

Section Four Airport Environment Strategy

Section Four

Airport Environment Strategy 2025–2030



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16 Introduction to the AES

This Airport Environment Strategy 2025–2030 (the AES) details our commitment to continual improvement of environmental performance.

The 2025–2030 AES has been prepared to meet the requirements of Section 71(2)(h) of the Airports Act and Sections 16 and 17 of the *Airports Regulations 2024*. The purpose of the strategy is to provide an overview of:

- Our objectives for the environmental management of Sydney Airport.
- The areas to be considered environmentally significant.
- Identification of the sources of environmental impact.
- Our framework for effective environmental management at the airport.

The AES covers all operations at Sydney Airport that are conducted on land held under the airport head lease with the Australian Government. It does not include freehold land that we own or occupy outside the airport head lease, which is governed by NSW law.

Strategy requirements and context

This AES is a core component of our planning regime and sits within the Sydney Airport Master Plan 2045. Various contextual information can be found throughout the Master Plan:

- Legislative framework and implementation by the Airport Environment Officer (AEO) appointed by DITRDCA (See Chapter 1 Introduction).
- Compliance with statutory requirements (See Appendix D).
- Sydney Airport’s location and map (See Chapter 3 Strategic Context and Economic Significance).
- History of Sydney Airport and detailed description of facilities (See Appendix C).
- Consultation process for the development of this AES (See Chapter 5 Stakeholder and Community Engagement).

Environmental significance

Local waterways surrounding Sydney Airport include Alexandra Canal, Cooks River and Botany Bay. These are largely tidal waterways which service large upstream urban catchments. Numerous nearby parks also create areas of open space with native vegetation. Remnant wetlands located within the airport precinct include Engine Pond West, Engine Pond East and the Mill Pond – these form part of the larger Botany Wetlands.

As the third water supply for Sydney, wetlands upstream of the airport have historical significance and are listed on the NSW State Heritage Register and on the Sydney Water Heritage and Conservation Register.

The Sydney Airport ATC Tower on General Holmes Drive is a Listed Place on the Commonwealth Heritage List. There are no listed sites of First Nations significance within the airport, however we recognise that Botany Bay and surrounding areas have importance to the local First Nations community.

We have not identified any areas of the airport that are environmentally significant for this AES period. The one item of exceptional heritage value (the ATC Tower) is not owned or occupied by Sydney Airport and is protected under the EPBC Act. See Chapter 18 Flora, fauna and heritage.

The heritage categorisation of three areas has changed, following updates to the Heritage Management Plan (i.e. the runways, Keith Smith Avenue and Sydney Airport Wetlands; see Chapter 18 Flora, fauna and heritage). There is also a change in the characterisation of the Sydney Airport Wetlands, which were noted in the previous AES for ‘biodiversity value’ by virtue of being on the Directory of Important Wetlands Australia. The Wetlands are now recognised as being protected under the EPBC Act as Commonwealth land.



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Environmental management at Sydney Airport

Environmental Management System (EMS)

Sydney Airport’s EMS provides a robust and systematic approach to environmental management that focuses on:

- Understanding and controlling environmental risk and opportunities.
- Assessing performance and incorporating continual improvement.
- Understanding and operationalising compliance requirements.

The EMS (Figure 16-1) has been prepared taking into account legal and other requirements (including the Sydney Airport Environment Policy, this AES, and our legislative obligations) and is compliant with the relevant international standard, *AS/NZS ISO 14001:2015 Environmental management systems – Requirements with guidance for use*.

Figure 16-1 Sydney Airport EMS overview



The EMS is reviewed every two years and updated as required. This allows us to respond to changes to our overall strategy, relevant legislation and stakeholder expectations, as well as implement technological advancements and lessons learned from audits and incidents. As part of a continual improvement process, the EMS will evolve over the AES period to meet the needs of managing the airport. Amendment of the EMS is undertaken in consultation with the AEO and finalised procedures are provided to the AEO.



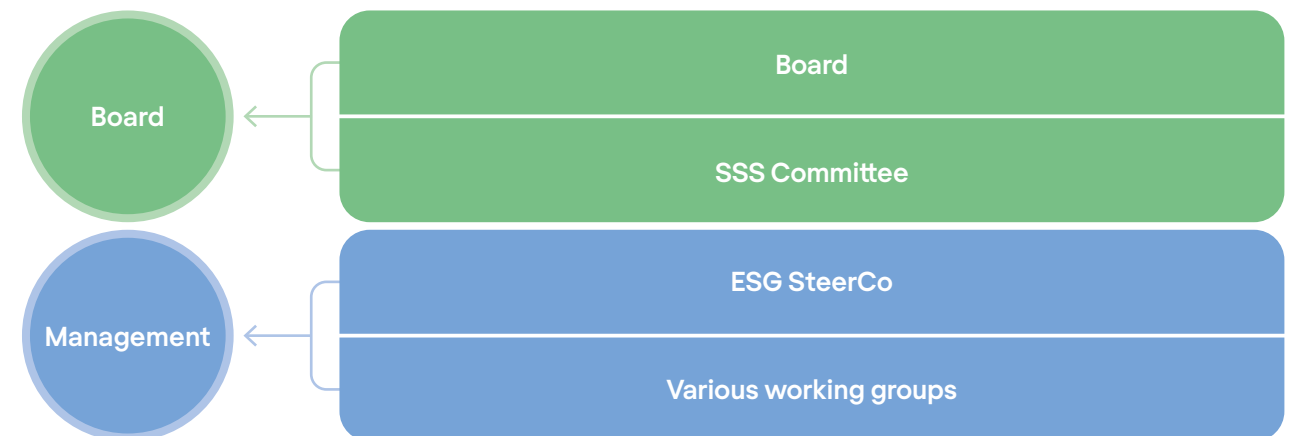
Governance framework

Our ESG governance framework (Figure 16-2) provides confidence that environmental management is appropriate, proportional to the risk, and transparent, to allow us to make informed and appropriate decisions.

The Board’s Safety, Security and Sustainability (SSS) Committee oversees and reviews the effectiveness of Sydney Airport’s sustainability and environmental policies, strategies, initiatives and systems as well as our performance and reporting.

The ESG Steering Committee (SteerCo) provides direction on our sustainability and environment strategies and objectives. The SteerCo is supported by various cross-functional working groups across the business, which guide and deliver our strategic initiatives.

Figure 16-2 ESG governance framework



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Training

It is vital that those working at the airport understand their impact on the environment and their responsibilities under the AES and relevant regulations.

Sydney Airport staff complete a corporate induction program covering all aspects of airport operations, including environmental management with a specific training package provided for roles that interact with the EMS and the environment. Information regarding environmental management and relevant contact people is located on the Sydney Airport intranet for all staff to access.

Sydney Airport staff that have specific environmental obligations, including Environment Team members, receive targeted training to ensure they are aware of the requirements of their role and are up to date with new technologies and changing management techniques.

Our contractors also complete an induction program that includes environmental management, so they understand environmental requirements at the airport, and how to report incidents.

Our tenants receive information through the SYD Terminal Operations Manual, which includes information on the Sydney Airport Environment Policy, EMS, AES and construction processes. Leases, agreements, and contracts contain environmental obligations.

Contractors that may have specific environmental requirements in their scope of work will be provided with task-specific information, which may include information regarding contamination management plans. This may be presented as a site induction session or provided as information in tenders.

Information regarding environmental management, which includes requirements to meet regulatory and AES compliance and, where appropriate, have management plans or systems that include training requirements, is readily available for our operators and contractors on the InfoSYD portal.

All training and information associated with environmental management is reviewed on a regular basis and updated as required, to ensure current requirements and management techniques are understood.

Stakeholder management

Sydney Airport works with many stakeholders to develop processes for environmental management that protect the environment and are able to be practically implemented. We work with our tenants, operators, licence holders, Authorisation holders and contractors to manage day to day operations of the airport, including management of change.

We work with Authorities, including Commonwealth and State governments, local governments and regional associations and alliances, to progress environmental management around the airport. In addition to our general communications with the community, we respond to all community concerns or complaints, via our Incident Management Procedure, which includes a process for community complaints.

Annual reporting

As outlined in the *Airports (Environment Protection) Regulations*, Sydney Airport is required to provide an annual environment report to the Secretary of the DITRDCSA, including progress in “achieving the policies and targets in the environment strategy”. This includes reporting on monitoring requirements identified throughout this AES. Annual reports will include the results of the monitoring outlined in this AES.

The Corporations Act 2001 (Cth) also requires in-scope entities to prepare an annual sustainability report containing climate-related financial information, including Scope 1, 2 and 3 data, in accordance with the requirements in Australian Sustainability Reporting Standards (ASRS), including *AASB S2 Climate-related Disclosures* (Climate Disclosures). The sustainability report and the auditor's report must be lodged with Australian Securities and Investments Commission (ASIC).

Environmental risk management

Sydney Airport's risk management process (Figure 16-3) has been followed to evaluate all airport activities for their environmental risk and opportunities.

As required under the *Airports (Environment Protection) Regulations*, we maintain an Environmental Site Register that outlines the results of monitoring, remedial plans and areas of environmental significance.

Figure 16-3 Risk management process



There are parties other than Sydney Airport that conduct activities that may have an environment impact. In order to manage environment risk associated with these activities, Sydney Airport conducts the following:

Tenants – Tenants are assessed on the risk of their activities. We have differing levels of controls that are incorporated into sub-leases that can include developing and implementing an EMS compliant with ISO 14001 or developing and implementing an environmental management plan (EMP) compliant with ISO 14001. Documented audit activities are undertaken for tenants that have an EMS or EMP and inspections are undertaken that include all tenants including low risk tenant activities.

Contractors – Environmental requirements are included in contracts, including construction projects, as applicable and dependent on the risk associated with the works. This may include preparation of Construction Environmental Management Plans.

Operators – Operator agreements contain environmental requirements, as applicable to the activities undertaken. This may include the need to have environmental management plans that comply with ISO 14001.

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Environmental management areas

Following an environmental risk assessment of airport activities – and taking into account regulatory requirements and stakeholder views – we have identified 10 key focus areas for environmental management to prevent or minimise damage to the environment or our community. Sydney Airport aims to continually improve the environment at and around the airport. The below figure shows our focus areas and our specific ambitions to address the requirements of section 17 of the *Airports Regulations 2024*.

Pollution management



Air quality

Increase usage of Ground Power Units (GPU) and Pre-conditioned Air (PCA) to reduce emission from Auxiliary Power Units



Surface water quality

Minimal impact to surrounding waterways from Sydney Airport activities



Ground-based noise

No breach of the Engine Operating Procedure



Contamination management

Reduce contamination at the airport through management and remediation

Flora, fauna and heritage



Flora and fauna

Maintain and progressively improve native vegetation at the Sydney Airport Wetlands



Heritage

Maintain the condition of the Botany Pumping Station in accordance with the Heritage Management Plan



First Nations heritage

Establish processes to consider First Nations in development

Sustainability



Greenhouse gas emissions

Take steps to decarbonise the direct emissions of our operations and help to reduce the climate impacts of aviation across our value chain



Natural resource use

Demonstrate responsible natural resource use in projects



Waste

Improve diversion of waste from landfills in development and terminal waste

Falling into three natural categories, these environmental management areas are explored in detail in chapters 17–19.

Each section includes objectives, context, a risk assessment of impacts and mitigation controls, monitoring measures, and additional actions planned for the duration of this AES.

As airport activities are undertaken by multiple parties, each section also identifies those responsible for the various activities and associated controls that are implemented to manage impacts.

The parties identified include:

- **SYD**
Operations undertaken directly by Sydney Airport.
- **Tenants/operators**
Tenants are organisations that hold a sub-lease from us to occupy airport space for their operation, while operators hold an agreement with us to conduct operations that allow the movement of aircraft through our facilities.
- **Contractors**
Contractors engaged by us or by our tenants/operators.
- **Other parties**
Entities or persons that use or manage land within the airport without a lease or operating agreement with us (e.g. the general public; utility providers).

Timeframes associated with action plans are broken down into the following categories:

- **Short term** – to be conducted in years one to three of the AES.
- **Long term** – to be conducted in years four to five of the AES.
- **AES period** – actions will occur across the entire AES period and will continue past this, as appropriate.

All actions associated with prevention or mitigation measures will be undertaken across the entire AES period and will likely continue into the future where the risk remains.



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Air quality

Overview

Sydney Airport has conducted air quality monitoring for many years. We have our own air quality monitoring station on the airfield which was installed in 2017 and we use portable low-cost sensors to provide additional local data.

We currently monitor for:

- Carbon monoxide
- Nitrogen oxide
- Nitrogen dioxide
- Nitrogen oxides
- Ozone
- Particulate matter (PM₁₀ and PM_{2.5})
- Volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, xylene and acrolein.

We also measure temperature, relative humidity, wind speed, wind direction, rainfall and solar radiation. By comparing Sydney Airport results to data from the NSW Office of Environment and Heritage air quality monitoring stations in Earlwood and Randwick, we have a good baseline to understand the air quality at the airport. Exceedances of air monitoring criteria are investigated to determine if the effect is regional, by comparison to other local data, or a local effect that may require management.

Air monitoring results to date show that specific pollutants measured at the airport are generally consistent with those pollutant levels in the local area.

An air emissions inventory was prepared in 2025 by Zephyr Environmental, specialist air quality consultants, for Master Plan 2045 to understand how emissions will change in the future. Using 2023 as a baseline year, the inventory projects emissions for 2030 and 2050 using available data on projected aircraft movements, types of aircraft, ground-based sources, and plans for electrification, as described in Master Plan 2045. Table 17-1 below presents the emissions from the airport in 2023, compared with the National Pollutant Inventory data for the Sydney Greater Metropolitan Area for the financial year 2022/2023. For all pollutants, Sydney Airport represents less than 1% of the total emissions in the air shed.

Air modelling to assess air emissions for Master Plan 2045, conducted based on the baseline year of 2023 by Zephyr Environmental, shows that Sydney Airport contributes less than 2% of air emissions in the local area. Other significant local sources of air emissions include major roads and tunnels, the port facility and heavy industry.

The inventory found that aircraft movements were the major source of air pollutants in 2023, contributing the most nitrogen oxides and VOC. PM₁₀ and PM_{2.5} emissions were fairly equally attributed to aircraft movements and APUs. The emissions inventory projects that pollutants will increase in proportion to growth in aircraft movements, which will remain the largest source of air pollutants in 2030 and 2050.

Projections for air quality include the following:

- Nitrogen oxides will increase around 12% in 2030 and 27% in 2050, compared with 2023 levels.
- PM₁₀ and PM_{2.5} will decrease in 2030 due to higher uptake in GPUs and APUs and less reliance on aircrafts using fuel. While they will increase slightly in 2050 due to higher aircraft movements and our requirement to increase the uptake, emissions in 2050 should still be below 2023 levels.
- VOCs will increase by around 11% in 2030 and 15% in 2050 compared to 2023 emissions. This projected slowdown in increases is due to expected changes in fuel mixes, with more sustainable aviation fuels being used in the future.

The *Airports (Environment Protection) Regulations* do not apply to pollution generated by an aircraft. As such, our air quality monitoring is primarily focused on activities undertaken by the airport and support operations.

Monitoring focuses on the quality of ambient air in relation to national health standards and applies to workers and the general public using the airport, as well as the surrounding communities. Workplace exposure (relating to specific activities that have a higher risk of chemicals and other materials in the area surrounding a worker) is covered in our safety requirements under WHS laws.

Objectives

Minimise the impact of airport operations and construction on air quality surrounding the airport.

Table 17-1 Sydney Airport emissions compared with emissions for Greater Sydney

Pollutant	NPI data for 2022 / 2023 tonnes per year	Emissions from Sydney Airport /tonnes per year	% of NPI emissions associated with Sydney Airport
NO _x	710,000	3,597	0.5%
PM ₁₀	1,100,000	51	<0.1%
PM _{2.5}	28,000	50	0.2%
VOCs	98,000	650	0.7%
SO ₂	870,000	425	<0.1%

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Air quality



Table 17-2 Air quality risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Maintenance and construction in operational and non-operational areas using plant, equipment and vehicles powered by fossil fuels	✓	✓	✓		Reduced air quality	SYD - EMS Air Quality Management Procedure - EMS Tenant Management Procedure - EMS Contractor Management Procedure - SYD BES Standards - SYD Net Zero Roadmap Tenants/operators - Environmental requirements in leases, licences and agreements Contractors - Planning approval process - Environmental requirements in contracts
Maintenance and operation of assets that include air conditioning or refrigeration equipment	✓	✓	✓		Reduced air quality Emission of ozone depleting substances from air conditioning and/or refrigeration systems	SYD - EMS Air Quality Management Procedure - EMS Contractor Management Procedure Tenants/operators - Environmental requirements in leases, licences and agreements Contractors - Environmental requirements in contracts
Operation and maintenance of tenancies and assets, including use of fixed and mobile plant and equipment		✓	✓	✓	Reduced air quality Emission of ozone depleting substances from air conditioning and/or refrigeration systems	SYD - EMS Air Quality Management Procedure - EMS Tenant Management Procedure Tenants/operators and other parties - Environmental requirements in leases and licences
Airfield operations, including use of fixed and mobile plant, equipment and aircraft, that use fossil fuels		✓	✓	✓	Reduced air quality	SYD - EMS Air Quality Management Procedure - EMS Tenant Management Procedure - EMS Contractor Management Procedure - Provision of GPUs and PCA Tenants/operators and other parties - Environmental requirements in leases and licences - Environmental clauses in airport operation and airline agreements Contractors - Environmental requirements in contracts



Table 17-2 Air quality risk processes continued

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Operations on land contaminated due to historic land use	✓	✓	✓	✓	Reduced local air quality due to soil vapour emissions Asbestos or contaminated dust emissions	SYD - EMS Contamination Management Procedure - EMS Contaminated Sites Register - EMS Tenant Management Procedure - EMS Contractor Management Procedure Tenants/operators and other parties - Environmental requirements in leases and licences Contractors - Planning approval process - Environmental requirements in contracts

Table 17-3 Air quality monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program
Tenant Audit Program	Environment Team	Annual
Air quality monitoring program – general airport	Appropriately qualified and experienced environmental professional	Annual reporting of continuous data
Air quality monitoring program – VOC	Appropriately qualified and experienced environmental professional	Quarterly
Implementation of the BES Standards via internal project approval stages	Sustainability Team	Annual
Tracking against Net Zero Roadmap implementation	Sustainability Team	Quarterly
Surface gas monitoring related to Gateway development footprint	Appropriately qualified and experienced environmental professional	Six monthly
Monitoring of GPU/PCA use, with information provided to airlines and ground handlers	Sustainability Team	Six monthly

Table 17-4 Air quality action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Working closely with airlines to increase usage of GPUs and PCA	AES period
Review the VOC monitoring program to determine if it is required on an ongoing basis and update frequency as required	Short term

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Surface water quality



Overview

Sydney Airport is surrounded by several waterways including Botany Bay to the south, Sydney Airport Wetlands to the east, Alexandra Canal to the north and Cooks River to the west. These waterways convey surface water to Botany Bay and eventually to the ocean, except for Engine Pond West which collects stormwater locally but is not connected on the surface to larger flowing waterways. The upper reaches of the Sydney Airport Wetlands are freshwater, due to the historic installation of weirs. All other waterways are influenced by local tides. Sydney Airport acknowledges that the waterways around the airport have been significantly modified, including modification of the Sydney Airport Wetlands from early industry and road construction, diversion of the Cooks River, and construction of Mill Stream.

Sydney Airport is located in a highly disturbed environment, with waterways seeing significant urban stormwater inflows from industrial, commercial and residential areas. Urban stormwater run off includes pollutants from sediment, litter, oil, nutrients and sewer overflows. We have undertaken studies of the surrounding aquatic environment. Under the Australian and New Zealand water quality guidelines¹, the ecosystem health around the airport has been described as a highly disturbed system, which is equivalent to the default guideline values for 80% to 90% species protection levels accounting for an estuarine environment. We work with local Councils, NSW Government agencies and local associations and alliances on the health of the waterways around the airport.

The largest impacts to surface water quality on the airport are sewer overflows from the SWSOOS and PFAS from former firefighting training activities.

Sydney Airport owns and operates extensive stormwater systems across the airport. Controls in place to manage water quality include flame traps in aprons, settling/holding ponds, gross pollutant traps and shut-off valves for spill containment. Spill management equipment is located across the airport to prevent unplanned releases reaching drains or waterways. Sydney Airport also engages a contractor to provide spill response services, including vacuum trucks to clean unplanned spills.

Sydney Airport has conducted surface water sampling for over 20 years and has a detailed understanding of the quality of runoff across the airport. This allows us to analyse trends and identify any upcoming areas of concern. Our compliance monitoring program provides a benchmark of the local environment and includes the surrounding waterways so we can assess the airport’s impact upon them. We also conduct management monitoring to allow us to manage activities on airport. Our Water Quality and Management Procedure includes our Surface Water Quality Monitoring Plans.

Objectives

Minimise the impact of airport operations and construction on water quality in water bodies on or adjacent to the airport.

Table 17-5 Surface water quality risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Management of airport land and assets, including maintenance and development activities	✓	✓	✓	✓	Erosion of land and sedimentation of drains and waterways Discharge of groundwater leading to surface water contamination Disturbance of contaminated soil leading to contaminated runoff Use of chemicals, such as de-rubberisation chemicals, causing contaminated runoff Runoff from activities, including chemical storage, causing water contamination Movement of litter onto land and into waterways	SYD – EMS Water Quality and Management Procedure – EMS Contamination Management Procedure – EMS Tenant Management Procedure – EMS Contractor Management Procedure – Maintenance contractor for clean-up response Tenants/operators and other parties – Environmental requirements in leases, licences and agreements Contractors – Planning approval process – Environmental requirements in contracts
Aviation activities, including refuelling, maintenance and emptying aircraft waste tanks		✓			Contaminated runoff causing contamination of waterbodies	SYD – EMS Water Quality and Management Procedure – EMS Tenant Management Procedure – Spill truck contractor Tenants/operators – Environmental requirements in leases and licences – Environmental clauses in airport operation and airline agreements
Tenant activities		✓			Processes causing contamination of rainwater runoff Movement of litter onto land and into waterways	SYD – EMS Water Quality and Management Procedure – EMS Tenant Management Procedure Tenants/operators – Environmental requirements in leases and licences
Use of local roads and shared user paths	✓	✓	✓	✓	Incidents causing surface water contamination Movement of litter onto land and into waterways	SYD – EMS Water Quality and Management Procedure – EMS Environmental Incident Response Procedure – Spill truck contractor

1. Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018 – <https://waterquality.gov.au/anz-guidelines>.

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Surface water quality



Table 17-5 Surface water quality risk processes continued

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Landscape management, including the use of pesticides and herbicides		✓	✓		Contamination of waterways Loss of flora and fauna	SYD - EMS Water Quality and Management Procedure - EMS Landscape Management Procedure - EMS Contractor Management Procedure Contractors - Environmental requirements in contracts
Fire services and training exercises		✓			Contaminated runoff entering waterways from training exercises Contaminated runoff from PFAS-impacted areas from former fire training	SYD - EMS Water Quality and Management Procedure - EMS Contamination Management Procedure - EMS Tenant Management Procedure Tenants/operators - Environmental requirements in leases and licences
Sewerage systems and pumping stations, including the operation of airport sewer systems, the recycled water treatment plant and third-party infrastructure, such as Sydney Water's SWSOOS	✓	✓		✓	Impact to water quality and aquatic flora and fauna from increased nutrient load Decrease to recreation activities due to biological hazards	SYD - EMS Water Quality and Management Procedure - EMS Tenant Management Procedure Tenants/operators: - Trade waste permits - Environmental requirements in leases, licences and agreements Other parties: - Sydney Water Authorisation as issued by DITRDCA



Table 17-6 Surface water quality monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program
Tenant Audit Program	Environment Team	Annual
SYD compliance monitoring	Appropriately qualified and experienced environmental professional	Six monthly
Monitoring project progress associated with the Sydney Water Authorisation	Environment Team	Monthly project control group meetings

Table 17-7 Surface water quality action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Review the effectiveness and efficiency of the water quality monitoring program and update as required	Short term
Continue working with Sydney Water to improve water quality in Mill Stream	AES period



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Ground-based noise



Overview

Noise is generated at Sydney Airport from a variety of sources, including vehicles, ground-based equipment servicing aircraft, aircraft operations, building operations and construction works.

Noise associated with the AES does not include aircraft noise (landing and take-off, flight overhead and when an aircraft is moving under its own power) which is managed by Airservices Australia under the *Air Navigation (Aircraft Noise) Regulations 2018*. This means that the only aircraft noise covered by the AES relates to push back and engine runs.

Sydney Airport has developed a noise model that allows us to assess noise sources as required and model the impact on the local community, including from aircraft operations and aircraft engine runs. This gives us flexibility to assess change within the airfield quickly and make data-driven decisions about our operations.

Noise complaints received by Sydney Airport generally relate to engine runs, where aircraft engines are tested to ensure they are safe to operate. This is an important issue for our community and we investigate each complaint to ensure concerns are taken into account. We regularly review the SYD Engine Operating Procedures, and incorporate feedback from community concerns.

The AES is limited to the impact of operations on the surrounding community and does not cover noise impacts to workers or the public on the airport site.

Objectives

Minimise the impact of noise on our surrounding communities.



Table 17-8 Ground-based noise risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Tenant and operator activities		✓			Noise from tenant activities	SYD - EMS Noise Management Procedure - EMS Tenant Management Procedure Tenants/operators - Environmental requirements in leases, licences and agreements
Construction and maintenance activities, including maintenance of pavements		✓	✓		Noise from plant and equipment used Vibration from plant and equipment used	SYD - EMS Noise Management Procedure - Planning approval process Contractors - Planning approval process - Environmental requirements in contracts
Operation of aircraft on the ground, including engine runs and use of auxiliary power		✓			Noise from aircraft	SYD - EMS Noise Management Procedure - SYD Engine Operating Procedure, as updated Airfield operators - Environmental clauses in airport operation and airline agreements

Table 17-9 Ground-based noise monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program
Tenant Audit Program	Environment Team	Annual
Noise complaint analysis	Environment Team	Quarterly

Table 17-10 Ground-based noise action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Conduct an assessment of current and potential engine run locations to minimise impact on local community and update procedures, as necessary	Short term
Review and update the noise model to be sure it is up to date and representative of the local environment	Short term

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Contamination



Overview

As one of the oldest operating airports in the world, Sydney Airport operations have spanned times when pollution control was not regulated. Legacy contamination is present at various locations across the airport. Soil quality has been impacted by legacy fuel storage and use (hydrocarbons), firefighting exercises (PFAS), aircraft maintenance activities (oils and solvents), asbestos from older building materials, and significant amounts of fill material used to build the airport. Due to the coastal and estuarine location of the airport, acid sulphate soils and potential acid sulphate soils may be present beneath the airport.

Sydney Airport sits over two water aquifers. The deeper aquifer is the Botany Sands Aquifer, which is contained within the Hawkesbury Sandstone bedrock. This aquifer extends from Centennial Park to Botany Bay and is fed by rain infiltration across the catchment, direct runoff from the Hawkesbury Sandstone rim and spring water discharge from cracks and bedding planes in the Hawkesbury Sandstone. The shallower aquifer sits above the Hawkesbury Sandstone within the fill material at the airport and is generally between 1.5 and 4 metres deep.

During the previous AES period, Sydney Airport proactively removed underground storage tanks and replaced them with above-ground tanks. To further reduce the risk of future contamination, Sydney Airport prioritises above-ground tanks in new developments and will continue to phase out end-of-life tanks in favour of above-ground solutions, where practicable.

We have conducted comprehensive investigations to understand the contamination status of the airport. Airport users engaging in activities that involve ground intrusion are required to consult our Contaminated Sites Register and Contamination Management Guideline to check the activities will not exacerbate contamination risk and to protect workers who may come into contact with contamination. Our guidelines include assessment of acid sulphate soils, where applicable.

Sydney Airport conducts compliance groundwater monitoring within the shallow groundwater table to understand the impact the airport has on the surrounding environment. We also conduct periodic management monitoring to assist in management of operations.

We will continue to work with our tenants, operators and contractors to be sure that contamination is managed, including remediation that follows the polluter pays principle, where practicable.

Objectives

Prevent the contamination of soil through the operation and development of the airport.

Minimise the impact of historic contamination on our surrounding environment.

Participate in the PFAS – Airports Investigation Program.



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Contamination



Table 17-11 Contamination risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Disturbance of known contaminated land from maintenance or development	✓	✓	✓	✓	Further soil and/or groundwater contamination Contamination of waterways Build-up or release of soil vapour	SYD – EMS Contamination Management Procedure – EMS Contaminated Sites Register – Planning approval process Tenants/operators and other parties – Environmental requirements in leases, licences and agreements Contractors – Planning approval process – Environmental requirements in contracts
Storage and use of chemicals, including fuels, in above and below ground storage systems	✓	✓	✓	✓	Spills leading to soil or groundwater contamination Contamination of waterways	SYD – EMS Contractor Management Procedure – EMS Tenant Management Procedure – SYD Fuel System Operation Plan – Maintenance processes for fuel vessels and systems – Spill truck contractor Tenants/operators and other parties – Environmental requirements in leases and licences – Environmental clauses in airport operation and airline agreements Contractors – Planning approval process – Environmental requirements in contracts
Use of plant and equipment throughout the airport and airfield	✓	✓	✓	✓	Spills leading to soil or groundwater contamination Contamination of waterways	SYD – EMS Contractor Management Procedure – EMS Tenant Management Procedure – Spill truck contractor Tenants/operators and other parties – Environmental requirements in leases and licences – Environmental clauses in airport operation and airline agreements Contractors – Planning approval process – Environmental requirements in contracts



Table 17-11 Contamination risk processes continued

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Tenant activities		✓			Spills leading to soil or groundwater contamination Contamination of waterways	SYD – EMS Tenant Management Guideline – Spill truck contractor Tenants/operators – Environmental requirements in leases and licences – Environmental clauses in airport operation and airline agreements
Importation of material during development			✓		Non-compliant material causing soil or groundwater contamination	SYD – EMS Natural Resource Use Guideline – EMS Contractor Management Guideline Contractors – Planning approval process – Environmental requirements in contracts

Table 17-12 Contamination monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program
Review of the Contaminated Sites Register	Environment Team	Annual
Tenant Audit Program	Environment Team	Annual
Spills data analysis	Environment Team	Quarterly
Compliance groundwater monitoring	Appropriately qualified and experienced environmental professional	Annual

Table 17-13 Contamination action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Conduct a full review of the Contamination Management Guideline and update as required	Short term
Develop a groundwater well mapping tool for Sydney Airport use	Short term
Develop a contamination mapping tool for Sydney Airport use	Short term
Continue to engage with those parties responsible for material contamination of airport sites (including Airservices Australia) to implement management and improvement plans and also ensure the safety of workers working on and adjacent to those sites	AES period
Participate in the PFAS – Airports Investigation Program with an aim to develop and implement with relevant operators an airport-wide PFAS Management Plan	AES period

Section Four Airport Environment Strategy

18 Flora, fauna and heritage

Flora and fauna

Overview

Due to the highly disturbed nature of the airport and the surrounding area, there are no areas of remnant vegetation within the airport precinct. All vegetation has been planted, providing value to Sydney Airport and surrounding areas by reducing heat island effects, improving air quality, and offering visual amenity and benefit to local wildlife. This value is relative to the airport’s highly urbanised setting. At the time of writing, there are no areas of the airport that are listed as critical habitat, Ramsar wetlands or protected areas for terrestrial or marine areas under the Protected Matters Search Tool established by the Department of Climate Change, Energy, the Environment and Water.

Management of vegetation at the airport is carried out in accordance with our Landscape Management Procedure, which includes requirements for offsetting trees that are removed.

Vegetation planted must meet aviation safety requirements, including height restrictions and restrictions on plant species that may attract large numbers of birds or bats, which present an aviation risk by increasing the likelihood of bird strikes.

Areas nominated for rehabilitation include Engine Pond East, Mill Pond and the airport land adjacent to Tower Beach.

To help manage the risk of bird strikes, Sydney Airport conducts monitoring of bird numbers on and around the airport, to determine whether active management of birds is required. This may include dispersal of birds to move them away from areas used by aircraft.

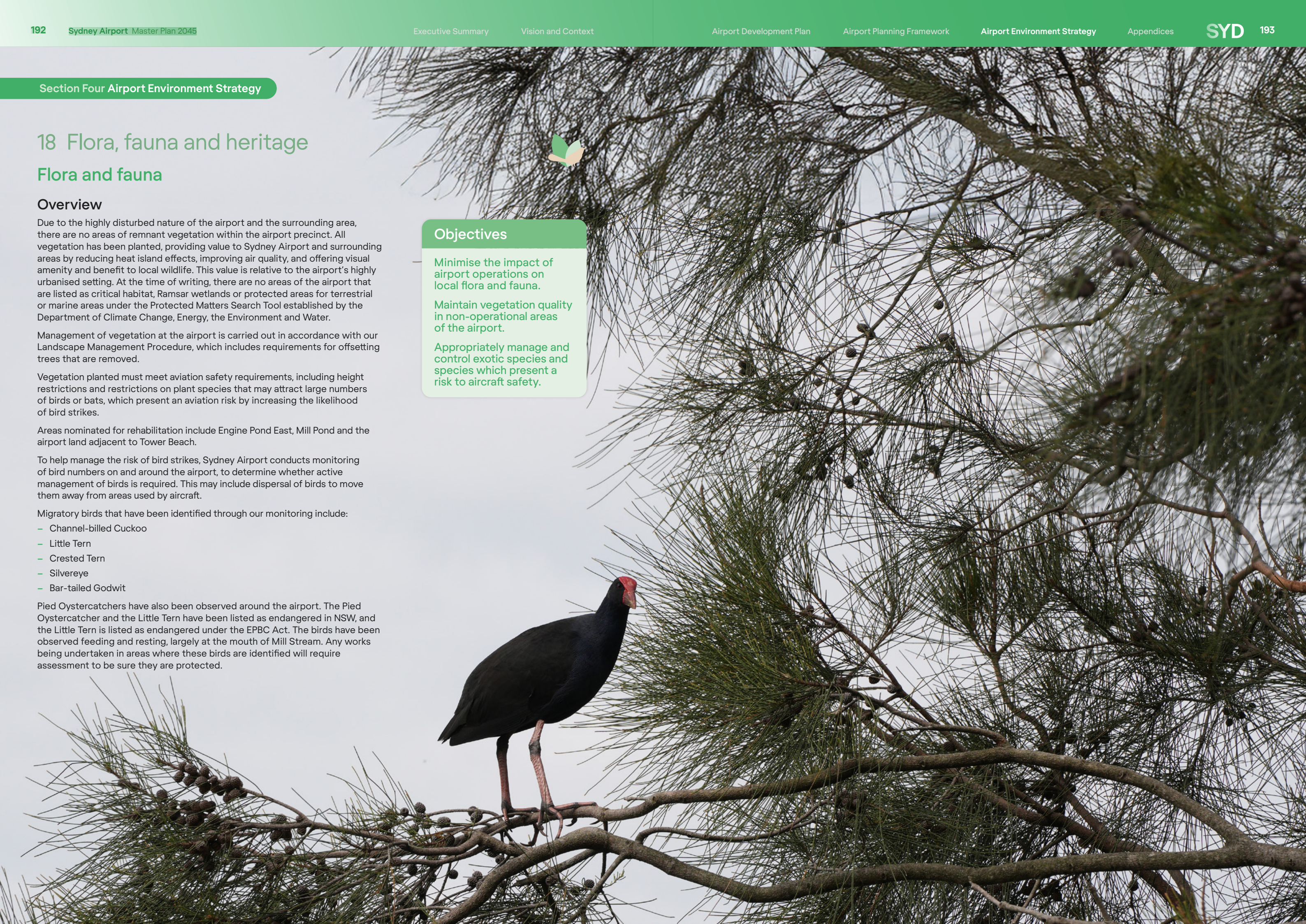
Migratory birds that have been identified through our monitoring include:

- Channel-billed Cuckoo
- Little Tern
- Crested Tern
- Silvereye
- Bar-tailed Godwit

Pied Oystercatchers have also been observed around the airport. The Pied Oystercatcher and the Little Tern have been listed as endangered in NSW, and the Little Tern is listed as endangered under the EPBC Act. The birds have been observed feeding and resting, largely at the mouth of Mill Stream. Any works being undertaken in areas where these birds are identified will require assessment to be sure they are protected.

Objectives

- Minimise the impact of airport operations on local flora and fauna.
- Maintain vegetation quality in non-operational areas of the airport.
- Appropriately manage and control exotic species and species which present a risk to aircraft safety.



Section Four Airport Environment Strategy

18 Flora, fauna and heritage

Flora and fauna



Table 18-1 Flora and fauna risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Spread of weeds through airport precinct, both terrestrial and aquatic	✓	✓	✓		Reduced quality of native flora and fauna Potential spread of pests to off-site areas	SYD - Landscaping contract - EMS Landscape Management Procedure - EMS Tenant Management Procedure Tenants/operators - Environmental requirements in leases and licences Contractors - Planning approval process - Environmental requirements in contracts
Feral animal habitat or refuge through airport precinct	✓	✓			Loss of native fauna	SYD - SYD wildlife management processes - EMS Tenant Management Procedure - Maintenance of airfield security fencing Tenants/operators - Environmental requirements in leases and licences
Impact to native species from use of pesticides, herbicides and through maintenance		✓	✓	✓	Loss of native flora and fauna	SYD - Landscaping contract - EMS Landscape Management Procedure - EMS Tenant Management Procedure Tenants and other parties - Environmental requirements in leases and licences Contractors - Planning approval process - Environmental requirements in contracts
Development and maintenance activities		✓	✓	✓	Loss of flora from tree removal	SYD - Planning approval process - EMS Landscape Management Procedure - Offsetting requirements from EMS Landscape Management Standard Other parties - Environmental requirements in licences Contractors - Planning approval process - Environmental requirements in contracts



Table 18-2 Flora and fauna monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program
Offsetting requirements implementation	Environment Team	Annual
Tenant Audit Program	SYD Audit Team	Annual
Weed survey	Appropriately qualified and experienced environmental professional	Annual
Ecological survey (landside areas)	Appropriately qualified and experienced environmental professional	Every two years
Maintenance contractor procedure reviews	Environment Team	On contract commencement or renewal

Table 18-3 Flora and fauna action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Continue rehabilitation/planting areas in the Sydney Airport Wetlands	AES period
Landscape and planting design guides to be developed	Long term
Prepare and implement a rehabilitation plan for the airport land adjacent to Tower Beach	Prepare – Short term Implement – Long term
Investigate the feasibility of increasing aquatic biodiversity around the airport, considering aviation safety constraints, and develop an appropriate action plan	Short term

Section Four Airport Environment Strategy

18 Flora, fauna and heritage

Heritage

Overview

The airport site has a long history beyond aviation use and has played a significant role in the development of the aviation industry and Sydney more broadly. Prior to the aviation history of the airport, which is outlined in Appendix C, the history of the land on which Sydney Airport lies included:

- First Nations occupation prior to and following European settlement, as outlined in Chapter 18 First Nations.
- Simeon Lord acquired land in the east of the airport in 1815, and developed a wool mill and flour mill. The wetlands were modified to provide a reliable water supply, including damming the outlet, with the wetlands used to power water wheels.
- The land was resumed by the Municipal Council in 1855 and in 1858 the Botany Pumping Station was established to provide a reliable water supply to Crown Street Reservoir in Sydney. The Pumping Station operated until 1885, when the water supply shifted to Prospect Reservoir.
- Alexandra Canal was constructed in the 1890s. During its construction, a number of archaeological finds were uncovered, including the bones of a Dugong that showed evidence of being butchered, First Nations axes and the remains of an ancient forest.
- The Lauriston Park Estate was created in 1902 and provided a residential estate for working-class people.
- Ascot Racecourse was established in 1904, between the Lauriston Park Estate and the Botany Pumping Station and was the site of the first aircraft flight over Sydney in 1911.
- The Wimbles Ink Factory was established in the north east of the airport in 1914, as well as a stone masonry yard, Anselm Odling & Sons, in the 1920s. These operated until 1947.
- The first Southern and Western Suburbs Ocean Outfall Sewer (SWSOOS) was constructed in 1916, with Sewer Pumping Station No. 38 constructed in 1915.

Our Heritage Management Plan informs our Heritage Management Procedures, which are implemented for any works that may impact items of heritage value. The heritage categorisation of three areas has changed, following updates to the Heritage Management Plan (i.e. the runways, Keith Smith Avenue, and Sydney Airport Wetlands).

The Heritage Management Plan was updated to assist in preparation of the AES. The update included assessment of every item in the previous Heritage Management Plan against the heritage criteria outlined in the Commonwealth Heritage List (DCCEEW 2021). This approach differed from the previous assessment, where the whole airport was assessed against this criteria, but not every item.

The result was a change in the heritage significance of a number of items, including the three items previously identified as of exceptional significance, being the runways, Keith Smith Avenue and Mill Pond (included in the wetlands item). It is noted that the Sydney Airport ATC Tower was not listed as exceptional in the previous AES, however its listing on the Commonwealth Heritage List occurred in 2016.

Sydney Airport has developed rapidly over its history, keeping up with advances in aviation technology and passenger needs. Ongoing development is a key part of the significance of Sydney Airport, and we should continue to recognise the evolution of the site.

We recognise a range of Sydney Airport locations identified as having exceptional or high heritage value.

Exceptional value

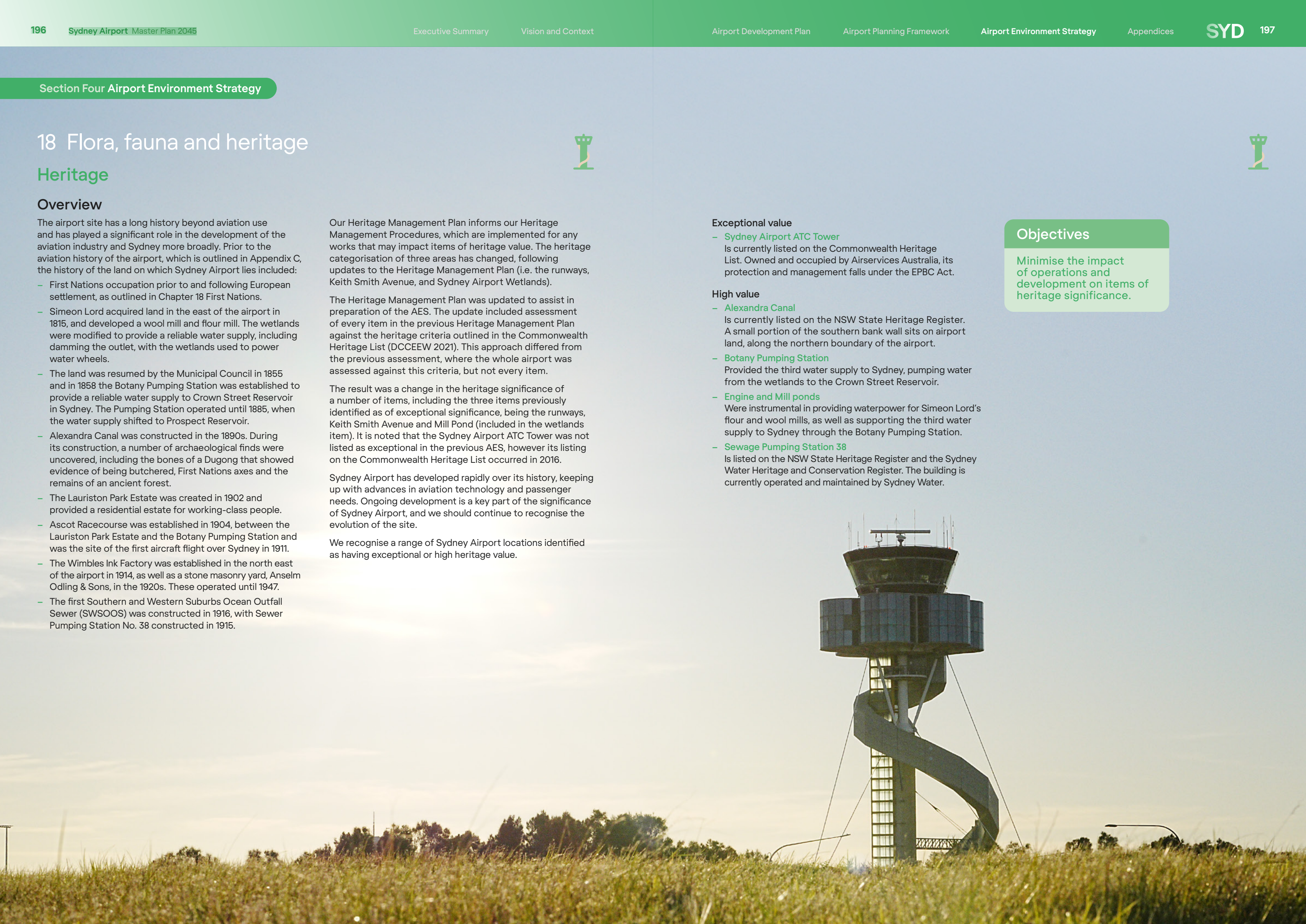
- **Sydney Airport ATC Tower**
Is currently listed on the Commonwealth Heritage List. Owned and occupied by Airservices Australia, its protection and management falls under the EPBC Act.

High value

- **Alexandra Canal**
Is currently listed on the NSW State Heritage Register. A small portion of the southern bank wall sits on airport land, along the northern boundary of the airport.
- **Botany Pumping Station**
Provided the third water supply to Sydney, pumping water from the wetlands to the Crown Street Reservoir.
- **Engine and Mill ponds**
Were instrumental in providing waterpower for Simeon Lord's flour and wool mills, as well as supporting the third water supply to Sydney through the Botany Pumping Station.
- **Sewage Pumping Station 38**
Is listed on the NSW State Heritage Register and the Sydney Water Heritage and Conservation Register. The building is currently operated and maintained by Sydney Water.

Objectives

Minimise the impact of operations and development on items of heritage significance.



Section Four Airport Environment Strategy

18 Flora, fauna and heritage

Heritage



Table 18-4 Heritage risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Use of heritage buildings, including operations and maintenance	✓	✓		✓	Damage to heritage assets	SYD - Planning approval process - EMS Heritage Management Procedure - EMS Tenant Management Procedure - Heritage Management Plan for exceptional and high significance items Tenants/operators and other parties - Environmental requirements in leases and licences - Planning approval process - Heritage Management Plan for exceptional and high significance items
Development or construction near heritage assets			✓	✓	Damage to heritage assets	SYD - EMS Heritage Management Procedure - EMS Contractor Management Procedure - SYD BES Standards Contractors - Planning approval process - Environmental requirements in contracts

Table 18-5 Heritage monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program
Tenant Audit Program	Environment Team	Annual
Heritage item inspections	Environment Team	Annual

Table 18-6 Heritage action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Structural assessment of Botany Pumping Station to assess safety risks	Short term
Review and update the maintenance processes for the Botany Pumping Station, taking into consideration the structural assessment	Short term



Section Four Airport Environment Strategy

18 Flora, fauna and heritage

First Nations heritage



Overview

This is the first Sydney Airport AES that has included a dedicated section for First Nations heritage. In preparation of the AES we consulted with our partner, the Gujaga Foundation, who identified that the whole of Botany Bay was important to their community. In order to fully understand this, we commissioned a report using the NSW Government Connecting with Country framework. The outcomes of this report have provided the information in the AES.

Sydney Airport is located on the land of the Dharawal people of coastal Sydney, a cultural landscape stretching from Sydney Harbour to Shoalhaven. The Dharawal people of coastal Sydney used the land for fishing and hunting for thousands of years to apply their cultural responsibilities with the immediate and broader neighbouring tribes. The Traditional Custodians had a close connection with the flora and fauna of the area and moved with the coastline, which has shifted significantly over the last 20,000 years.

Early Dharawal ancestors in the area at the time of colonisation included:

- Mahroot, who led fishing and whaling expeditions and secured land to build a commercial enterprise.
- Pemulwuy, who speared Governor Phillip’s gamekeeper in 1790 at the Cooks River and started the Pemulwuy-led war of resistance.
- Biyarrung, also known as Biddy Giles, who ran fishing and hunting tours through her cultural area and tried to increase people’s understanding of First Nations people.

The Dharawal clan lived alongside the early Sydney settlements in the early stages of the colony. In 1883, the Aborigines Protection Board was established, and Aboriginal people were moved to the La Perouse Aboriginal Reserve and Mission. Today, Dharawal people from the La Perouse community still have ongoing connection to their ancestral lands, including those around Botany Bay.

The landscape around the airport has been heavily modified, so evidence of historic places, if present, is likely to be buried under current infrastructure. Known sites from historical records are located primarily on the southern portion of the airport, around the original Cooks River estuary and the old river alignment.

These include:

- Former burial site found near the old Ascot Racecourse site.
- Camp at the mouth of the Cooks River, seen by early settlers in 1788.
- The location of the spearing of Governor Phillip’s gamekeeper John McIntyre, by Pemulwuy, near the mouth of the Cooks River.
- Location of workplaces of First Nations people, including the general airport and Kookaburra Holdings, located at the airport.

Sydney Airport has an [Innovate Reconciliation Action Plan](#) (RAP), which covers the period September 2024 to September 2026. We will use our RAP to manage aspects of First Nations heritage and relationships with our local community. During the AES period, we will continue to maintain strong relationships with the Traditional Custodians of the land and promote reconciliation through our sphere of influence. While referenced here, the RAP is not tied to the AES and operates as an independent document and program.

Our partner in all First Nations heritage matters is the Gujaga Foundation, which is 100% owned and controlled by Traditional Owners of coastal Sydney and the Illawarra. Members of the foundation are descendants from original inhabitants at the time of colonisation.

Objectives

Establish processes to consider First Nations heritage applicable to airport operations.



Gamay Dancers at Sydney Airport



Section Four Airport Environment Strategy



18 Flora, fauna and heritage

First Nations heritage



Table 18-7 First Nations heritage risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Discovery of First Nations heritage items during development or maintenance works		✓	✓	✓	Damage to heritage assets	SYD - Planning approval process - First Nations Heritage Management Procedure (to be developed) - Tenant Management Procedure Tenants/operators and other parties - Environmental requirements in leases and licences Contractors - Planning approval process - Environmental requirements in contracts
Use of the land	✓	✓	✓	✓	Impact to First Nations value of the land	All Not included in this AES; addressed through RAP processes

Table 18-8 First Nations heritage monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program

Table 18-9 First Nations heritage action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Conduct further research to understand the First Nations sites known at the airport, to understand their importance to the Dharawal people of coastal Sydney	Short term
Determine how to best recognise the above locations	Short term
Work with the local Indigenous community to develop a Sydney Airport First Nations Heritage Management Guideline that provides guidance on how to protect First Nations heritage, if discovered	Short term

19 Sustainability

Greenhouse gas emissions



Overview

Sydney Airport recognises that climate change can potentially affect business operations through physical and transition risks. In Chapter 4 of Master Plan 2045, we address the contribution of the aviation industry to global human-induced GHG emissions, the importance and difficulty of decarbonisation of the sector, and our commitment to transitioning to a net zero future for Scope 1 and 2 emissions (for emissions we control).

At Sydney Airport, Scope 1 emissions primarily come from fuels for vehicles and backup generators, emission of refrigerants from cooling equipment, and gas used for heating. Scope 2 emissions generally relate to the grid electricity used to power the airport. As of 1 January 2025, Scope 2 market-based emissions have been reduced to zero by purchasing 100% renewable electricity and surrendering large-scale generation certificates which match Sydney Airport’s consumption.

Our Scope 3 emissions are the largest component of our GHG emissions, mostly contributed to by aircraft using the airport. Scope 3 emissions are a complex area to address and we have commenced planning to understand how this can be achieved. All plans and controls will require implementation through close collaboration with our supply chain to reduce emissions. See Chapter 4 Decarbonisation Initiatives and Climate Resilience for more.

Energy and embodied carbon are addressed via Sydney Airport’s Built Environment Sustainability (BES) Standards which span across a wide range of sustainability focus areas. The BES Standards are aligned with greenstar rating tools and global best practice for airport developments. The standards include a combination of performance and prescriptive requirements deemed to apply as appropriate to the project scale and project typologies. Life-cycle carbon assessments (LCA), material substitution strategies (such as low – carbon concrete, steel, asphalt), and a waste and circularity strategy are all promoted by the standards.

Objectives

- Take steps to decarbonise the direct emissions of our operations.
- Take steps to help reduce the climate impacts of aviation across our value chain.



Table 19-1 Greenhouse gas emissions risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
SYD’s use of fossil fuels in vehicles, plant and equipment	✓				Production of SYD Scope 1 emissions from operations, contributing to climate change	SYD Plant and equipment replacement program, switching to electric or other decarbonised technologies
SYD’s use of electricity	✓				Production of SYD Scope 2 emissions from operations, contributing to climate change	SYD Procurement of a renewable PPA
Aviation operations at the airport using fossil fuels and electricity		✓		✓	Production of SYD Scope 3 emissions, contributing to climate change	SYD Scope 3 emissions objectives and long-term ambitions
Tenant, contractor and other parties’ use of fossil fuels and electricity		✓	✓	✓	Production of SYD Scope 3 emissions, contributing to climate change	SYD - Scope 3 emissions objectives and long-term ambitions - Procurement of a renewable PPA
Use of natural resources in products in operations and development				✓	Production of SYD Scope 3 emissions, contributing to climate change	SYD Scope 3 emissions objectives and long-term ambitions

Table 19-2 Greenhouse gas emissions monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Scope 1 emissions monitoring (Sydney Airport petrol, diesel, natural gas, refrigerants) – provided in mandatory disclosure	Sustainability Team	Annual
Scope 2 emissions monitoring (Sydney Airport purchased electricity) – provided in mandatory disclosure	Sustainability Team	Annual
Scope 3 emissions monitoring (Sydney Airport value chain emissions) – provided in mandatory disclosure once required	Sustainability Team	Annual

Table 19-3 Greenhouse gas emissions action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Continue working towards net zero emissions by 2030 (Scope 1 and Scope 2)	AES period
Work with key value chain stakeholders to address Scope 3 emissions	AES period
Implement the BES Standards across Sydney Airport’s buildings and infrastructure capital works portfolio, addressing sustainability categories such as energy and upfront embodied carbon deemed relevant to project typologies	Short term – AES period

Section Four Airport Environment Strategy

19 Sustainability

Natural resource use

Overview

Sydney Airport uses a variety of natural resources throughout operations and improvement works, including maintenance, building upgrades and new developments. Resources used are contained in building materials, plant and equipment, and potable water.

The airport uses potable water across the precinct within buildings, landscaping and supplying aircraft. All water for the T2/T3 precinct is sourced from Sydney Water’s town water supply. The T1 International Operations Precinct utilises a component of recycled water for toilet flushing, air conditioning cooling systems and irrigation, which is sourced from an on-site recycled water treatment plant. This plant takes sewage from the T1 terminal building and provides a high level of treatment to allow reuse, reducing our reliance on Sydney Water’s town water supply. One deep groundwater bore is located within the airport, which is used primarily for landscaping works.

Sydney Airport will continue to improve the efficiency of its potable water use through the replacement of fixtures and fittings with more efficient ones. We will continue to utilise the recycled water treatment plant to reduce potable water use at the T1 International precinct.

We are committed to reducing the use of natural materials through sustainable construction activities. This process starts with refurbishing existing buildings to reduce new builds and also designing spaces to be used flexibly to maximise the use of new developments. The last phase is using sustainable products, such as replacing new material with recycled material where feasible during design and development project phases.

Objectives

Minimise the environmental footprint of the airport by using natural resources efficiently to operate and develop the airport.



Section Four Airport Environment Strategy

19 Sustainability

Natural resource use



Table 19-4 Natural resource use risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Use of natural resources through operation, construction and maintenance activities	✓	✓	✓	✓	Depletion of natural resources Production of Scope 3 GHG emissions	SYD – EMS Natural Resources Management Procedure – SYD BES Standards – EMS Tenant Management Procedure – EMS Contractor Management Procedure Tenants/operators and other parties – Environmental requirements in leases and licences Contractors – Planning approval process – Environmental requirements in contracts
Use of potable water supplies in buildings, assets and to supply aircraft	✓	✓	✓	✓	Depletion of potable water supplies Scarcity of water during droughts	SYD – Recycled water treatment plant for T1 International precinct – EMS Natural Resources Management Procedure – SYD BES Standards – EMS Tenant Management Procedure – EMS Contractor Management Procedure Tenants/operators and other parties – Environmental requirements in leases and licences Contractors – Planning approval process – Environmental requirements in contracts
Production of wastes from maintenance and construction activities, including waste concrete and asphalt			✓		Opportunity to reuse material rather than use virgin natural resources Reduction in Scope 3 GHG emissions	SYD – EMS Natural Resources Management Procedure – SYD BES Standards – EMS Contractor Management Procedure Contractors – Planning approval process – Environmental requirements in contracts



Table 19-5 Natural resource use monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program
Tenant Audit Program	Environment Team	Annual
Collection of construction contractor waste data	Project Management Teams	Monthly throughout project
Collection of water usage data, including water produced by the recycled water treatment plant	SYD Utilities Team	Quarterly
Analysis of construction waste data (following implementation of electronic collection system)	Environment Team, supported by Sustainability Team	Six monthly

Table 19-6 Natural resource use action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Implement the BES Standards across Sydney Airport’s buildings and infrastructure capital works portfolio	Short term – AES period
Develop tenancy fit-out sustainability requirements to encourage improvement in the sustainability performance of tenant fit-outs, including defit works	Short term
Investigate additional potable water metering across the airport	Short term
Investigate opportunities for material reuse on construction projects, with SYD standards for approved products and develop an action plan for implementation, as appropriate	Short term

19 Sustainability

Waste

Overview

Waste is generated at Sydney Airport from a variety of activities, including operation of buildings and terminals, tenant and airline activities, construction, maintenance, and quarantine activities.

Solid waste generated at the airport includes food waste, office paper, packaging wastes, quarantine wastes, foreign object debris, scrap metals, timber, building materials, animal wastes and litter. Litter is collected from the general areas of the airport, as well as from gross pollutant traps located in waterways. Quarantine waste cannot be recycled and is required to be disposed of by an Australian Quarantine and Inspection Service (AQIS) approved provider. These wastes are disposed of to secure landfill or incineration.

Liquid waste generated at the airport includes sewage, waste oils and lubricants, trade wastes (containing various contaminants including solids and oils and grease), liquid wastes from oil and water separators and grease traps and waste cooking oil. Liquid wastes are disposed of differently to solid wastes and are either removed from site for treatment or disposed of to the sewerage network. Where trade waste enters the surrounding sewerage network, we comply with Sydney Water requirements, including holding trade waste permits.

We run various recycling programs, including a container deposit scheme, commingled recyclables, paper and cardboard waste, and organics recycling. We also believe that the best solution to waste management is to avoid producing waste in the first place. We have worked with our retailers to ban single-use plastics, in line with NSW plastics ban guidance. To date this has included banning lightweight single-use plastic bags, plastic straws, stirrers and cutlery, and expanded polystyrene food containers.

Objectives

- Reduce the generation of waste through operation and development of the airport.
- Maximise the amount of waste diverted from landfill.

Table 19-7 Waste risk processes

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Movement of litter in the environment from: - Public use of land around the airport, including roads and shared user paths - Movement of waste from off-site to on-site through drainage systems - Movement of waste around the airport, including from aircraft to waste storage areas	✓	✓		✓	Aviation hazard from FOD Contamination of surface water Reduced visual amenity	SYD - Maintenance contract for non-operational areas to manage litter - Maintenance contractor for litter pick up - Provision of bins and waste storage areas - EMS Tenant Management Procedure Tenants/operators and other parties - Environmental requirements in leases and licences - Environmental clauses in airport operation and airline agreements
Generation of waste	✓	✓	✓	✓	Depletion of natural resources Use of landfill space	SYD - Recycling programs, including provision of appropriate bins - Organics recycling program - Container recycling program - Retail protocols (including no single-use plastics) - SYD BES Standards - Reuse of materials in projects (e.g. reuse of asphalt and concrete) - Operational waste management processes - EMS Waste Management Procedure - EMS Tenant Management Procedure - EMS Contractor Management Procedure Tenants and other parties - Environmental requirements in leases and licences - Environmental clauses in airport operation and airline agreements Contractors - Planning approval process - Environmental requirements in contracts
Storage of waste material	✓	✓	✓	✓	Litter moving into the environment Contamination of surface water	SYD - Maintenance contract for non-operational areas to manage litter - Maintenance contractor for litter pick up - Provision of bins with lids and waste storage areas - EMS Waste Management Procedure - EMS Tenant Management Procedure - EMS Contractor Management Procedure Tenants and other parties - Environmental requirements in leases and licences - Environmental clauses in airport operation and airline agreements Contractors - Environmental requirements in contracts - Planning approvals process

Section Four Airport Environment Strategy

19 Sustainability

Waste



Table 19-7 Waste risk processes continued

Identified aspect	Who conducts the activity				Potential impact	Prevention or mitigation measures
	SYD	Tenants/ operators	Contr- actors	Other parties		
Disposal of waste	✓	✓	✓	✓	Inappropriate waste disposal leading to contamination of land or waterways	SYD - Operational waste management processes - Use of licensed waste contractor - EMS Waste Management Procedure - EMS Tenant Management Procedure Tenants and other parties - Environmental requirements in leases and licences - Environmental clauses in airport operation and airline agreements
Generation of trade waste	✓	✓	✓	✓	Inappropriate waste entering sewer Inappropriate waste entering stormwater	SYD - Trade waste agreements - Use of licensed waste contractor for grease traps and oil/water separators - EMS Waste Management Procedure - EMS Tenant Management Procedure - EMS Contractor Management Procedure Tenants and other parties - Environmental requirements in leases, licences and operation agreements - Trade waste agreements, as required Contractors - Planning approval process - Environmental requirements in contracts

Table 19-8 Waste monitoring

The following actions will be undertaken to monitor effectiveness of prevention or mitigation measures.

Monitoring action	Conducted by	Frequency or timeframe
Implementation of the EMS requirements, including relevant procedures	SYD Audit Team, Environment Team	EMS Audit Program
Tenant Audit Program	Environment Team	Annual
Waste composition audits	Specialist environmental consultant	Five yearly
Waste tracking for Sydney Airport	Specialist environmental consultant	SYD terminal and precinct waste – six monthly
Waste tracking for contractors	Project Manager	Construction contractors – monthly report

Table 19-9 Waste action plans

The following actions have been identified to deliver continual improvement.

Action plan	Timeframe
Develop tenancy fit-out sustainability requirements to encourage improvement in the sustainability performance of tenant fit-outs, including deficit works	Short term
Collect information on litter removal, including quantity and composition, and commence reporting on our website to inform the community	Short term
Continue to divert recoverable waste streams from terminals for recycling	Short term
Work with surrounding councils and other relevant authorities to reduce the amount of litter in waterways around the airport	Long term

