



4.0

Environmental Management Issues

4 ENVIRONMENTAL MANAGEMENT ISSUES

The 2005 AES described the environmental context in which Bankstown Airport operates and identified the primary sources of environmental impact associated with operations at the Airport. It established objectives and targets for the management of aspects of the Airport environment and identified the actions that would be taken to achieve those objectives and targets.

This Section discusses the status of, and the ongoing and future management of the environmental aspects identified in the 2005 AES; namely it describes:

- additional information obtained since the approval of the 2005 AES, new issues of significance that have been identified, and the initiatives taken to mitigate and control environmental impacts at the Airport, in relation to air quality, water quality, soil quality, ground-based noise, flora and fauna, heritage waste and resource use, and
- the future actions that are proposed to deliver on the objectives and targets specified for each of these aspects of the environment.

An implementation plan prioritising the actions required to deliver this Strategy will be developed and provided to the Department within 4 months of approval this AES.

Environmental achievements against the 2005 AES are described in each sub-section below. In addition a summary table is included in Appendix D. This table details the 2005 commitments, identifies whether these have been achieved and comments on how they have been achieved. In addition the table indicates which commitments are ongoing in the 2010 AES and identifies new commitments for the 2010 Strategy.

4.1 AIR QUALITY

4.1.1 BACKGROUND

The NSW Government's *Air Quality Management Plan*, entitled *Action for Air* first prepared in 1998 and updated in 2006/7 identified the key areas for action to manage Sydney's air quality over the next 25 years. Airport related air quality issues were not regarded as significant. Instead motor vehicles and wood fire heating were identified as the major sources of concern for pollutants in the Sydney Basin.

Aviation emissions were found to be a very minor contributor to total Sydney airshed emissions with the largest airport, Sydney (Kingsford Smith) Airport projected to contribute in 2020 only 0.6 per cent of total carbon monoxide, 3.6 per cent of oxides of nitrogen and 0.4 per cent of non-methane hydrocarbons.

An update of the *Air Emission Inventory for the Greater Metropolitan Region in NSW in 2007*, found that aircraft remain a minor contributor of emissions within the Sydney Basin, representing just 0.8 per cent of total carbon monoxide emissions and 1.9 per cent of nitrogen emissions.

General Aviation airports such as Bankstown Airport contribute significantly less than this and so represent a very small contributor to the total emissions in the Sydney airshed. Most of these emissions would be from aircraft exhaust, which are regulated by DITRDG through the *Air Navigation (Aircraft Engine Emissions) Regulations*.

Emissions from ground based operations at the Airport, such as fuel storage, stack emissions and ground-based engine running constitute only a very small proportion of total airport emissions. Given its location at the intersection of two major transport routes and the density of road traffic in the local region, monitoring ambient air quality is more likely to reflect the impacts of road transport than to provide useful information regarding the effectiveness of control measures on the ground. Monitoring undertaken at the Airport will therefore concentrate on ensuring point source emissions at ground level do not adversely impact local air quality.

The *National Pollutant Inventory (NPI)*, an Internet database (www.npi.gov.au) maintained by the DEWHA, provides information on the types and amounts of pollutants being emitted to the environment by industrial facilities that exceed specified thresholds of pollutant types. Five of Bankstown Airport's tenants, including BAA, Qantas Heavy Maintenance, BP Australia Limited, Mobil Oil Australia Pty Ltd and The Shell Company of Australia Ltd, submit NPI reports. (Note: Qantas Heavy Maintenance ceased operations at Bankstown Airport in 2008).

The primary sources of air emissions from activities at the Airport addressed by this AES are:

- point sources including stacks, storage of solvents, exhausts from paint spray booths, cooling towers, etc;
- fuel storage and refuelling operations;
- vehicle traffic to, from and on the Airport;
- aircraft engine ground runs;
- dust, including possible asbestos fibres, generated during construction or building maintenance activities; and
- ozone depleting substances, such as some refrigerants (chlorofluorocarbons) and fire-suppressants (halons).

Tenants are responsible for demonstrating that their air emissions, including from point sources, chemical or fuel storages, vehicular traffic, aircraft engine ground runs or dust generated during construction activities, are compliant with the requirements of the *Airports Act 1996*. Compliance is progressively reviewed by BAL and the AEO during environmental audits.

Current vehicle emissions at Bankstown Airport can mainly be attributed to the local workforce. Emissions generated from this source will increase in proportion to the growth in on-site employment and aircraft passenger levels associated with the introduction of passenger air services as documented in the MP.

The provision of improved access to public transport, cycleways and pedestrian facilities, as discussed in the surface access development concept in the MP, and the substitution of private transport trips with public transport will help to reduce vehicle emissions and improve air quality overall.

4.1.2 ENVIRONMENTAL ACHIEVEMENTS

The following management actions were undertaken at the Airport in relation to air quality issues during the period of the 2005 AES:

- Qantas Heavy Maintenance ceased operations at Bankstown Airport in 2008 resulting in cessation of emissions associated with their heavy maintenance operations;
- Turbomeca installed a new engine test facility. Monitoring confirmed it is operating as prescribed and regular monitoring will ensure it continues to operate within prescribed parameters;
- Airport tenants that trigger NPI threshold limits submitted NPI reports;
- tenants identified during audits as having halon-based fire extinguishers, other than those licensed to do so, disposed of the halon-based fire extinguishers as they are required by law to do;
- the register of buildings containing asbestos materials was maintained and updated as required; and
- the potential impact on air quality of all development proposals at Bankstown Airport was assessed. Measures were imposed, as required, to ensure the developments and their associated activities met the air quality standards specified in the *Airports (Environment Protection) Regulations 1997* and did not have an adverse impact on local air quality.

4.1.3 AIR QUALITY OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 1 contains the objectives and targets for air quality at Bankstown Airport and the proposed measures that will be implemented to prevent, control or reduce the impacts of airport operations on air quality (including ozone depleting substances).

TABLE 1 AIR QUALITY OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

<p>Objectives:</p> <ol style="list-style-type: none"> 1. Prevent or minimise air pollution (including minimising the release of ozone depleting substances) to the extent practicable and comply with regulatory requirements.
<p>Targets:</p> <ol style="list-style-type: none"> 1. Comply with the requirements of the <i>Airports Act 1996</i> and <i>Airports (Environment Protection) Regulations 1997</i>.
<p>Actions: BAL will:</p> <ol style="list-style-type: none"> 1. Require audits of tenant operations to assess compliance with the <i>Airports (Environment Protection) Regulations 1997</i> (Annually) . 2. Assess air quality requirements and options for minimising emissions of air pollutants in the development assessment and approval process at the Airport (For each development proposal). 3. Monitor the annual tenant NPI reports for those that trigger NPI reporting thresholds and assess options for reducing emissions of air pollutants (Annually). 4. Identify the options the tenants who trigger the NPI reporting threshold propose to implement to reduce emissions of air pollutants (June 2010) 5. Monitor the aggregate Airport emissions report undertaken by NSW EPA every 5 years and assess options for reducing emissions of air pollutants (Five yearly). 6. Identify and assess options to reduce air emissions at the Airport. (Annually) 7. Promote and encourage the use of alternative fuels and other measures to reduce emissions of air pollutants at the Airport (For each development proposal) 8. Prepare an air quality management plan for operations at the Airport (Jun 2011) 9. Monitor the emissions from all spray paint booths on the Airport (Annually) 10. Prepare and implement an Asbestos Management Plan (Dec 2010) 11. Maintain the Asbestos Register for the Airport (Annually).

4.2 WATER QUALITY

4.2.1 BACKGROUND

Formed in 2005, the Sydney Metropolitan Catchment Management Authority (SMCMA) is the NSW Government agency responsible for the coordination and management of Sydney’s natural resources; it does this by working in partnership with Local Government and the community to build capacity and commitment at the local level to rehabilitate degraded urban water ways. The Sydney Metropolitan CMA has prepared a Catchment Action Plan, incorporating key catchment targets and key management targets for the Sydney Metropolitan area including the Georges River.

A key initiative of the Sydney Metropolitan CMA in partnership with the Western Sydney Regional Organisation of Councils (WSROC), the former Upper Parramatta River Catchment Trust, the Stormwater Trust, Sydney Water and the Sydney Coastal Councils Group has been the initiation of the Water Sensitive Urban Design in Sydney Program. This program has, amongst other things, resulted in the development of the “*Water Sensitive Urban Planning Guide for the Sydney Region*” which promotes sustainable urban design and urban water management with the goal of improving river health. The document provides a performance based development assessment framework that has been adopted by BAL.

BAL has adopted Water Sensitive Urban Design principles as identified in 4.2.2.

SURFACE WATER

The whole of Bankstown Airport lies within the catchment of the Georges River, a major regional waterway located immediately to the west of the Airport. The Georges River has historically been subject to pollution stemming from industrial and residential developments in the catchment.

Rain that falls on the Airport is collected through an extensive system of pipelines, box culverts and open drains which ultimately discharge via five points on the Airport boundary into Georges River. Two of the discharge points have significant catchments upstream of the Airport. The catchments of these drains include industrial and commercial, as well as residential, areas which have potential to impact upon the quality of surface water draining onto, and through, the Airport (SEE FIGURE 9 BELOW).

A number of activities at the Airport have the potential to affect the water quality of the Georges River. The major sources of potential surface water pollution on the Airport include:

- spills and leaks during aircraft servicing and maintenance, aircraft refuelling and runoff from aircraft washing
- spills and leaks during vehicle refuelling and maintenance and runoff from vehicle washing;
- spills and leaks or sediment discharge during construction and maintenance activities;
- spills and leaks associated with bulk liquids storage; and
- spills occasioned by accidents during vehicle travel on airport roads.

To reduce the potential impacts of water pollution on the Georges River, pollution control devices in the form of absorbent booms are installed and maintained on the drains that service the main tenanted areas. The booms are designed to absorb hydrocarbons which, being lighter than water, float on the water surface and are trapped on the absorbent boom material.

Surface water quality monitoring is undertaken at the points where run-off discharges from the Airport (refer to Figure 9). Monitoring results have indicated some exceedances of surface water quality limits listed in Schedule 2 of the *Airports (Environment Protection) Regulations 1997* for several contaminants.

Monitoring at the upstream boundary of the Airport has found that exceedances of some water quality parameters,



although not all, can be attributed to pollution within the catchment upstream of the Airport. Investigation upstream within the main tenanted catchments has been undertaken in order to identify the potential source or sources of the contaminants that can't be attributed to off-airport pollution. If a potential source can be identified BAL works with the operator to rectify the matter.

The source of the some contaminants is difficult to pin point and is likely to be associated with non-point source pollutants such as vehicular traffic, building materials or related to the local geology and soils.

GROUNDWATER

The structural and textural characteristics of the Ashfield Shale underlying the site determine the hydrogeological regime of the area. The shale has negligible primary porosity and permeability. Some secondary permeability exists in fractures within the shale. Groundwater in the shale is generally low in volume and poor (brackish) in quality with concentrations of some metals often occurring at naturally elevated levels. Perched groundwater may exist in localised fill areas overlying the weathered shale, particularly following rain.

Groundwater in this area is not used as a drinking water resource.

Sources of potential groundwater pollution include:

- contaminated sites;
- leakage from underground fuel tanks;
- spillage of fuels and chemicals;
- chemical use (such as pesticides/herbicides), particularly historical chemical use; and
- historic activities, such as landfilling.

Regular groundwater monitoring is undertaken at 4 areas on-airport; two of these areas have been associated with in-ground disposal of wastes including night soil and solid wastes; the third area is associated with hydrocarbon contamination arising from a ruptured fuel line; and the fourth area with chemical contamination arising from historical practices on the site.

FIGURE 9: CATCHMENTS AND WATER QUALITY MONITORING LOCATIONS



Source: BAL

Groundwater monitoring undertaken annually at the in-ground disposal sites over recent years has continued to indicate slight exceedances of groundwater quality limits listed in Schedule 2 of the *Airports (Environment Protection) Regulations 1997* for some contaminants.

There is no groundwater extraction in the vicinity of these sites and since groundwater movement is very slow and the nearest discharge point is some distance downstream of the sites, it is considered that the exceedances at the sites can be managed by natural attenuation. BAL will however continue to monitor these sites and liaise regularly with the AEO in regard to their management.

Groundwater monitoring was undertaken in the course of the removal of the underground tanks at a fuel storage site. No pollution of groundwater was found therefore no further monitoring is considered warranted at this site.

Groundwater monitoring at the other two sites show the contamination is diminishing over time and there is no evidence that the contamination is migrating off either site. Monitoring will continue until all contamination levels reduce to the groundwater quality limits listed in Schedule 2 of the *Airports (Environment Protection) Regulations 1997*.

WASTEWATER

Bankstown Airport, like many commercial and industrial areas, generates wastewater. Wastewater includes any discharges to the sewerage system. Activities that generate waste water typically include:

- aircraft and vehicle washing;
- parts and equipment washing;
- aircraft and vehicle servicing;
- industrial processes; and
- food processing in food outlets.

Typical waste water treatments on the Airport include;

- grease traps; and
- oil interceptors.

Wastewater is either discharged to sewer under agreement with Sydney Water or removed by a licensed contractor for off-site disposal at an approved waste facility.

4.2.2 ENVIRONMENTAL ACHIEVEMENTS

The following environmental achievements were undertaken at the Airport in relation to water quality issues during the (2005-2010) period of the 2005 AES:

SURFACE WATER

- New developments on the Airport incorporate on-site detention systems to ensure they do not impact off-airport flood levels. Confirmation that the new development will not impact off-airport flood levels is required from a suitably qualified professional;
- New developments on-airport now incorporate water sensitive urban design (WSUD) features such as rainwater tanks and landscaping with drought resistant native species. This practice improves sustainability by reducing reliance on dam water;
- Stormwater monitoring, regular inspections of stormwater drains and regular auditing of tenant premises has identified the potential sources of some contaminants and action has been taken to eliminate these sources;
- Environment Information Sheets on a range of topics relevant to the protection of surface water quality including storage of fuels and chemicals, spill response and clean-up and operation and maintenance of spray painting facilities have been prepared. The Information Sheets are available on the Bankstown Airport website and tenants have been notified of the availability of the sheets via monthly newsletters and mail-outs. The Information Sheets are also distributed to relevant tenants during environmental audits of their premises and operations;
- Short articles on matters relevant to the protection of surface water quality regularly appear in the monthly newsletter to tenants; and

- The Bankstown Airport Spill Response Procedures were reviewed in consultation with the major refuelling companies on the Airport. The outcome of the review included the development of an agreement between BAL and the refuellers that ensures a coordinated response to any fuel spills that may occur at the Airport; development and issue of an Environment Information Sheet on Spill Management and an updated Spill Response Procedure Chart; and an agreement to run a joint spill response training exercise.

GROUNDWATER

- Groundwater monitoring of Landfill 1 (the former night soil trenches) and Landfill 2 (the former solid waste landfill) continues to confirm that the migration of contaminants from the landfills is not significant; and
- Groundwater monitoring at two sites, to monitor attenuation of known groundwater contamination, is ongoing. Monitoring indicates there has been no significant increase or movement of the contaminants, confirming the source of the contamination has been removed, and the contaminants are degrading over time. Monitoring will continue until such time the contaminants are within the accepted levels established in *Airports (Environment Protection) Regulations 1997*.

WASTEWATER

- A register of tenants' Trade Waste Agreements is maintained in the *Environmental Site Register*.

4.2.3 OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 2 contains the objectives, targets and proposed measures that will be implemented to prevent, control or reduce the impacts of operations at the Airport on water quality.

TABLE 2 WATER QUALITY OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

<p>Objectives:</p> <ol style="list-style-type: none"> 1. To promote and improve sustainable water use practices. 2. To prevent or minimise surface or groundwater pollution. 3. To detect and manage the risk of groundwater pollution at known contaminated sites. 4. To liaise with other organisations to contribute to an improvement in overall water quality in the Georges River.
<p>Targets:</p> <ol style="list-style-type: none"> 1. Comply with the requirements of the <i>Airports Act 1996</i> and <i>Airports (Environment Protection) Regulations 1997</i>.
<p>Actions: BAL will:</p> <ol style="list-style-type: none"> 1. Require all new developments to adopt Water Sensitive Urban Design principles (Jan 2010). 2. Encourage new and existing tenants to adopt sustainable water use practices (Jan 2010) 3. Continue to develop and implement a Stormwater Management Plan and a Groundwater Management Plan as part of the EMS (Dec 2011). The Plans will include the following actions: <ul style="list-style-type: none"> - Consideration of water quality requirements and promotion and encouragement of options for collection of stormwater for beneficial reuse in the development assessment and approval process at the Airport (refer to Section 4.8 on Resource Use). - Monitoring of performance of tenants (including existing bulk fuel storage facilities) in operating and maintaining surface water and in-ground collection and treatment systems in areas which have the potential to be impacted by petroleum hydrocarbons and reporting of non-compliances to the AEO. - Regular stormwater and groundwater monitoring targeting areas of particular risk and follow up of any exceedances identified in the course of monitoring. - Require annual audits of tenant operations to assess compliance with <i>Airports (Environment Protection) Regulations 1997</i>. - Random inspections of tenant facilities to visually inspect stormwater systems. - Incident reporting and response program for surface water, wastewater and groundwater. - Assessment of options for managing the impacts of pollutants in stormwater discharges from paved areas. - Continue use and maintain floating booms to collect pollutants in surface water at discharge drains exiting the Airport. - Tenant consultation through monthly newsletters and random audits to remind tenants of water quality impacts of their operations. - Liaise with the AEO regarding the continued development and implementation of the Plans.

4. Document the Stormwater and Groundwater Management Plans (Dec 2011)
5. Require new underground fuel installations to be designed and installed in accordance with NSW regulatory requirements (Jan 2010).
6. Require existing underground storage tanks to be monitored in compliance with NSW regulatory requirements (June 2010).
7. Require new lessees to undertake a base-line study of groundwater quality at the commencement and termination of the lease, if the new or existing activities are considered to be a high potential risk to groundwater quality (When required).
8. Ensure written approval from Sydney Water Corporation prior to consent for new developments that discharge trade waste to sewer (Jan 2010).
9. Install a fully serviced aircraft wash down facility (Dec 2014)

4.3 SOIL QUALITY

4.3.1 BACKGROUND

Bankstown Airport was established in 1940 and a number of the aviation-related and industrial activities undertaken at the Airport over the intervening years have been identified as potential or actual sources of soil contamination (e.g. night-soil and solid waste landfilling, refuelling, spray painting and heavy engineering).

Since the preparation of the 2005 AES, the *Environmental Site Register (ESR)*, which is a database of information and records, has been maintained and further developed. The *Environmental Site Register* includes a *Contaminated Site Register* that identifies sites at the Airport where the soil is suspected or, has been confirmed, to be contaminated. The status of the *Contaminated Site Register* is reported in the *Annual Environment Report*.

The *Bankstown Airport Contaminated Site Register* currently comprises confirmed, potential (suspected) and remediated sites. The “*confirmed*” contaminated sites consist of areas where environmental investigations have confirmed soil pollution. The “*potential*” contaminated sites are areas where contamination is suspected because historical activities frequently associated with contamination are known to have occurred or environmental audits have identified the potential for soil pollution as a result of poor practices. The “*Remediated*” sites are those where the contamination has been addressed and is no longer an issue.

CONTAMINATED SITE MANAGEMENT

Management of contaminated sites at the Airport is based on the following principles:

- preventing contamination of soil and groundwater;
- identifying, recording and assessing potential or known contaminated sites; and
- managing and where appropriate remediating contaminated sites to a level unlikely to pose a risk to human health and the environment, in consultation with the AEO.

PREVENTING CONTAMINATION

Prevention of contamination is achieved through a range of activities including:

- Lease clauses – All leases issued at the Airport incorporate strict clauses concerning environmental performance.
- Development Control – All developments on the Airport are subject to assessment and Development Approvals when issued, contain conditions that reduce the risk of any potential contaminating activities associated with the construction and operation of the proposed development.
- Audits and Inspections – BAL and the AEO inspect and assess all Tier 1 and Tier 2 tenant sites upon the expiry of their lease or, upon a proposed change of land use. If there is any reason to suspect soil contamination may have occurred in the course of the tenant's occupation a site assessment may be required.

A procedure has also been developed for investigating unoccupied sites that are being proposed for use. In this case BAL and the proponent agree on the scope of a 'baseline' or 'pre-occupancy' contamination investigation for the proposed site. The results of the pre-occupancy investigation can then be used to compare with the results of a post-occupancy contamination investigation (performed by the tenant if required) at the end of their lease period. In this way, any contamination caused by the tenant during the lease period should be detected.

Other measures employed by BAL for assessing and monitoring soil quality at the Airport include:

- Environmental audits and site inspections, which allow for regular inspection and assessment of all sites at the Airport;
- Education – BAL promotes good management and work practices that avoid or minimise the risk of soil pollution. This is achieved via face to face consultation and the preparation and issue of *Environmental Information Sheets* on best-practice environmental management; and
- Practice – Soil and fill material brought onto the Airport is subject to strict controls. The specification for materials imported to the Airport is addressed in an *Environmental Information Sheet*.

IDENTIFICATION AND ASSESSMENT OF CONTAMINATED SITES

Potentially contaminated sites are identified in a variety of ways. Sites on the *Bankstown Airport Contaminated Site Register* include facilities and areas that have historically been used for activities that have a high potential to pollute, areas that are identified in the course of environmental audits and inspections and areas that are identified in the course of site investigations undertaken prior to development or at a change of use.

Once identified, all potentially contaminated sites are entered on the Site Contamination Register and categorised as having a high or a moderate to low risk to human health and the environment.

This preliminary categorisation is based on the nature of the contamination and is primarily done on the basis of any or all of following considerations:

- Toxicity – What is the risk to human health and ecology?
- Location – Is the contamination buried or at the surface? What impact does it have on the use of the area?
- Mobility – Is the contamination inert, solid or liquid?
- Proximity – How close are the nearest receptors and what is their nature? Are they likely to be impacted?
- Size – How large is the area impacted by the contamination?

Sites that are considered to be of a high risk nature must be further assessed by a suitably qualified professional.

High-risk sites at Bankstown Airport are mainly associated with:

- potential leakage from underground tanks, pipelines and hydrant systems;
- fill material brought onto the Airport; and
- industrial activities on the Airport, including storage and handling of chemicals.

Sites that are considered to be of a low risk nature are generally managed until a change of use is proposed when they are investigated and remediated or managed, as required.

All investigation and assessments of potentially contaminated sites are conducted by an appropriately qualified professional with relevant expertise in the management of the type of contamination thought to occur at the site.

All assessment of potentially contaminated sites at the Airport is based on the policy framework and objectives established in the *National Environment Protection (Assessment of Site Contamination) Measure 1999*.

REMEDICATION AND MANAGEMENT OF CONTAMINATED SITES

Management of confirmed contaminated sites at Bankstown Airport is based on the preferred hierarchy of options for site clean-up and / or management established in the *National Environment Protection (Assessment of Site Contamination) Measure 1999*, namely:

- treatment of the contaminated soil onsite, if practicable, otherwise treatment of the soil offsite and returning it to the site when clean (i.e. to destroying the contamination or reducing it to an acceptable level); or if this option is not practicable; and
- containing and managing the contaminated soil onsite or removing it to an appropriate facility offsite.

If however remediation would have no net environmental benefit or would have a net adverse environmental impact the preferred option involves:

- implementing an appropriate management strategy to manage the contamination on the Airport site.

4.3.2 ENVIRONMENTAL ACHIEVEMENTS

The following environmental achievements were undertaken at the Airport in relation to soil contamination during the period of the 2005 AES:

- development of and improvements to the *Environmental Site Register*;
- update of the Site Contamination Register;
- implementation of practices aimed at preventing soil and ground water contamination at the Airport (refer to Preventing Contamination in 4.3.1 above);
- More than fifteen environmental site investigations, involving both large tracts and small sites, were undertaken by BAL and tenants;
- Seventeen sites were added to the CSR as a consequence of investigations and audits, eleven sites were remediated and one was removed when investigation found no soil pollution. The remaining sites are low risk and being managed;
- underground storage tanks were decommissioned at Air BP's fuel storage facility; and
- an Asbestos Management Plan was prepared for the Airport.

4.3.3 OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 3 contains the objectives, targets and proposed measures that will be implemented to prevent, control or reduce the impacts of operations at the Airport on soil quality.

TABLE 3 SOIL QUALITY OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

<p>Objectives:</p> <ol style="list-style-type: none"> 1. To prevent, detect and where appropriate remediate soil contamination. 2. Minimise the potential health and ecological impacts associated with contaminated soil. 3. Prevent the spread of ground contamination to neighbouring lands.
<p>Targets:</p> <ol style="list-style-type: none"> 1. No occurrences of soil contamination from future activities on existing "clean" sites. 2. Register and manage as appropriate known contaminated sites. 3. Comply with the requirements of the <i>Airports Act 1996</i> and <i>Airports (Environment Protection) Regulations 1997</i>.
<p>Actions: BAL will continue to :</p> <ol style="list-style-type: none"> 1. Develop and improve the <i>Environmental Site Register</i> (Annually). 2. Update the <i>Site Contamination Register</i> (As required). 3. Require that all Development Applications include a statement as to how the tenants comply with the AES (For each development application). 4. Manage importation of fill material to ensure contaminated fill is not brought onto site (As required). 5. Require that new lessees undertake a base-line study of soil quality at the commencement and termination of the lease, if the AEO and EM suspect contamination may be an issue (As required). 6. Adhere to BAL, industry and regulatory standards and guidelines for new fuel storage facilities (As required). 7. Require environmental audits of tenant operations to assess compliance with the <i>Airports (Environment Protection) Regulations 1997</i> (Annually). 8. Conduct random inspections of tenant facilities to visually inspect facilities and activities that have potential to cause soil pollution (As required). 9. Implement an incident reporting and response program for all types of incidents with the potential to cause soil pollution (June 2011). 10. Consider the risk of soil pollution when assessing new DAs (For each development application). 11. Require that tenants and all airport users dispose of their liquid wastes, including fuel samples, in an appropriate manner that is in compliance with regulatory requirements (June 2010).

4.4 NOISE

4.4.1 BACKGROUND

GROUND-BASED NOISE

In accordance with the *Airports (Environment Protection) Regulations 1997* noise sources considered in the preparation of this AES address ground-based activities within the Airport boundaries, including noise generated from ground-based aircraft operations, except when taxiing, taking off and landing.

Noise generated by aircraft in flight is addressed below.

The following sources of ground-based noise have been addressed in this AES:

- ground running of aircraft;
- aircraft servicing;
- mechanical plant and servicing equipment;
- non-aviation industrial activities;
- road traffic;
- operation of fixed audible alarm or warning systems; and
- construction activities.

Ground-based noise criteria are provided under the *Airports (Environment Protection) Regulations 1997*, against which the AEO can enforce compliance. However, for ground-based aircraft operations, the Regulations do not define the limit of "excessive noise" at which regulatory action may be taken.

Bankstown Airport Engine Ground Running Rules have been developed that identify the times and the locations where aircraft ground running is permitted. A copy of these rules has been provided to tenants and is posted on the Airport's website. The *Engine Ground Running Rules* are reviewed by BAL biennially, or as required by the AEO, and approved by the AEO.

Tenants are reminded of their obligations with regards to noise management associated with all ground-based activities during the environmental audits and through monthly tenant newsletters.

A *Noise Complaints Register* is maintained by BAL to enable recording and investigation of noise complaints in relation to ground-based activities at the Airport. Follow-up action with tenants is undertaken when required.

AIRCRAFT NOISE MANAGEMENT

Bankstown Airport has some influence on aircraft noise and will continue to work with governments, local communities, aircraft operators, regulators and air navigation service providers to help develop practical solutions to minimise noise impacts on communities.

Aircraft noise modelling was conducted for the MP (Section 20). The modelling was undertaken to determine the Australian Noise Exposure Forecasts (ANEFs), a requirement of the Airport Master Plan, which are used to assist land-use planning. In addition to the ANEFs, BAL undertook N60 modelling for the MP to better assist the community to understand the noise impacts associated with the forecast aircraft movement traffic. The N60 noise modelling presented in the MP measures and presents the number of noise events greater than 60 decibels over a specified period of time over particular flight paths. Noise levels greater than 60 decibels are generally considered to be intrusive to persons conducting a conversation.

The noise modelling in the DMP takes into account a number of Airservices Australia's noise impact management measures that are in place at Bankstown Airport. BAL supports these mitigation strategies. These include:

- restriction of circuit training operations (touch and go movements) to between 6 am and 11 pm, Monday to Friday, and to between 6 am and 'last light' on weekends;
- where possible, direction of fixed wing flying training (circuits) to Runway 11R/29L to the maximise the extent of circuits done over open space and commercial/industrial areas to the south of the Airport;
- night circuits for aircraft operations are confined to the southern side of the Airport; and
- flight paths that direct helicopter training primarily over industrial areas to the south of the Airport.

4.4.2 ENVIRONMENTAL ACHIEVEMENTS

The following environmental achievements were undertaken at the Airport in relation to noise issues during the period of the 2005 AES:

- Work commenced on the construction of the local collector road network, with the south-eastern portion being developed to provide access to the southern and eastern sector of the Airport from Milperra Road. This road takes all the road traffic to the Toll and Ipec facilities at the Airport and has relieved pressure on roadways within residential areas to the north;
- A *Noise Management Plan* was prepared for Bankstown Airport. The Plan and its supporting information describes the noise management initiatives currently being undertaken by BAL identifies future initiatives and establishes a timeframe for the delivery of those initiatives to manage noise associated with operations at Bankstown Airport. The Plan is available on the Bankstown Airport website;
- A Fly Friendly procedure that identifies procedures that pilots can adopt to minimise noise associated with operations into and out of Bankstown Airport was developed. Pamphlets documenting the Fly Friendly procedure were printed and distributed to all flying schools and clubs on the Airport. The Fly Friendly procedures are documented on the Bankstown Airport website;
- The *Aircraft Engine Ground Running Guidelines* for Bankstown Airport were reviewed and amended as follows:
 - Engine Ground running for maintenance purposes may only be conducted between 7.00am and 8.00pm Monday to Friday and 8.00am and 6.00pm Saturday and Sunday, and should be conducted at designated engine running locations;
 - Pre-flight run ups and engine maintenance run ups outside aircraft hangars is permitted, at low engine power (idling) setting only and for periods of no longer than 10 minutes; and
 - Engine maintenance testing at higher power settings or for longer than 10 minutes duration must be undertaken in the designated engine maintenance test area.

The amendments were communicated to all tenants via mail out. The Guidelines may be updated from time to time and the document is available in its most up to date version on the Bankstown Airport website.

- All new developments at the Airport are required to consider noise and vibration impacts during construction and operation of the new facility and, where necessary, a *Noise and Vibration Control Plan* is required to manage impacts; and
- The *Noise Complaints Register* continues to be maintained. The following details are recorded; the nature of a noise complaint, BAL's investigation results, actions taken as a result of the investigation and the response to the complainant.

4.4.3 OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 4 contains the objectives, targets and proposed measures that will be implemented to prevent, control or reduce the ground-based noise impacts of operations at the Airport.

TABLE 4 GROUND-BASED NOISE MANAGEMENT OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Objectives:
1. To prevent or minimise ground based noise.
Targets:
1. Comply with the requirements of the <i>Airports Act 1996</i> and the <i>Airports (Environment Protection) Regulations 1997</i> .
Actions:
Ground-based Noise
BAL will:
1. Continue the development of a local collector road system that accommodates traffic volumes and reduces movements of heavy vehicles on residential streets, in accordance with the Master Plan (Ongoing).
2. Require all developments to address noise and vibration impacts during development planning having regard to the <i>Airports (Environment Protection) Regulations</i> and the <i>NSW Industrial Noise Policy</i> (June 2010).
3. Require annual audits of tenant operations to assess compliance with the <i>Airports (Environment Protection) Regulations 1997</i> (June 2010).
4. Require monitoring by a suitably qualified acoustic scientist where noise is considered excessive to assess compliance with <i>Airports (Environment Protection) Regulations 1997</i> and the <i>NSW Industrial Noise Policy</i> (June 2010).
5. Provide a noise attenuating facility for aircraft engine maintenance testing (Dec 2014)
6. Provide more information regarding noise management at the Airport on the Bankstown Airport website (Dec 2011);
7. Maintain the <i>Noise Complaint Register</i> (As required).
8. Undertake a review of <i>Engine Ground Running Rules</i> (Every 2 years).
Aircraft Noise
BAL will:
1. Update and report aircraft noise modelling through the Master Plan process (Every 5 years);
2. Support measures by Airservices Australia to manage aircraft noise impacts (As required)
3. Provide better information about the actions being taken to manage aircraft noise and provide links to Airservices Australia aircraft noise management information on the Bankstown Airport website (Dec 2011); and
4. Implement and review the aircraft noise management plan and facilitate discussions on aircraft traffic with the community through the BACCF (Every 5 years).
5. Provide information regarding progress with implementation of the <i>Noise Management Plan</i> on the Bankstown Airport website (June 2011).

4.5 FLORA AND FAUNA

4.5.1 BACKGROUND

The Airport is located within an urban setting and, except for the bushland adjacent to Deverall Park, vegetation is limited to open grasslands, isolated pockets of re-growth shrub and garden or park-like plantings within the Airport's developed areas. A range of common native and exotic birds, mammals, reptiles and amphibians are present on the Airport.

The bushland adjacent to Deverall Park is the only remaining area of bushland at the Airport. It has been zoned an "Environment Protection Zone" and is protected from clearing.

Since the preparation of the 2005 AES, BAL has identified two environmentally significant sites at the Airport as defined by the *Airports (Environment Protection) Regulations 1997*:

- *Hibbertia glabrescens* MS - A species of ground cover not previously recorded has been discovered beneath the glide path within the north western precinct of the Airport. The species which is known only to Bankstown Airport has been listed as 'Critically Endangered' under the *Commonwealth Environment Protection and Biological Diversity Act 1999*; and
- *Acacia pubescens* – A stand of *Acacia pubescens* which is listed as a 'Vulnerable' species under both the *Commonwealth Environment Protection and Biological Diversity Act 1999* and the *NSW Threatened Species Conservation Act 1985* was identified along a drain adjacent to the Airport boundary in the north east precinct of the Airport.



Specific locations of these sites will be provided to relevant government agencies.

BAL engaged appropriately qualified ecologists to map the location of these species and provide advice for their ongoing management and protection. *Vegetation Management Procedures* that take into account the advice received for the management and protection of the identified species were prepared and ground staff were instructed on their implementation. The AEO and the DEWHA were consulted in the course of preparing the procedures. At the request of DEWHA, BAL has sought expert advice from the Royal Botanic Gardens Sydney to confirm the management procedures are appropriate for the long term protection of the listed 'critically endangered' species.

A *Wildlife Management Plan* has been developed to manage the risk of bird strike in a holistic manner. Bird counts and species identification is undertaken on a regular basis to establish the type of birds that are attracted to the Airport. Vegetation on airport land is managed to reduce the attractiveness of the Airport environment to birds. Birds are discouraged from visiting the Airport via an escalating series of actions starting with disturbing birds that land near runways, firing loud but non-lethal blasts in the vicinity of birds and, where all else fails, using lethal shots to cull one of a flock as a warning to others. Culling birds is a last resort that is infrequently warranted.

Management of flora and fauna at the Airport is subject to the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* and to some extent, the *NSW Threatened Species Conservation Act 1995*.

4.5.2 ENVIRONMENTAL ACHIEVEMENTS

The following environmental achievements were undertaken at the Airport in relation to management of flora and fauna during the period of the 2005 AES:

- A *Bushland Management Plan* was prepared to guide the maintenance of the Environment Protection Zone adjacent to Deverall Park;
- Significant weed control works were carried out within the core of the Environment Protection Zone with the assistance of \$20,000 grant under the NSW DECC Conservation Incentives Scheme;

- Investigations of the *Hibbertia glabrescens* MS and the *Acacia pubescens* species were conducted by suitably qualified professionals and advice given in regard to their management and protection;
- *Vegetation Management Procedures* that, amongst other things, provides for the protection of the listed species was prepared in consultation with the AEO, DEWHA and implemented at the Airport;
- The *Urban Design Guidelines* prepared for the Airport includes guidance for landscaping that encourages the use of native species, particularly those endemic to the area;
- BAL participates on the Sydney wide White Ibis Task Force and continues to liaise with Bankstown City Council regarding bird control measures within the region;
- The Australian Museum was consulted and a frog survey was conducted of a drain prior to development to ensure no significant species would be impacted by the proposed development; and
- Annual clean-up days were held in conjunction with Bankstown City Council staff and tenants on the Airport to remove rubbish that is dumped within the Environment Protection Zone adjacent to Deverall Park.

Action in relation to the proposed development of an agreement with Bankstown City Council for the management of the bushland of Deverall Park as a native habitat conservation zone and nature walk has been deferred. The area is currently too severely infested with weeds and rubbish to consider development of a nature walk or to allow uncontrolled public access. BAL has instead undertaken bush regeneration work in consultation with Bankstown City Council officers and instituted regular rubbish removal from the area. When the area is in a better state BAL will liaise with Council with the view to reaching an agreement regarding the maintenance of the area, establishing a nature walk and allowing public access to the area.

4.5.3 OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 5 contains the objectives, targets and proposed measures that will be implemented to prevent, control or reduce the impacts of operations at the Airport on native flora and fauna.

TABLE 5 NATIVE FLORA AND FAUNA MANAGEMENT OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

<p>Objectives:</p> <ol style="list-style-type: none"> 1. Protect <i>environmentally significant</i> areas 2. Conserve bushland adjacent to Deverall Park as a habitat, protecting its flora and fauna values. 3. Contribute to the protection of native flora and fauna and their habitat on and around the Airport.
<p>Targets:</p> <ol style="list-style-type: none"> 1. Comply with the requirements of the <i>Airports Act 1996</i> and the <i>Airports (Environment Protection) Regulations 1997</i> the <i>Environment Protection and Biodiversity Conservation Act 1999</i> and the <i>Threatened Species Conservation Act 1995</i>. 2. No adverse impact on listed species within <i>environmentally significant</i> areas. 3. No net loss of vegetation at the bushland adjacent to Deverall Park. 4. No net increase in the number of bird strike incidents per year.
<p>Actions: BAL will:</p> <ol style="list-style-type: none"> 1. Develop and implement a Biodiversity Policy for the Airport (Dec 2011). 2. Engage with Bankstown City Council to rehabilitate and regenerate the Environment Protection Zone on the Airport with the view to making it suitable for general public access as a nature conservation zone and nature walk within 10 years (As required). 3. Undertake ongoing liaison with external stakeholders regarding management of native flora and fauna at the Airport (As required). 4. Monitor the frequency of bird strike incidents and implement measures to reduce such frequency (As required). 5. Work co-operatively with relevant government agencies, DEWHA and Royal Botanic Gardens Sydney to define, monitor, manage and protect the '<i>critically endangered</i> <i>Hibbertia glabrescens</i> and to support any research studies proposed (Jan 2010). 6. Seek external funding and assistance for bush regeneration works within the bushland adjacent to Deverall Park and to support research of listed species occurring on the Airport (Annually).

4.6 HERITAGE

4.6.1 BACKGROUND

Heritage issues are regulated through a variety of Acts – at Commonwealth, State and Local levels, with only the Commonwealth legislation being effective in relation to the Airport site. This AES recognises the on-airport heritage issues, which have been identified in the *Bankstown Airport Heritage Management Strategy*.

The *Heritage Management Strategy* of 2005 (*HMS*) will be a basis for heritage assessment and formulation of conservation policy, but will be further expanded in most areas under the *Heritage Management Plan (HMP)*. BAL with the assistance of Heritage Consultants will develop a *HMP* to guide future development. The objective of the *HMP* will be to provide a succinct document with developed policies and practical guidelines applicable to individual structures and other items of heritage significance at Bankstown Airport. The assessments process for development of the *HMP* will be in accordance with the current *Commonwealth Heritage List Criteria and National Heritage List Criteria*.

BAL aims to appropriately manage heritage, conservation and development issues utilising the *HMS* and the future *HMP*.

ITEMS OF INDIGENOUS CULTURAL HERITAGE

Although the setting in which the Airport lies would have been a favourable location for Aboriginal habitation prior to European arrival, the whole of the Airport has been extensively cleared and regraded over the majority of its area to make it suitable for its present purpose. Hence, the potential for the occurrence of Aboriginal sites and artefacts is considered to be low. Discussions with representatives of the Gandangarra LALC in 2000 also reportedly confirmed that Aboriginal sites were unlikely to be found at the Airport. There are no known Aboriginal Sites at the Airport, or adjacent to the Airport, listed on the:

- National Heritage List (NHL) which is administered by the Department of Environment, Water, Heritage and the Arts (DEWHA);
- Register of National Estate (RNE), which was frozen in February 2007 following amendments to the *Australian Heritage Council Act 2003* and the introduction of the National Heritage list;

- NSW Department of Environment, Climate Change and Water's Aboriginal Heritage Information Management System; or
- Bankstown City Council's *Bankstown Local Environment Plan 2001* in its Heritage Schedule.

Areas for proposed future development may be subjected to archaeological assessments as considered appropriate in consultation with the AEO. An Archaeological Assessment of Indigenous Heritage Values was conducted for the South East Development Precinct in January 2003. A representative of the Gandangarra LALC participated in the assessment and no indigenous relics, archaeological resources or places of archaeological significance were identified during the field survey.

However, BAL and its tenants will take care when disturbing land in areas that have not been totally altered by past land-filling. Should a relic be discovered, work will stop immediately and BAL's Environment Manager will arrange further investigation.

NON-INDIGENOUS CULTURAL HERITAGE

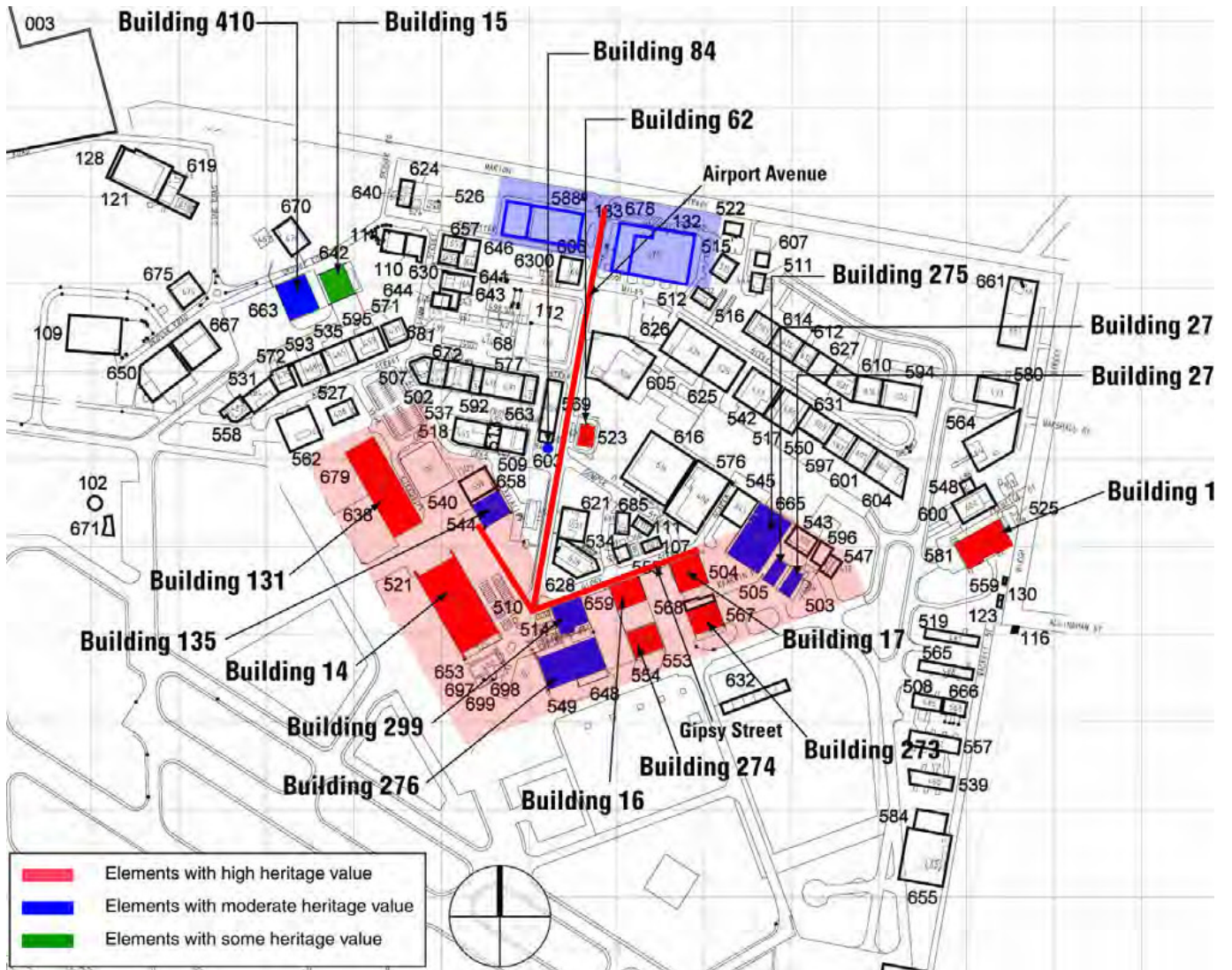
The Airport has historical significance as the location of an RAAF station from the 1940s to the 1960s. The *Bankstown Airport Heritage Management Strategy* 2005 identified elements having heritage significance relating to their use at this time and provided for the conservation of those buildings of particular heritage significance and the chevron ('V') shaped alignment of hangars at the southern end of Airport Avenue, on the northern part of the site.

In 2004, a new Commonwealth heritage management system was introduced through the *EPBC Act* which included the creation of the National Heritage List and the Commonwealth Heritage List. Bankstown Airport has not been included on either of these lists.

Bankstown Airport is listed for heritage purposes on the:

- Register of the National Estate (RNE) as an indicative place, as opposed to a formal entry. The RNE which was frozen in February 2007 will continue as a statutory register until February 2012. The transition period allows for the Commonwealth, State and Local Governments to transfer places to appropriate heritage registers where necessary, however, Bankstown Airport will not be listed on the new Commonwealth Heritage List. After February 2012

FIGURE 10: HERITAGE MANAGEMENT STRATEGY EXTRACT



Source: Figure 5.2 Heritage Values – Bankstown Airport Heritage Strategy 2005

the RNE will be maintained on a non-statutory basis as a publically available archive;

- NSW DECCW’s State Heritage Inventory (SHI) as an item of environmental heritage. It is not known whether the listing relates to the Airport as a whole and/or specific elements. It is not listed on the *NSW State Heritage Register* (SHR); and
- Bankstown City Council’s *Bankstown Local Environment Plan* (LEP) 2001.

4.6.2 ENVIRONMENTAL ACHIEVEMENTS

The following environmental achievements were undertaken at the Airport in relation to heritage issues during the period of the 2005 AES:

- The *Bankstown Airport Heritage Management Strategy 2005* was prepared by Godden MacKay Logan. In addition to identifying the elements of the Airport judged to have heritage value, the Strategy provides guidance for managing the heritage values that have been identified in the course of general airport operations, maintenance and building works and during the assessment of development proposals (refer to Figure 10);
- Heritage Impact Statements were prepared for proposed works to three buildings deemed to have ‘high’ and ‘some’ heritage value. All were assessed to have minimal impact on the heritage value of the buildings and the works were approved.
- Two hangars judged to have heritage values were fully refurbished and are now leased;
- Minor alterations to one hangar assessed to have heritage value were undertaken and the building is now leased; and
- One Heritage Impact Statement was prepared for construction of a new hangar in the vicinity of two buildings deemed to have heritage values. The proposed development was deemed to have little impact on the ‘heritage’ significance of the place and the new hangar was built.

4.6.3 OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 6 contains the objectives, targets and proposed measures that will be implemented to prevent, control or reduce the impacts of operations at the Airport on Aboriginal and non-indigenous heritage.

TABLE 6 ABORIGINAL AND NON-INDIGENOUS CULTURAL HERITAGE MANAGEMENT OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Objectives:
1. Identify, preserve and protect sites of indigenous and non-indigenous heritage significance located within the Airport.
Targets:
1. Compliance with the requirements of the <i>Airports Act 1996</i> and <i>Airports (Environment Protection Regulations) 1997</i> and the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
Actions: BAL will:
1. Use the <i>Bankstown Airport Heritage Management Strategy, 2005</i> , as the basis for heritage assessment and the formulation of conservation policy (As required).
2. Develop a <i>Heritage Management Plan</i> , that incorporates polices and practical guidelines applicable to individual structures and other items of heritage significance to guide future development. Develop <i>HMP</i> in accordance with the current <i>Commonwealth Heritage List Criteria</i> and <i>National Heritage List Criteria</i> (June 2011).
3. Undertake additional investigations, in consultation with relevant organisations, to identify indigenous and/or non-indigenous heritage sites during the planning stage for new developments (As required).
4. Consider indigenous heritage aspects in interpretative features of the bushland area adjacent to Deverall Park (when the area is deemed suitable for public access).
5. Monitor tenants management of Heritage properties during environmental audits (June 2010).
6. Assess new developments impacting elements having heritage values against the <i>Bankstown Airport Heritage Management Strategy</i> and the <i>EPBC Act</i> Policy Statement 1.2 Significant Impact Guidelines, Matters of National Environmental Significance, May 2006 (For each development application) .
7. Ensure those tenants leasing property having heritage value address the management of these values in their EMP (June 2010).

4.7 WASTE

4.7.1 BACKGROUND

Airport operations generate a range of wastes which require off-site disposal. Types of waste vary from office waste such as paper, through to aircraft maintenance wastes such as oil, metal and plastic.

No operational waste is disposed of on land within the Airport site.

BAL and each separate tenant are responsible for the disposal of their waste. This is achieved through services offered by private waste disposal companies who supply small, transportable skip bins or by Bankstown City Council via their regular garbage service. Wastes collected from public areas including the litter bins are disposed by BAL.

BAL disposes between fifteen and thirty cubic metres of mixed waste each month which equates to in the order of eighty to hundred tonnes mixed waste per annum. Mixed waste includes office waste, green waste and industrial waste such as asphalt, soil and building materials but does not include liquid wastes such as oil and solvents.

Environmental audits of tenant operations and facilities indicate a high degree of recycling of certain waste types including oils, solvents and metals, particularly aluminium. Many of the commercial offices recycle office wastes including paper, glass bottles and aluminium cans. There is no centralised recycling system and recycling initiatives are left to individual tenants.

4.7.2 ENVIRONMENTAL ACHIEVEMENTS

The following environmental achievements were undertaken at the Airport in relation to waste management during the period of the 2005 AES:

- BAL continued to work closely with the Regional Illegal Dumping (RID) Squad to address illegal waste disposal at Bankstown Airport. BAL reports all illegal dumping or witnessed littering incidents on or adjacent to Airport land to the Squad;
- BAL undertook a review of tenants' waste generation and concluded that the volume of most waste streams generated by the Airport companies was insufficient to warrant in-house recycling programs;

- BAL investigated the potential to establish an on-airport recycling station for paper and cardboard but concluded it was not a service that it could afford to offer or operate at this time;
- articles regarding waste management and low or no-cost waste recycling services and opportunities have been included in the monthly newsletters distributed to tenants and operators at the Airport; and
- waste management plans were required for all construction works of a nature or size to generate significant wastes.

4.7.3 OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 7 contains the objectives, targets and proposed measures that will be implemented to prevent, control or reduce the impacts of waste generated from operations at the Airport and/or stored at the Airport.

TABLE 7 WASTE MANAGEMENT OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

<p>Objectives:</p> <ol style="list-style-type: none"> 1. Comply with the principles of the waste management hierarchy of avoid, reuse, recycle and disposal, where practicable. 2. Have regard to State and Commonwealth regulatory guidelines in relation to waste management.
<p>Targets:</p> <ol style="list-style-type: none"> 1. Review options for waste reduction, reuse and recycling and set targets where practicable. 2. Comply with the <i>Protection of the Environment Operations Act 1997</i> (NSW) and the <i>Protection of the Environment Operations (Waste) Regulation 2005</i> (NSW) with respect to waste management, particularly hazardous, industrial and liquid wastes.
<p>Actions: BAL will:</p> <ol style="list-style-type: none"> 1. Require audits of tenant operations to assess compliance with NSW waste legislation and the principles of the waste hierarchy (Annually). 2. Consider waste management options in the design and construction of new developments at the Airport (For each development application). 3. Monitor its waste and look for opportunities to further reduce, reuse and recycle (Every 2 years). 4. Continue to encourage tenants, through correspondence, environmental audits and awareness programs to reduce, reuse and recycle their waste (Annually). 5. Continue litter inspections through Airport grounds (Weekly). 6. Continue working with the RID Squad to minimise the frequency of illegal dumping at the Airport (As required).

4.8 CLIMATE CHANGE AND RESOURCE USE

4.8.1 BACKGROUND

Since the 2005 AES was approved in February 2005, global climate change has become an environmental issue of importance locally, nationally and internationally.

At this time, the Commonwealth Government has committed to reduce Australia's carbon pollution to 25 per cent below 2000 levels by 2020, subject to international consensus to stabilise greenhouse gas levels by mid century.

It has enacted the *National Greenhouse and Energy Reporting Act 2007* which establishes a mandatory corporate reporting scheme for greenhouse gas emissions, energy consumption and production. Under the scheme corporations are required to register and report if they emit greenhouse gas emissions or produce or consume energy, over a specified threshold, commencing July 2008. The reporting threshold will be lowered in subsequent years to cover medium and large corporations.

In addition the government stands ready to introduce a Carbon Emissions Trading Scheme that will assist industry and business to move to a low pollution economy.

According to a report commissioned by the NSW Government the future climate of the Sydney Metropolitan region is predicted to be warmer and drier (*CSIRO, 2007, Climate Change in Sydney Metropolitan Catchments*). Despite this trend the report finds the possibility of increases in extreme rainfall events remains.

The key effects that climate change is anticipated to have on Bankstown Airport include:

- more frequent flooding affecting larger areas of the Airport, due to potential increases in extreme rainfall events;
- higher water charges, due to a increasing demand for a reducing resource;
- higher energy charges, as a consequence of pressure to reduce greenhouse gas emissions from carbon polluting sources (the major source of energy in NSW today); and

- opportunities to participate in the Carbon Emission Trading Scheme through improvements in energy efficiency and introduction of new renewable sources of energy.

Energy, in the form of electricity and fuel, and water are the main resources used at the Airport. The main use of these resources include:

- lighting;
- heating and cooling (air conditioning);
- industrial processes;
- road transport (public and private); and
- aircraft activity.

Emissions from aircraft are made by a "third" party that Bankstown Airport has no direct control over, therefore they are not considered in this AES.

This AES therefore focuses on addressing greenhouse gases from the first four sources identified above - all of which generate greenhouse gases due to energy and fuel consumption.

The use of electrical energy has an impact on the generation of greenhouse gases (carbon dioxide in particular) through the burning of fossil fuels in the power generation process. Reductions in the power needs of the Airport or in inefficient or excessive energy use will, in a small way, help in reduce the greenhouse gas effect.

Proponents of new developments will be encouraged to consider energy efficiency and water efficiency re-use options in future development proposals, which will be considered by BAL when reviewing DAs.

4.8.2 ENVIRONMENTAL ACHIEVEMENTS

Environmental achievements were undertaken at the Airport in relation to resource use issues during the period of the 2005 AES. These included:

- *Urban Design Guidelines* that encourage the incorporation of energy and water efficient design features were developed and issued;

- New developments incorporated energy and water efficient features including; installing energy and water efficient fixtures; improving day lighting in building and hangars, installing rainwater tanks which collect water for toilet-flushing and landscaping and using endemic native species tolerant to dry conditions in landscaping;
- Completing the first greenhouse gas emission audit for the Airport, which established;
 - Bankstown Airport produced an overall roughly 650 tonnes of greenhouse gas emissions of which 440 tonnes, roughly two thirds, are Stage 1 and 2 emissions (controlled by BAL) under the *National Greenhouse and Energy Reporting Act 2007* and are therefore reportable by BAL. The remaining one third are Stage 3 emissions (“third party” controlled) and non-reportable by BAL. The level of reportable emissions falls well below the mandatory reporting threshold;
 - Provision of utilities (electricity, telecommunications, water and waste) and transport fuels accounted for roughly three quarters of the BAL controlled emissions;
 - Roughly three quarters of these emissions were produced from electricity generation;
- Opportunities for cogeneration did not arise during the 2005 AES. This action will remain unchanged for future development at the Airport;
- Renewable energy options for power generation on new projects were encouraged however where considered, the option was not cost effective at this time. The NSW Government is currently considering a solar feed-in tariff which may improve the cost effectiveness of this option for small businesses at the Airport; and
- All building development and refurbishment proposals were required to prepare Waste Management Plans showing how the proponent proposed to reduce waste generated during construction.

The use of alternate fuels in the Airport’s vehicle fleet was investigated, however alternate fuels are not able to be sourced locally at the present time making the option of running a small vehicle fleet on an alternate fuel impractical.

4.8.3 CLIMATE CHANGE AND RESOURCE USE OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 8 contains the objectives, targets and proposed measures that will be implemented to prevent, control or reduce the impacts of resource use associated with operations at the Airport.

TABLE 8 RESOURCE USE MANAGEMENT OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

<p>Objectives:</p> <ol style="list-style-type: none"> 1. Conserve natural resources through efficient use of energy, water and other materials. 2. Incorporate where practicable the principals of ecologically sustainable development in future development of the Airport. 3. Convert waste to a resource where practicable.
<p>Targets:</p> <ol style="list-style-type: none"> 1. Identify opportunities to reduce consumption of water and energy at the Airport and set targets for reduction. 2. Identify options for re-use of water and waste as a substitute for new resources where practicable.
<p>Actions: BAL will:</p> <ol style="list-style-type: none"> 1. Develop sustainability guidelines for development at the Airport (June 2012). 2. Monitor resource use (energy, water and fuel) and look for opportunities to improve efficiency (Jun 2011). 3. Undertake an energy audit of BAL facilities and operations with the view to identifying opportunities to improve energy efficiency (June 2011) 4. Consider water harvesting on new developments (For every development application). 5. Consider water re-use options for grey water in new developments (For every development application). 6. Consider energy conservation in design of future developments (For every development application). 7. Review co-generation opportunities (Every 2 years). 8. Consider renewable energy options for power generation on new projects where practicable ((For every relevant development application). 9. Undertake a carbon audit of BAL operations and facilities with the view to identifying opportunities to reduce greenhouse gas emissions (Dec 2011)

4.9 SOCIAL AND COMMUNITY

4.9.1 BACKGROUND

BAL is committed to good Airport neighbour relationships and engagement with the local community on a number of issues, including the environment. BAL has established the Bankstown Airport Community Consultative Forum (BACCF) as means of facilitating communication between the Airport and the community. BAL also issues monthly tenant newsletters and quarterly community newsletters to inform the community of airport operations including environmental management issues.

The *Annual Public Environment Report*, previously issued in hard copy, has not been prepared in recent years as more environmental information relevant to the Airport's operation has been posted on its website.

The environmental excellence award for local schools was discontinued in recent years and an environmental excellence award for tenants was not commenced due to practical difficulties.

Action in relation to the proposed development of an agreement with Bankstown City Council for the management of the bushland of Deverall Park as a native habitat conservation zone and nature walk has been deferred (refer to Section 4.5 for further details). BAL's long term objective is that this area should be available for controlled public access and will retain this long term target in the AES.

BAL engaged in a number of consultations with Bankstown City Council regarding the development of open space at the Airport for public recreation use. One of the areas targeted for this purpose in the Master Plan is the area where the *Hibbertia glabrescens* MS, the plant species now listed as 'critically endangered' under the *Environment Protection and Biodiversity Conservation Act 1999*, occurs. This means the area is unsuitable for development as an uncontrolled public recreation area.

BAL continues to liaise with Bankstown City Council on environmental matters relevant to Council through the Memorandum of Understanding (MOU) with Council. BAL has established a Planning Coordination Forum with Bankstown City Council which will be broadened

to include Liverpool and Fairfield Councils and the NSW Government – to meet quarterly on Airport development activities. In addition BAL will continue to consult widely on development through the BACCF and the extensive communication network already established. BAL will display development applications on its website.

BAL will also identify other stakeholders who may be impacted by environmental matters associated with proposed development and consult with these stakeholders/notify these stakeholders prior to deciding whether to grant development approval, in accordance with *BAL's Development Application Consultation Policy 2010*.

4.9.2 ENVIRONMENTAL ACHIEVEMENTS

The following environmental achievements were undertaken at the Airport in relation to social and community issues during the period of the 2005 AES:

- continued meetings and involvement of the BACCF;
- preparation and distribution of quarterly community newsletters, and monthly tenant newsletters which include environmental issues; and
- posting of environmental information in relation to airport operations on the Airport's website.

4.9.3 OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

Table 9 contains the objectives, targets and proposed measures that will be implemented to prevent, control or reduce the impacts of operations at the Airport on the community.

TABLE 9 COMMUNITY IMPACT MANAGEMENT OBJECTIVES, TARGETS AND MANAGEMENT MEASURES

<p>Objectives:</p> <ol style="list-style-type: none"> 1. Act as a good neighbour and to undertake reasonable and practicable actions to prevent or minimise impacts from the Airport. 2. Be open and frank with stakeholders and the community regarding Airport operations. 3. Maintain a consultative network that conveys Airport information to BAL's stakeholders and the community. 4. To be, and be perceived as, responsible managers of environmental issues.
<p>Targets:</p> <ol style="list-style-type: none"> 1. Production of environmental information on the Bankstown Airport website for the community. 2. Production of quarterly community newsletters. 3. Biannual meetings of the BACCF.
<p>Actions: BAL will:</p> <ol style="list-style-type: none"> 1. Produce and maintain environmental information on the Bankstown Airport website for the community (Annually). 2. Produce and distribute community newsletters to a minimum 15000 households (Quarterly). 3. Organise meetings of the BACCF (Quarterly). 4. Continue the tenant Newsletter (Monthly). 5. Engage with Bankstown City council to rehabilitate and regenerate the Environment Protection Zone on the Airport with the view to making it suitable for general public access as a nature conservation zone and nature walk within 10 years.

4.10 ENVIRONMENTAL MANAGEMENT ISSUES ACHIEVEMENTS

The objectives and targets in the 2005 AES have been revised in this AES to incorporate progress since the approval of the 2005 AES.

Environmental achievements against the 2005 AES have been described in each sub-section above. In addition a summary table is included in Appendix D. This table details the 2005 commitments and whether these have been achieved. The table also provides commitments and comments for this 2010 Strategy, as well as identifying new commitments.

