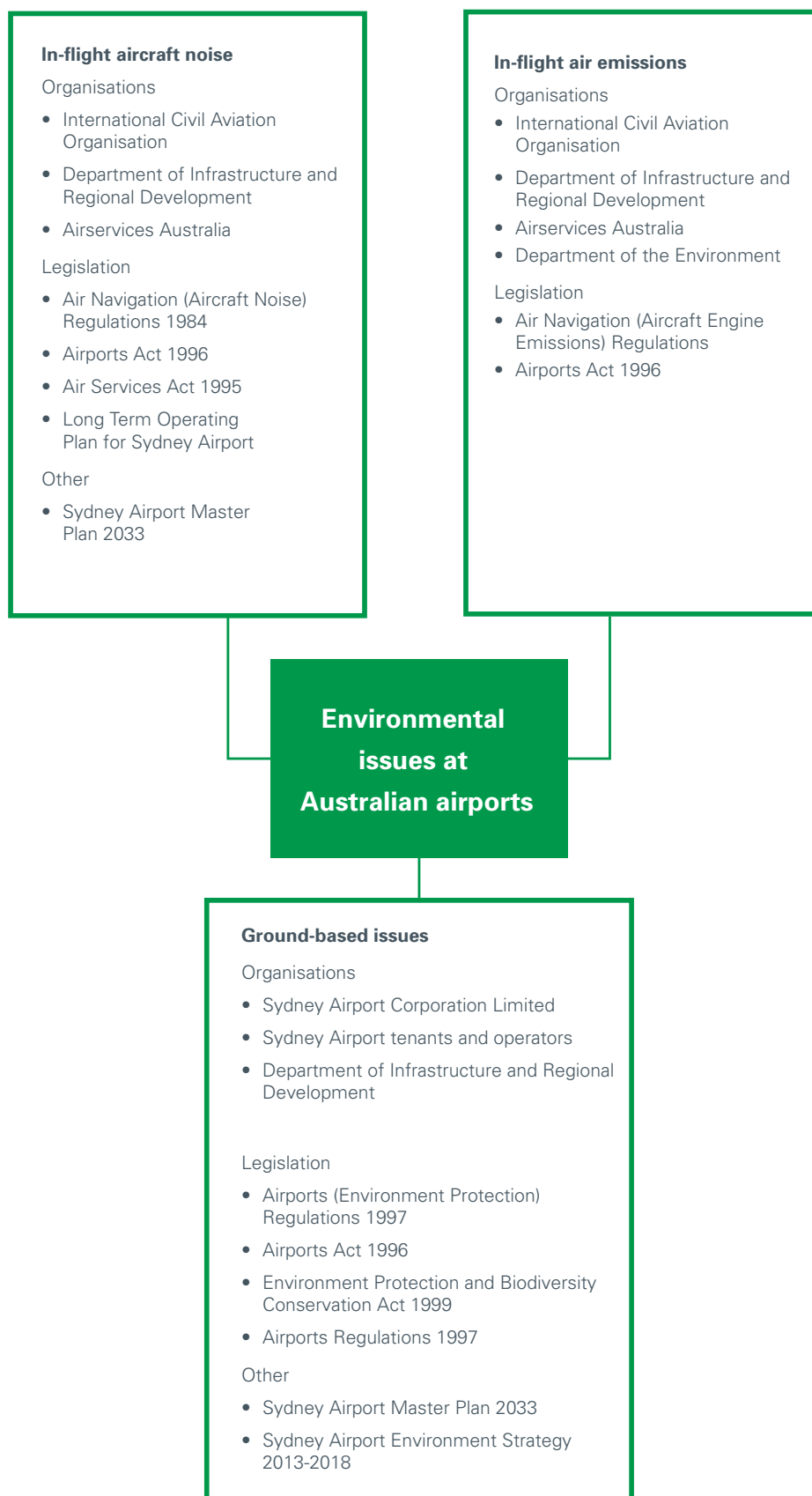
Web: www.icao.int

2.2 Previous airport environment strategy achievements

A cornerstone of the Sydney Airport Environment Policy is a commitment to continuous environmental improvement. This commitment is given expression through Sydney Airport's environment strategies and is illustrated by the various environmental achievements that have been secured while implementing the previous strategies.

Figure 2.1

Organisations and legislation affecting the management of environmental issues at the airport



A summary of the major environmental outcomes and achievements secured while implementing the first, second and third environment strategies is listed in **Table 2.1**. This summary demonstrates continual environmental improvement and a high level of continuity across the strategy periods.

Table 2.1: Continual improvement of environmental performance at Sydney Airport – achievements under the previous environment strategies

2011/12	<ul style="list-style-type: none"> • Sydney Airport's new CEO, Kerrie Mather, endorsed the Sydney Airport Environment Policy • Sydney Airport relocated to its new head office, the Central Terrace Building, which achieved a 5 star Green Star (Office Design v2) rating for the base building and incorporated environmentally sustainable elements in its fit-out • Completed installation of fixed electrical ground power at all T1 and T2 gates/aerobridges, reducing air and noise emissions from aircraft auxiliary power units • Carried out a number of energy saving projects including the installation of LED lighting on the departures roadway at T2, installation of solar hot water at T1, and the installation of lighting isolation switches in areas of T1 • The amount of drinking water saved due to the recycled water plant increased to 600,000 litres per day • Development of a new energy savings action plan commenced, updating previous energy plans and identifying further opportunities for energy savings across the airport • Commenced development of an energy and carbon strategy to establish a framework and roadmap for Sydney Airport for energy and carbon management for the future • Development of a new water savings action plan commenced to update previous water saving plans and to identify further water saving and efficiency opportunities • For the sixth year, Sydney Airport offset all emissions associated with its vehicle fleet through Greenfleet • Continued implementation of the Sydney Airport contaminated sites strategy, which included groundwater monitoring and management of the airport's known contaminated sites • Continued remediating the former joint oil storage facility site, a project that extracts hydrocarbon contaminants from the site • Provided funding to support local schools' environmental and education programs • Continued implementation of the wetlands enhancement program. Works undertaken included native fish release and aquatic and terrestrial weed removal and pest management activities • Green and golden bell frog surveys carried out to determine the presence of the species on airport land. However, the species was not recorded during the survey • Hosted the tenant environment forum, focusing on business sustainability with a guest presenter from Energetics • Implemented the environmental auditing program which generally indicated good environmental performance across the airport. Tier 1 tenants provided independent environmental audit reports • Installed new facilities including lockers and showers to support staff cycling to and from work • Established a joint working group with Transport for NSW and NSW Roads and Maritime Services to develop ground transport solutions for the airport, including road upgrades and improved public transport services. The outcomes of the working group deliberations will inform the preparation of Sydney Airport's five year ground transport plan, which forms part of this Master Plan • Sydney Airport continued to advocate to the NSW Government that the station access fee for users of the two on-airport train stations be reformed to encourage increased travel by rail to the airport • Sydney Airport continued to advocate to the NSW Government that additional bus services be provided, particularly to the St George – Sutherland area where more than a third of airport workers live
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2010/11	<ul style="list-style-type: none"> • Implemented a detailed communications plan to raise awareness of the new Airport Environment Strategy 2010–2015, and to inform and educate staff and tenants of the various aspects and requirements of the new strategy • Completed the base building for Sydney Airport's new head office, the Central Terrace Building, which achieved a 5 star Green Star (Office Design v2) rating, certified by the Green Building Council of Australia. A 5 star rating signifies Australian Excellence in environmentally sustainable design and/or construction • In April 2011, Sydney Airport celebrated the 100th anniversary of the first flight from the site that would become Sydney Airport. The event included a plaque unveiling ceremony at Hammond Place • Green and golden bell frog surveys were carried out to determine the presence of the species on airport land. However, the species was not recorded during the survey • Continued implementation of the wetlands enhancement program. Works undertaken included native fish release, aquatic and terrestrial weed removal and pest management activities • Launched the new tenant management strategy outlined within the Airport Environment Strategy 2010–2015 • Developed a range of fact sheets and guidance material to assist tenants with meeting their environmental obligations and improving environmental performance across the airport • Hosted the tenant environment forum, attended by a range of airport tenants, which focused on the contents and requirements of the new Airport Environment Strategy • Awarded a new contract for waste services which targets an additional 30% recovery of beneficial materials through increased recycling and composting • Provided funding to support local schools' environmental and education programs • For the fifth year running, Sydney Airport offset all emissions associated with its vehicle fleet through Greenfleet • Sydney Airport celebrated the water recycling plant's first anniversary of operation, with recognition of its environmental achievement in the NSW Government's Business Water Awards. The awards celebrate sustainability achievements in the development and delivery of water initiatives in NSW • Lobbied the NSW Government to reform the fare structure for users of the Airport Link train stations at T1 and T2/T3 and make travel by public transport to and from the airport more affordable. Lobbied the NSW Government to introduce additional bus services to and from the airport and make use of public transport more convenient
2009/10	<ul style="list-style-type: none"> • Completed the development of Sydney Airport's Environment Strategy 2010–2015 and obtained approval for the strategy from the minister in May 2010 • Officially commissioned the new water recycling plant which became operational in November 2009, saving on average 550,000 litres of water every day, eventually saving up to one million litres of water every day • Continued the program to install fixed electrical ground power units to all gates/aerobridges across T1 and T2, reducing air and noise emissions from aircraft auxiliary power units • Provided funding to support local schools' environmental and education programs • Through Greenfleet, Sydney Airport offset all emissions associated with its vehicle fleet • Continued to lobby the NSW Government and its departments for improved rail, bus and road services to the airport, including by making submissions to the Transport Blueprint for NSW, M5 Transport Corridor Study, and the Metro Strategy • Continued remediating the former joint oil storage facility site, a project that extracts hydrocarbon contaminants from the site • Carried out a full ecological assessment of the airport site to assist with the identification of environmentally significant areas • Conducted a green and golden bell frog habitat assessment to assess the likely presence of the threatened species on airport land • Continued implementation of the wetlands enhancement program. Works undertaken included carp removal, native fish release, and aquatic and terrestrial weed removal • Implemented the resource recovery strategy and rolled out the recycling program in the T1 foodcourt, where quarantine restrictions do not apply

2008/09	<ul style="list-style-type: none"> Completed Stage 2 of the Sydney Airport water recycling project and moved into the commissioning phase Completed a comprehensive water cycle management system, which integrates all of Sydney Airport's previous water management strategies, policies, guidelines and plans as well as outlining a range of measures to minimise water use and improve and monitor stormwater quality Commenced reviewing and updating Sydney Airport's Environment Strategy 2005–2010, which included holding a series of consultation workshops with key government, aviation, community and other stakeholders Continued implementation of the wetlands enhancement program. Works undertaken included carp removal, native fish release, and aquatic and terrestrial weed removal Completed Phase 2 of the Sydney Airport contaminated sites strategy, which included the development of a program for the ongoing monitoring and management of the airport's known contaminated sites Commenced remediating the former joint oil storage facility site, a project that extracts hydrocarbon contaminants from the site Completed the comprehensive heritage management plan for the airport Lobbied the NSW Government to reform the fare structure for users of the Airport Link train stations at T1 and T2/T3 and make travel by public transport to and from the airport more affordable Lobbied the NSW Government to introduce additional bus services to and from the airport and make use of public transport more convenient Worked closely with the RTA and local councils to develop an integrated network of shared pedestrian/ cycleways to better connect the airport with the regional cycling network Installed additional bicycle racks at T1 and T2 and posted cycle-related information – including maps showing the location of the racks and changing/shower facilities – on the Sydney Airport website Commenced developing a cycle strategy, which will include a requirement that all major new developments must have bike storage and changing facilities Provided funding to support local schools' environmental and education programs
2007/08	<ul style="list-style-type: none"> Sydney Airport joined with the global aviation industry – including 94 other major airports around the world – in signing an international declaration on climate change Worked to reduce the company's carbon footprint. The first step involved developing a comprehensive emissions inventory and carbon footprint (scope 1 and 2 emissions) Acquired new software to assist in the maintenance of the environmental management system Established and held first meeting of the Sydney Airport Environment Forum. The forum was established to foster communication and cooperation between Sydney Airport and airport tenants on environmental management matters affecting the airport Completed Stage 1 and commenced Stage 2 of the Sydney Airport water recycling project utilising recycled sewage from the international terminal, which aims to save up to one million litres of water every day Commenced implementation of the Sydney Airport ground travel plan (AGTP) as a way of encouraging the use of sustainable transport options Continued implementation of the wetlands enhancement program. Works undertaken include revegetation and rehabilitation of Engine Pond East, a native fish (Australian bass) stocking program, carp eradication and aquatic weed removal Finalised and commenced implementation of Sydney Airport's resource recovery plan. As part of this, recycling bins have been placed throughout the T2 multi-user domestic terminal Continued implementation of the water savings action plan. This included completion of the water cycle assessment of the airport to investigate and assess opportunities for additional water efficiency and recycling opportunities Continued implementation of the energy savings action plan. Introduced energy savings initiatives such as a new lighting system in the domestic precinct car park (which will reduce energy usage in the car park by 30%). A further green hybrid vehicle was acquired, making a total of 10 in the company's vehicle fleet Continued implementation of the Sydney Airport stormwater management plan. Installed an additional two stormwater quality improvement devices in the domestic terminal precinct to improve the quality of stormwater run-off from the airport. Sustainable stormwater management measures were also used with relevant construction projects Successfully completed environmental audits of the airport's tier 1 tenants Completed draft of the heritage management plan for the airport and submitted to DEWHA for consideration Continued implementation of the Sydney Airport contaminated sites strategy Approximately 71,000 new native plants established at the airport as part of the ongoing \$2 million landscaping and streetscape improvement program

2006/07	<ul style="list-style-type: none"> Commenced Stage 1 of the Sydney Airport water recycling project after securing a \$3 million grant from the NSW Government. Stage 1 involved installation of the necessary reticulation pipe work to allow for the circulation and reuse of treated waste water Continued implementation of the energy savings action plan. During its first year of operation, a reduction in total energy use on the airport of 1% was achieved despite passenger numbers increasing by 6.4% Finalised and began implementing the Sydney Airport ground travel plan (AGTP) as a way of encouraging the use of sustainable transport options Continued implementation of the Sydney Airport stormwater management plan. Completed installation of three stormwater quality improvement devices in the international terminal car park Continued implementation of the Sydney Airport water savings action plan. An airport-wide leak detection project was completed, water-savings devices were installed across the airport and a sophisticated real-time water demand monitoring system was installed Continued implementation of the wetlands enhancement program, including construction of a fish ladder in Engine Pond East to allow the movement of native fish from Botany Bay upstream into the environmentally significant Botany Wetlands Through its education grants scheme, Sydney Airport provided funding and assistance to a number of local schools and kindergartens to enable them to undertake local environmental and educational projects Signed up to the voluntary greenhouse gas offset program Greenfleet for Sydney Airport's vehicle emissions Three green hybrid vehicles acquired, making a total of nine in the Sydney Airport vehicle fleet
2005/06	<ul style="list-style-type: none"> Prepared and submitted the Sydney Airport water savings action plan to the NSW Government. Implementation commenced following approval of the plan in March 2006. Water savings of 10 million litres achieved in 2005/06 Prepared and submitted energy savings action plan to the NSW Government, which aims to reduce the airport's energy use and greenhouse gas emissions. Implementation of the plan commenced following approval of the plan in June 2006 Sydney Airport completed a comprehensive environmental audit of its own operations. The results were positive, with no major non-compliance issues identified Continued implementation of the Sydney Airport stormwater management plan. Designed and awarded contracts for the installation of three stormwater quality improvement devices in the international terminal car park. These will remove gross pollutants, sediment, oil and grease from stormwater run-off and improve water quality in Botany Bay, Cooks River and the Alexandra Canal Continued implementation of the wetlands enhancement program. Gross pollutant trap installed at the Engine Ponds to improve water quality in the environmentally significant wetlands area. Major program also implemented to remove carp from the Engine Ponds and allow for the future release of native fish Sydney Airport finalised its commitment of \$2.7 million to the Lady Robinsons Beach restoration project, including stabilisation of the dune system with native grasses Five green hybrid vehicles acquired, making a total of six in the Sydney Airport vehicle fleet
2004/05	<ul style="list-style-type: none"> Sydney Airport Environment Strategy 2005–2010 prepared and submitted to the Australian Government. The strategy was approved on 18 January 2005 Undertook a major environmental audit program of all tier 1 and tier 2 Sydney Airport tenants. These tenants undertake airport-related activities that pose a higher environmental risk than other airport tenants Completed a detailed Sydney Airport stormwater management plan to be implemented over the next five years. The plan's aim was to improve the quality of stormwater run-off from the airport and so improve water quality in surrounding bodies of water Completed Phase 1 of the Sydney Airport contaminated sites strategy, which involved a comprehensive four year program to investigate, assess and remediate, where required, all identified contaminated sites on the airport As the Engine Ponds and Mill Stream are the most significant area for fauna habitat at the airport, they were designated as an environmentally significant area in the new Airport Environment Strategy. Sydney Airport developed a wetlands enhancement program Through its education grants scheme, Sydney Airport provided funding and assistance to a number of local schools and kindergartens to enable them to undertake local environmental projects Sydney Airport took delivery of its first green hybrid vehicles, with more to be acquired in the coming years

2003	<ul style="list-style-type: none"> • Installed on-airport odour control unit to reduce emissions associated with Sydney Water ocean outfall sewage pipeline • Aircraft ground running procedures reviewed • Completed a comprehensive stormwater characterisation study across the Airport and completed a stormwater monitoring program • Achieved a 50% reduction in the number of on-airport spills for second year running • Upgraded pollution control devices on stormwater outlet pipes at T1 terminal • Achieved a waste volume reduction of 5% on previous year and developed an airport waste strategy • Funded public whale watching platform as part of Sydney Airport's community grants program • Sydney Airport achieved a Gold Award from the NSW Government's Sustainable Energy Development Authority for energy use reduction
2002	<ul style="list-style-type: none"> • Achieved over 50% reduction in the number of on-airport spills and spill response team procedures updated • Prepared and began implementing the Sydney Airport contaminated sites management strategy, including risk assessment of all identified sites, and development of remedial action plans for high risk sites • Released Environmental Management at Sydney Airport education handbook • Implemented bulk fuel management strategy to improve management, removal and installation of bulk fuel tanks • Conducted a major review of the heritage elements of the airport • Achieved an average waste reduction of 13% on previous year • Completed an energy management strategy aimed at reducing Sydney Airport's energy usage

Of the 106 actions proposed in the previous Environment Strategy 2010 – 2015, 86 actions are either on-going, have been completed or were expected to be completed prior to this new strategy being approved. Actions that have not yet been implemented from the previous strategy because the strategy was not in place for the full five year period have been transferred to this strategy.



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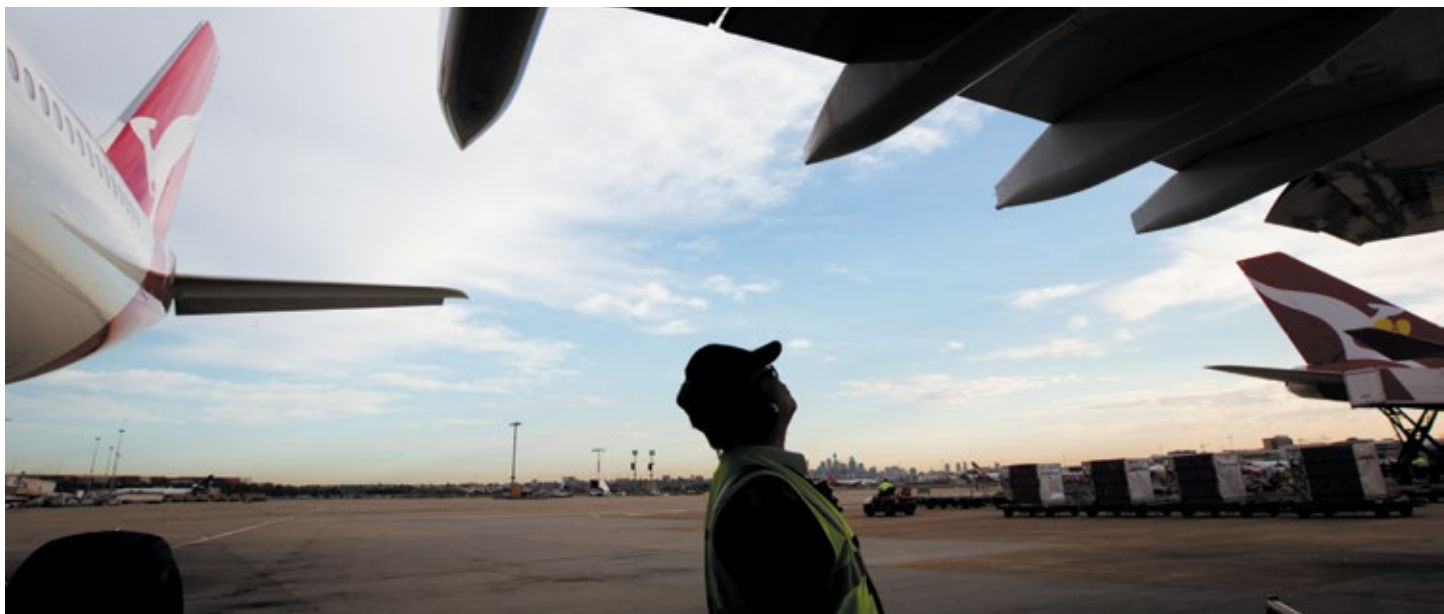
Pre-conditioned air supplied to aircraft in these yellow ducts minimises auxiliary power unit use by aircraft while on the ground, improving air quality and reducing ground-based noise.



3.0

**ENVIRONMENTAL
MANAGEMENT AT
SYDNEY AIRPORT**

CHAPTER 3: ENVIRONMENTAL MANAGEMENT AT SYDNEY AIRPORT



3.1 Legislative context

The Commonwealth legislative framework controlling environmental management of the airport comprises the following Australian laws:

- Airports Act 1996 Part 5 and Part 6
- Airports Regulations 1997
- Airports (Environment Protection) Regulations 1997
- Environment Protection and Biodiversity Conservation Act 1999

The regulatory authority administering the legislation for leased Australian airports is the Australian Government's Department of Infrastructure and Regional Development (DIRD). An airport environment officer (AEO) has been appointed by DIRD to oversee the implementation of this legislation at the airport.

3.1.1 Airports Act 1996

The airport is operated in accordance with the Airports Act 1996 (the Act). The Act and associated regulations establish a system for the regulation of airports that has due regard to the interests of airport users and the general community.

Part 6 of the Act, Environmental Management, describes the requirements for the effective environmental management of the airport site. Sections 131B, 131C and 131D of the Act make it an offence to cause serious or material environmental harm, or to cause an environmental nuisance affecting an airport site.

Part 5 of the Act, Land Use, Planning and Building Controls, describes the mechanisms for planning, building and development assessment and approval at the airport. The provisions require each airport to have a master plan. In accordance with Section 70(2) of the Act, the purposes of a master plan for an airport are to:

- Establish the strategic direction for efficient and economic development at the airport over the 20 year planning period of the plan
- Provide for the development of additional uses of the airport site
- Indicate to the public the intended uses of the airport site
- Reduce potential conflicts between uses of the airport site, and to ensure that uses of the airport site are compatible with the areas surrounding the airport
- Ensure that all operations at the airport are undertaken in accordance with relevant environmental legislation and standards
- Establish a framework for assessing compliance at the airport with relevant environmental legislation and standards
- Promote the continual improvement of environmental management at the airport.

Sydney Airport's Master Plan 2033 can be downloaded from www.sydneyairport.com.au. The potential environmental issues associated with implementing the

plan are identified in Chapter 13, along with a summary of Sydney Airport's plans for dealing with the environmental issues.

Part 5 of the Act also requires that, for each airport, there is to be an environment strategy included in its master plan. Once approved by the minister, Sydney Airport and all persons who carry out activities at the airport are then obliged to take all reasonable steps to ensure compliance with the environment strategy.

In addition, the provisions of Part 5 of the Act require major development plans (MDPs) to be prepared and exhibited for public comment for certain types of development at the airport. The provisions detail the approval requirements for all building activities, including requirements for environmental assessment.

3.1.2 Airports Regulations 1997

The Airports Regulations 1997 specify detailed requirements for environment strategies, including:

- Demonstration of continuous improvement in the environmental consequences of activities at the airport and the progressive reduction in extant pollution at the airport
- Development and adoption of a comprehensive environmental management system for the airport
- Identification and conservation of objects and matters at the airport that have natural, indigenous or heritage value
- Identification of environmentally significant areas
- Identification of the sources of environmental impact associated with airport operations and plans to monitor and minimise the impact on the environment including timeframes for any measures to achieve this
- Involvement of the local community and airport users in development of any future strategy and dissemination of the strategy to sub-lessees, licencees, other airport users and the local community

3.1.3 Airports (Environment Protection) Regulations 1997

The Airports (Environment Protection) Regulations 1997 (the regulations) impose a general duty to prevent or minimise environmental pollution and have as one of their objects the promotion of improved environmental management practices at Commonwealth-leased airports. As outlined in **Section 2.1.2**, the regulations do not apply to noise or other pollution generated by an aircraft in flight or when landing, taking off or taxiing at an airport, except in the case of aircraft ground running.

The regulations contain detailed provisions setting out:

- Definitions, acceptable limits and objectives for air, water and soil pollution, and offensive noise
- General duties to prevent or minimise pollution, preserve significant habitat and cultural areas, and to prevent offensive noise
- Monitoring and reporting requirements for existing pollution

3.1.4 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is the predominant Commonwealth statute for protection of the environment and biodiversity, and for the promotion of ecologically sustainable development.

Relevantly, under the provisions of the EPBC Act, actions may require assessment and approval by the Minister for the Environment if the action will have, or is likely to have, a significant impact on the environment of Commonwealth land (such as Sydney Airport).

An action includes a project, development, undertaking, activity or series of activities. Before adopting or implementing an MDP on Sydney Airport, Section 160 of the EPBC Act requires the Minister for Infrastructure and Regional Development to obtain and consider advice from the Minister for the Environment.

3.1.5 Application of state laws

The interaction between Commonwealth and state legislation in relation to major airports is complex and depends on the particular facts and circumstances surrounding each issue. Commonwealth laws generally take priority over state laws. However, state legislation does apply:

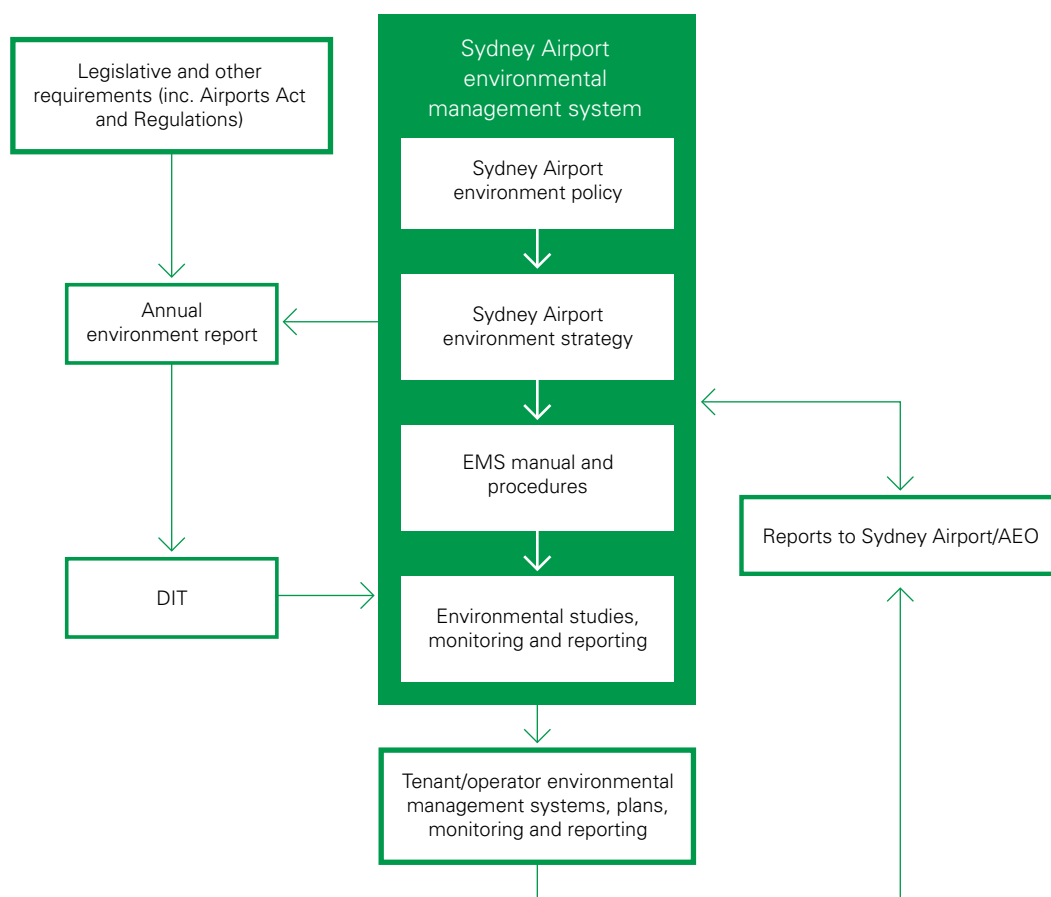
- Where no Commonwealth law exists
- Where Commonwealth law exists but operates concurrently with state legislation

In relation to other land owned either by Sydney Airport or the Commonwealth, which is not part of the airport site, additional state legislation will apply. That land is beyond the scope of the Environment Strategy.

3.2 Environmental management framework

Sydney Airport has adopted a risk-based approach to environmental management at the airport incorporating the Environment Strategy and Sydney Airport's environmental management system (EMS) to control the identified environmental risks and to achieve a high standard of environmental management. The environmental management framework is illustrated in **Figure 3.1**.

Figure 3.1: Sydney Airport environmental management framework



3.2.1 Sydney Airport environmental management system

Sydney Airport has developed and maintains an environmental management system (EMS) which, as required by Clause 5.02B of the Airports Regulations 1997, is intended to maintain consistency with relevant Australian and international standards. In this case, the relevant standard is AS/NZS ISO14001 Environmental Management Systems – Requirements with Guidance For Use.

The EMS provides the system by which daily environmental management can be planned, implemented and reviewed, thus ensuring a cycle of continuous environmental improvement.

Sydney Airport's EMS comprises the following main components:

- **Environment policy**
- **Planning** – including environmental aspect and risk identification and assessment, objectives, targets and action plans
- **Implementation and operation** – including environmental responsibilities, training and awareness, communication, document and operational control, and emergency preparedness and response
- **Checking** – including monitoring, assessment and auditing
- **Management review**

The strategy provides the strategic level policies, objectives, proposed actions and targets for the environmental management of the airport within which Sydney Airport's EMS will operate. The EMS is not a stand-alone system but rather one that is fully integrated with Sydney Airport's business and organisational structure. It establishes the detailed day-to-day mechanisms by which the goals outlined in the strategy are to be achieved and provides the tools to establish the operational framework, monitor progress, review performance and implement corrective actions for the strategic actions outlined in the strategy.

3.2.2 Sydney Airport environment policy

Sydney Airport has adopted the Sydney Airport environment policy that forms the basis for environmental management of Sydney Airport. The policy establishes the principles for environmentally sustainable use of the airport, from which objectives, key performance indicators, and action plans and programs are developed.

The Sydney Airport environment policy – which has been endorsed by Sydney Airport's chief executive officer – is presented on page 38 of this strategy. In accordance with the EMS, it will be reviewed and

updated periodically. Please refer to the Sydney Airport website for the most up-to-date version.

3.2.3 Environmental risk management

As part of Sydney Airport's overall approach to risk management, an integrated risk management framework is implemented which systematically identifies and evaluates the key environmental risks affiliated with all airport operations.

In assessing the environmental risks, Sydney Airport undertook a review to determine all environmental interactions (or environmental aspects) resulting from airport activities, products and services. These include:

- Sustainability and environmental management
- Climate change and energy management
- Water management
- Air quality
- Ground-based noise
- Ground transport
- Biodiversity and conservation management
- Heritage
- Waste and resource management
- Soil and land management
- Spills response and hazardous materials

From this review, the potential environmental impacts were determined. Discussion of these impacts is integrated into the environmental action plans (EAPs) shown in **Chapter 4**.

Once the environmental aspects and impacts are determined, Sydney Airport applies a risk management process that:

- Identifies all risks
- Evaluates identified risks as high, medium or low by assessing the likelihood of occurrence and the resulting consequence
- Assesses risk mitigation strategies
- Allocates a risk owner to each risk

Sydney Airport's environment policy



ENVIRONMENT POLICY

Sydney Airport is Australia's major gateway to the world and our nation's premier airport. The airport connects Sydney – Australia's only global city – and NSW – Australia's most populous state – to other cities and regions across Australia. It provides access to all the benefits of the global aviation network.

Being only 8km from the Sydney CBD, and located on the shores of one of our most significant waterways - Botany Bay - Sydney Airport Corporation Limited (SACL) recognises its responsibility to manage Sydney Airport in a sustainable manner for the benefit of people in Sydney, NSW and Australia. This responsibility extends to all our staff, airport tenants and other stakeholders.

In recognition of our vision, SACL is committed to the following environmental principles:

- **Sustainability:** by adopting measures to conserve natural resources and energy; reducing impacts on the environment; and considering the ecological, social and economic implications of our actions.
- **Knowledge and Awareness:** by developing and maintaining a broad-based understanding of the sources of environmental impact of our operations, both on and off the airport, using, where necessary, research, education and awareness training.
- **Continual Improvement:** by striving to continually improve our environmental performance.
- **Community Involvement:** by developing and maintaining strong links with our local community and all key stakeholders involved with Sydney Airport.
- **Pollution Control:** by implementing pro-active and effective measures to minimise pollution and reduce environmental impacts.
- **Compliance:** by complying with all applicable environmental laws, policies and standards and, where possible, exceeding the requirements imposed by them.
- **Systematic Management:** by developing, implementing and maintaining an Environmental Management System, rigorously assessing the environmental impacts of development proposals, and implementing comprehensive environmental management strategies and plans.

All employees and stakeholders are encouraged to become actively involved in the environmental management of Sydney Airport.

Kerrie Mather
Managing Director & Chief Executive Officer

dated: 27 September 2011

Incorporation of the Environment Strategy into risk management

This Environment Strategy aims to provide a strategic direction for the environmental management of the airport, setting out objectives, targets and strategic action plans to address the environmental risks. Sydney Airport adopts and implements EAPs that set clear responsibilities for the management of risk, allow for resources to be prioritised, and put in place procedures and programs to ensure that such risks are eliminated or otherwise appropriately managed.

3.3 Environmental responsibilities

Environmental management at the airport is not exclusive to one section of the airport. Sydney Airport has adopted an integrated approach to ensure that all airport staff and operators (including tenants and contractors) have an appropriate element of environmental responsibility. The main environmental responsibilities at the airport are summarised below.

3.3.1 Sydney Airport Corporation Limited responsibilities

Within the current organisation structure, each department has environmental responsibilities. This structure promotes a strong business culture, strengthens relationships between departments, and reflects Sydney Airport's focus on addressing environmental issues with external stakeholders, such as airport tenants and operators.

The Sydney Airport board has established a safety, security, environment and health (SSE&H) committee. The SSE&H committee addresses strategic aspects of the airport environment and is advised by the environment department on technical information relating to environmental issues.

Chief Executive Officer (CEO)

The CEO is ultimately responsible for the implementation of the Environment Strategy, corporate and environmental policies, regulatory compliance, and for ensuring Sydney Airport's general managers are informed and have systems in place to deal with environmental risks relating to their operations.

Sydney Airport environment department

The environment department is responsible for the effective implementation of actions contained within the Environment Strategy and ensuring compliance with applicable legislative and regulatory requirements.

An important function of the environment department is the coordination of environmental issues and initiatives across Sydney Airport's departments and with airport tenants and operators. This is achieved through the environmental management system and environmental audit program, which address airport operations and

tenant activities, including the annual receipt and review of tenant environmental management plans (EMPs).

The environment department engages a broad range of consultants, contractors and technicians to undertake studies, assessments and monitoring at the airport. Only suitably qualified and experienced consultants are engaged, in accordance with Sydney Airport's tendering process.

Sydney Airport employees

Sydney Airport employees have a responsibility to adhere to procedures and policies developed by Sydney Airport and to participate in training relating to the Environment Strategy and environmental management system.

Environmental management programs and procedures designate responsibilities for specific actions. These are communicated to relevant staff through consultation during the development process, staff induction and the environmental management system.

An introduction to environmental awareness is also conducted as a component of Sydney Airport's employee induction program.

3.3.2 Tenant responsibilities for environmental management

Airport tenants and operators are responsible for conducting their activities in an environmentally responsible manner and must comply with applicable environmental legislation (including the Act and regulations), the strategy and the spirit of the Sydney Airport environment policy. A tenant's lease or licence includes relevant statutory environmental requirements and, depending on the tenant's tier classification, may require the development of an operational environment management plan (EMP).

Sydney Airport has classified airport tenants into three tiers based on the environmental risk posed by their activities, as described below:

- **Tier 1** tenants have the greatest potential for significant environmental risk. These include airlines that have substantial maintenance facilities at the airport and bulk fuel suppliers
- **Tier 2** tenants have a medium potential for significant environmental risk. These include car rental companies, hotels and non-terminal fast-food outlets, freight companies, some international, domestic and regional airlines, general aviation (including corporate aviation and helicopters) tenants and refuelling companies
- **Tier 3** tenants pose the least potential for significant environmental risk. These consist of mainly terminal retail operators, including food and beverage outlets

Tier 1 tenants are expected to develop and maintain an individual environmental management system. In addition, Sydney Airport requires tier 1 and tier 2 tenants as part of their lease conditions to develop and implement an EMP which ensures that:

- Their activities are in compliance with the airports act 1996 and the strategy
- They have identified all environmental risks associated with their operations and have appropriate controls and programs to eliminate or minimise these risks

EMPs should be consistent with ISO14001 and include:

- A description of the tenant's ground-based activities
- The identification of environmental risks, the level of risk and the impact associated with these activities
- Methods/procedures (including spill response and recognition of the airport emergency plan where necessary) to be used to address these identified risks and ensure compliance with relevant legislation
- Targets for environmental performance
- Procedures to advise Sydney Airport of changes to activities and their associated environmental risks
- Management of environmental records and documents
- Staff training programs
- Contractor management
- Allocated responsibilities for the upkeep, review and auditing of the EMP
- Contact details of the person responsible for the EMP

Tenants should ensure that their EMP is kept current and that Sydney Airport has been provided with the most recent version of the EMP.

Tenant auditing and reporting requirements

Tier 1 and 2 tenants are required to have an environmental audit carried out of their activities on an annual basis. This audit can be carried out by an internal staff member who is considered to be appropriately qualified for the audit. The results of the audit should be provided to Sydney Airport annually by no later than 31 July for the previous financial year. The audit should cover the following elements:

- Compliance with the EMP and statutory requirements
- Compliance with EMP requirements listed in the Environment Strategy
- An assessment of the environmental impacts and of the methods/procedures/mitigation measures used to minimise these environmental impacts
- Additional or new activities and the associated risk, impact and environmental procedures that have been established, or are required
- Assessment of progress in achieving environmental performance targets

For Tier 1 tenants, every second year this audit must be carried out by an independent, certified environmental auditor. This audit should cover the elements listed previously. The results of the independent audit should be provided to Sydney Airport by no later than 30 September for the previous financial year.

For Tier 3 tenants, whose environmental risks are considered low, Sydney Airport, through its general environmental awareness programs and lease agreements, will incorporate generic environmental requirements in the functional areas of waste management, energy and resource usage.

3.3.3 Contractor responsibilities

Contractors engaged by Sydney Airport are expected to comply with this Environment Strategy, the Airports Act 1996 and regulations. Contracts are assessed on a case by case basis, with those identified as carrying significant potential risk requiring the development of an EMP.

Table 3.1: Summary of airport tenant auditing and reporting requirements

	Tier 1 tenants	Tier 2 tenants
EMS	Yes	No
EMP	Yes	Yes
External audit*	Biennially	No
Internal audit	Biennially**	Annually

* Audit to be carried out by an independent certified environmental auditor

** Audit to be carried out in alternate year to external audit

EMPs ensure that the activities and environmental effects associated with the contract are identified and management actions implemented to reduce environmental risk and prevent or minimise environmental impacts. The EMP is required to be provided to Sydney Airport's environment department, and provides the basis for environmental auditing of the contractor. Sydney Airport's relevant project manager, in consultation with the environment department, ensures compliance with the EMP.

3.3.4 Department of Infrastructure and Regional Development (DIRD) and the airport environment officer (AEO)

The AEO is appointed by the secretary of DIRD and is authorised under the Act to exercise powers regarding environmental issues conveyed through the relevant legislation. Focusing on strategic environmental goals, the AEO liaises with Sydney Airport, airport tenants and operators to ensure management of the airport environment is within the intent of the Act and regulations. This occurs through regular meetings, site inspections, facility audits and reporting requirements conducted by the AEO. In addition, the AEO may be requested to consider, and place conditions on, applications submitted to the airport building controller (ABC) for activities on airport land (the development assessment and approval process is outlined in **Section 3.7**).

While the AEO is responsible for the day-to-day administration of the Airports (Environment Protection) Regulations 1997, DIRD maintains overall responsibility for enforcement of the Act and regulations at Commonwealth-leased airports and oversees the AEO role. DIRD monitors the environmental performance of Sydney Airport and airport tenants and operators through AEO's quarterly reports and liaison, annual environment reports produced by Sydney Airport as well as periodic inspections and communication.

3.4 Environmental awareness and training

Improving knowledge and awareness is one of the principles of the Sydney Airport Environment Policy. This is to be achieved by developing and maintaining a broad-based understanding of the sources of environmental impact of Sydney Airport's operations, both on and off the airport, using, where necessary, research, education and awareness training.

Sydney Airport employs a number of measures and programs to implement this principle, including:

- Corporate induction program for employees
- Training for environment department staff to keep abreast of best management practices and emerging technologies

- Environmental information on Sydney Airport's internet and intranet websites for staff and airport users
- Ensuring appropriate environmental training is incorporated into tenant operations through EMP provisions

3.5 Environmental audit program

Sydney Airport adopts a comprehensive review process to ensure the effectiveness of the Sydney Airport environmental management framework. The three key components of this process are:

- Tenant inspections
- Airport operations and contractor audits
- EMS review

Tenant inspections

Tenant inspections are conducted by Sydney Airport in consultation with the tenant, depending on the particular airport tenant's classification (refer to **Section 3.3.2**) as well as the tenant's annual audit results and EMP.

The main purpose of the inspection is to assist the tenant to comply with the requirements of the Strategy and the Airports (Environment Protection) Regulations 1997. The inspection will also allow a review of progress in implementing any recommendations outlined in previous audits. Tenant inspections undertaken by Sydney Airport are intended to complement the tenant's own auditing program.

Airport operations and contractors audits

It is equally important to review and audit Sydney Airport's own activities as it is to monitor the activities of airport tenants and operators. As a result, Sydney Airport's activities are under constant review and are audited by the Sydney Airport environment department. The range of activities covered by Sydney Airport auditing includes:

- Airfield maintenance
- Airport operations
- Airport construction projects
- Airport property department
- Airport emergency procedures (where relevant to the environment)

EMS review

Sydney Airport's EMS is a dynamic system and accordingly requires constant review to ensure its validity. As part of this review process, monitoring of environmental performance and auditing are carried out. The main aspects addressed in this review are:

- Continuing appropriateness of the environment policy

- Application and compliance with environmental procedures
- Continuing relevance of objectives
- Legislative requirements review
- Achievement of targets

3.6 Annual environment report

In accordance with clause 6.03 of the Airports (Environment Protection) Regulations 1997, Sydney Airport is required to prepare and submit an annual environment report (AER) to the secretary of DIRD.

The AER is a comprehensive report that details the airport's environmental performance over the reporting period. The report contains information on, among other things:

- Key achievements over the reporting period
- Progress towards implementation of the Environment Strategy objectives and targets
- Progress towards implementation of the Environment Strategy's environmental action plans
- Compliance with relevant legislative requirements
- The results of any monitoring that was undertaken
- Information concerning any additional initiatives and actions that are proposed to ensure continual environmental improvement.

Please refer to the Sydney Airport website for information on key environmental achievements

3.7 Development approval process

A rigorous development assessment process has been established to enable Sydney Airport to address its obligations under the Airports (Building Control) Regulations 1996. If a proposed development has the potential to impact on the environment, an environmental assessment must be undertaken. Sydney Airport, the AEO, the airport building controller (ABC) and, in some circumstances, the Minister for Infrastructure and Regional Development or Minister for the Environment can either refuse to permit a proposed development or impose conditions on a proposed development to ensure any environmental impacts are eliminated or minimised.

All development proposals at Sydney Airport are subject to a thorough planning and environmental impact assessment process undertaken by Sydney Airport's planning and environment departments. Sydney Airport must consider this Environment Strategy, the Master Plan 2033, the Airports Act 1996 and the EPBC Act prior to granting any development approval. This ensures that developments are designed, constructed and managed in an environmentally responsible and appropriate manner.

3.7.1 Sydney Airport assessment process

The Sydney Airport assessment process is a hierarchical system consisting of three main components. The level of assessment of a proposal is dependent on the scale and nature of the development and may include:

1. Sydney Airport development application (DA) and/or
2. Sydney Airport consent or exemption (SC or EX) and/or
3. Major development plan (MDP).

All assessment processes must comply with the requirements of the Airports Act 1996 and this Environment Strategy.

Development applications

DA assesses the concept of a proposal and whether it is appropriate to proceed to an application for a SC or exemption EX. An initial review of environmental issues is conducted by the applicant, in consultation with Sydney Airport's environment department, to determine the potential for environmental impacts and therefore the degree of environmental assessment that will be required. Where it is established by Sydney Airport that a project requires more detailed environmental consideration, a review of environmental factors (REF) must be completed, detailing all potential environmental impacts and proposed measures to eliminate or mitigate these impacts.

Sydney Airport consent or exemption

Following the development application process, a proponent is then required to lodge either an application for Sydney Airport consent or an application for exemption. Applications for exemption are made where a development is deemed to be minor. Sydney Airport consent applications and exemption applications are then assessed against the relevant regulatory requirements, including the Airports (Building Control) Regulations 1996. If approved, Sydney Airport will grant the consent or exemption with or without conditions. Proposals are then referred to the ABC for approval.

Major development plans

Under Section 89 of the Airports Act 1996, certain developments are classified as being a "major airport development." Paragraphs 89(1)(m) and (n) provide that major airport development includes development that is carried out at Sydney Airport:

- That is of a kind that is likely to have significant environmental or ecological impact
- Which affects an area identified as environmentally significant in the Environment Strategy

For each major airport development, a major development plan (MDP) must be prepared in consultation with the community and other stakeholders, and submitted to the Minister for

Infrastructure and Regional Development for consideration and approval. The minister may approve the MDP (subject to conditions) or refuse it.

Development that may affect an environmentally significant area

In dealing with specific internal and external applications for development, building or other works, which carry an environmental risk, Sydney Airport applies a number of environmental conditions of approval to ensure that they are designed, constructed and managed in an environmentally responsible manner, and that they are in compliance with this strategy and relevant legislation. To provide guidance and information concerning the environmental impact assessment process, including for a development that may affect an environmentally significant area, Sydney Airport provides applicants with a fact sheet for environmental impact assessment of development and other applications at Sydney Airport.

As part of this process, Sydney Airport ensures that any development, building or other work that may affect an environmentally significant area is thoroughly assessed in accordance with relevant legislation.

Under the Master Plan 2033, land adjacent to the environmentally significant area known as the Sydney Airport Wetlands is zoned either BD2 (enviro-business park) or EC1 (environmental conservation). The objectives of these zones specifically recognise the need to protect the wetlands.

Relevant objectives of the BD2 zone are to:

- Provide for a limited range of sustainable development, particularly for business purposes, that will not compromise the ecological, cultural or scientific value of this land or adjacent land including Mill and Engine Ponds and Mill Stream
- Ensure buildings achieve design excellence having particular regard to the surrounding natural and built environment and the associated sensitivities
- Incorporate appropriate environmental management principles and controls into development proposals
- To ensure heritage items are appropriately considered and managed.

Relevant objectives of the EC1 zone are to:

- Protect the ecological and scenic values of the waterways in this area
- Maintain the health and natural flows of the waterway
- Enable maintenance dredging of Mill Stream and related activities to maintain water depths and to ensure sedimentation accumulation is managed and controlled
- To ensure heritage items are appropriately considered and managed

The Master Plan 2033 indicates that prior to granting consent for any permissible land use within these zones, Sydney Airport must have regard to the abovementioned objectives as well as comply with the development approval processes outlined elsewhere in this section.

3.7.2 Regulatory approval process

In accordance with the Airports (Building Control) Regulations 1996, a building or works permit must be obtained from the ABC prior to works commencing on the airport site. In considering permit applications, the ABC may obtain recommendations from the AEO and must ensure that:

- Sydney Airport consent has been granted for the proposal
- The proposal complies with the Airports Act 1996 and associated regulations
- The proposal complies with the Sydney Airport Master Plan and Environment Strategy, in accordance with clause 2.05 of the Airports (Building Control) Regulations 1996

The ABC may impose conditions on the approval to ensure applicable building codes and environmental impacts are properly addressed.

3.7.3 Baseline contractual obligations

As indicated above, contractors engaged by Sydney Airport are expected to comply with this Environment Strategy, the Act and regulations. In the case of construction contractors, the airport tenant responsible for managing the contractor should ensure the preparation of an EMP covering the work to be performed by the contractor (although the contractor can themselves prepare the EMPs). These EMPs will generally require Sydney Airport approval before the works commence.