

**Annual**

# Environment Report

**2020 - 2021**



**Connecting Communities**



**Hobart Airport**  
TASMANIA

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## GLOSSARY OF TERMS

ACI	Airports Council International
AEO	Airport Environment Officer
AEPR	<i>Airports (Environment Protection) Regulations 1997</i>
AER	Annual Environment Report
AES	Airport Environment Strategy
ANZECC	Australian and New Zealand Environment and Conservation Council
ARFF	Air Rescue Fire Fighting
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CCAP	Climate Change Adaptation Plan
CEMP	Construction Environmental Management Plan
CEO	Chief Executive Officer
COPC	Chemical of Potential Concern
DPIPWE	Department of Primary Industries, Parks, Water & Environment
EMS	Environmental Management System
EPA	Environment Protection Authority
EPBC	<i>Environment Protection and Biodiversity Conservation (Act)</i>
ESA	Environmentally Sensitive Area
ESR	Environmental Site Register
GME	Groundwater Monitoring Event
HBA	Hobart International Airport Pty Ltd
HEPA	Heads of EPA
IMS	Integrated Management System
ISO	International Organisation for Standardisation
kL	Kilolitres
LNAPL	Light Non-Aqueous Phase Liquids
LED	Light-Emitting Diode
LOR	Limit of Reporting
mBTOC	Metres Below Top of Casing
NPI	National Pollutant Inventory
OLS	Obstacle Limitation Surface
PAH	Polycyclic Aromatic Hydrocarbon
PFAS	Per- and poly-fluorinated alkyl substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
SMP	Site Management Procedure
TPH	Total Petroleum Hydrocarbon
TRH	Total Recoverable Hydrocarbon

UPSS	Underground Petroleum Storage System
WWTP	Wastewater Treatment Plant

### Executive Summary

Hobart Airport’s Annual Environment Report (AER) for 2012-2021 summarises the airport’s environmental performance over the year and its environmental achievements to date when compared to the Environment Strategy, currently outlined in the Hobart Airport Master Plan in Chapter 13. While this document fulfills the regulatory requirements for reporting on the environment, it also highlights the significant achievements the airport has made in matters of ongoing environmental improvement and the implementation of measures to reduce environmental harm from site activities.

Over the past 12 months, the airport has continued to demonstrate continuous improvement in environmental management, both during a global pandemic and in recovery. Whilst the number of projects has reduced when compared to previous years, the management of the natural environment and activities on the airport remain a focus. The airport continues to facilitate and maintain environmental awareness amongst staff, tenants and contractors undertaking activities on airport grounds, resulting in a cohesive approach in dealing with matters pertaining to the environment.

Environmental monitoring is an important aspect of ensuring best practice in environmental management. The commitment to monitor the potential impacts of various activities allows for the early detection of the potential for environmental harm and the early implementation of mitigation measures to protect the existing environmental values. The airport is committed to ongoing monitoring to ensure that the immediate environment is holistically managed.

A total of 53 environmental objectives and targets are identified in Chapter 13 of the Master Plan within the Environment Chapter. These achievements are reflected in the number of commitments met, and those that remain routine and ongoing. Routine and ongoing commitments are achieved as a matter of course should the need arise. In summary, of the 53 commitments identified, all have been achieved within the strategy period.

	Commitments Achieved	<b>44</b>
	Routine (as required)	<b>6</b>
	Continuous (ongoing)	<b>3</b>
	To be completed	<b>0</b>

Examples of the airport’s achievements over the past 12 months are highlighted throughout this document and reflect the airport’s proactive approach to managing the environment. The strategies and measures the airport has in place ensure that best practice environmental management is achievable and is consistent with the airport’s Environmental Policy, and objectives and targets for the future. All commitments are outlined in Chapter 13 of the Master Plan (2015-2020) and include ongoing and routine activities that will be reported against in future AERs submitted for Hobart Airport.

Due to the Covid-19 pandemic, some monitoring activities (in March 2020) were reduced based on a reassessment of risk. Monitoring frequencies returned to normal scheduling in September 2020.

## 1. Introduction

This report comprises Hobart Airport's Annual Environment Report (AER) for the 2020-2021 financial year. Summarised within the report is the airport's environmental performance over the course of the year and its environmental achievements to date. It also highlights the key environmental objectives and actions for the following year. The location of Hobart Airport is illustrated in **Figure 1**.

This document fulfills the statutory annual reporting requirements of the *Airports (Environment Protection) Regulations 1997* and has been prepared using information derived from scheduled monitoring, reporting, on site environmental management and supplementary reporting and investigations. The current Airport Environment Strategy (AES) included as Chapter 13 *Environment* in the Hobart Airport Master Plan, is relevant for the period 2015-2020 and is required to be reviewed and updated every five years as required under the planning framework of the *Airports Act 1996*. The new Master Plan, including revised environmental targets and objectives, is under development. In light of the Covid-19 pandemic and its impacts, the Commonwealth has extended the lodgment date for the Master Plan to late 2022. Chapter 13 within the Master Plan outlines the airport's strategy in managing the environmental values on site and provides a framework on which to promote good governance and continuous improvement in environmental management.

## 2. Annual Environment Report Requirements

The *Airports (Environment Protection) Regulations 1997* outline the requirements for the AER as the following:

- *6.03 Annual Report*
  - (1) *The airport-lessee company for an airport must give the Secretary a report for each financial year, or another reporting period that the Secretary determines, containing:*
    - (a) *Information, mentioned in sub regulation 6.02 (3), added to the environmental site register for the preceding year; and*
    - (b) *Details of the company's performance in achieving the policies and targets of the environment strategy and, in particular, of the company's progressive management of enduring environmental pollution problems at the airport; and*
    - (c) *A report of incidents of pollution and other contraventions of the regulations that have occurred during the year to which the report applies.*



**Figure 1 Hobart Airport Site Location**

### 3. Continuous Improvement

#### 3.1 Integrated Management System (IMS)

The development and implementation of the airport's Integrated Management System (IMS) implemented in January 2014 has proven successful in terms of integrating quality, environment, aerodrome safety, security and health and safety. The IMS allows for the documentation of environmental incidents or identified hazards, the actions taken to address the incident and any follow up actions required.

While this system has been an effective starting point, due to the expansion of the business, Hobart Airport transitioned to a new system in the current financial year. The program selected to fulfill this purpose is BA365 which forms the basis of a Safety Management System (SMS). Its selection is based on simplicity, relevance to all Business Units and the ability to meet the complexities of risk-based management for the aviation sector.

For the period of 2020-2021, there were seven environmental occurrences reported within the IMS, relating to spills and/or potential damage to the environment. All incidents were addressed, actions documented, and the incident closed once actions were completed. One action remains open from

2019 and is subject to ongoing site investigations. Two additional actions remain open and relate to contractor non-compliances, which are detailed in Section 7.

Id	Title	Site	Department	Incident Occurred On	Reported By	Incident Location	Status	Category	Incident Risk Rating
278	Gate 15 A - Storage of abandoned vehicles	Hobart Airport	Environment	Jun 1, 2021	Kirsten LEGGETT	Landside	Closed	Environmental	Medium
277	Gate 15A slurry pit and dispersion of contaminated material	Hobart Airport	Environment	Jun 1, 2021	Kirsten LEGGETT	Landside	Work In Progress	Environmental	High
276	Gate 15 A Compound stockpiling - source unknown	Hobart Airport	Environment	Jun 1, 2021	Kirsten LEGGETT	Landside	Work In Progress	Environmental	High
198	Thrifty Fuel Spill	Hobart Airport	Environment	Mar 27, 2021	Kirsten LEGGETT	Landside	Closed	Environmental	High
149	ARFF Foam Spill	Hobart Airport	Environment	Feb 9, 2021	Kirsten LEGGETT	Airside	Closed	Environmental	Medium
70	Diesel Spill	Hobart Airport	Environment	Jul 21, 2020	Janine LOUDEN	Airside	Closed	Environmental	Low
87	Europcar suspected fuel line leak/rupture	Hobart Airport	Environment	Nov 28, 2019	Janine LOUDEN	Landside	Work In Progress	Environmental	High

**Figure 2 Environmental Incident Record 2020-2021**

Currently Hobart Airport uses a separate environmental risk register from BA356, however the risk assessment approach and analysis of Consequence and Likelihood is the same for individual incidents within BA365, which records the inherent and residual risks associated with each aspect. These risks are incorporated on several levels relevant to the operation of the airport. Risks and associated controls are reviewed regularly by the Risk & Safety Manager, based on the assessed level of risk. Accordingly, the risk registers and incident performance data are reported and reviewed by the Board of Directors, CEO, HBA management team or at staff level.

Environmental risks are included with other enterprise-wide risks alongside financial, reputation and brand, operational, compliance and people and safety. A separate and more specific environmental risk register is reviewed annually and maintained which details specific risks relating to the environment. An Audit of the SMS is scheduled annually, as part of the airport’s commitments to continuous improvement.

As part of the development of a Document Management System, the Document control policy outlines the file structure for procedures and tools that have been developed for document control, management of documents and communication requirements.

#### EMS Audit

It is a requirement that federally leased airport operate an EMS which is consistent with the relevant Australian and International standards. The relevant Australian Standard *AS/NZS ISO 14001:2004 Environmental Management Systems – Requirements with guidance for use* has been superseded by the *AS/NZS ISO 14001:2016 Environmental Management Systems – Requirements with guidance for use*. Whilst HBA is not currently seeking certification, an internal audit and gap analysis of the IMS was

undertaken to determine alignment with the current standard. As a result of this gap analysis, a standalone environmental risk register was established and is reviewed annually.

In the first half of 2020 an environmental compliance register was also developed, to ensure all compliance related matters and activities are documented, scheduled and implemented throughout the year.

### 3.2 Environmental Audits

Environmental audits on tenants at the airport are undertaken. The prioritisation of tenant auditing is based on a tiered structure:

1. Tier 1 tenants are those tenants that use and store fuels and chemicals that have the potential to interact with the environment through accidental spillage or overflow. Tier 1 tenants also include those with activities that require discharges to the environment (e.g. wastewater). These tenants are audited annually.
2. Tier 2 tenants are those tenants that store or use chemicals or contain areas where hazardous materials are stored and have the potential to interact with the environment through accidental spillage or overflow. These tenants are audited every second year.
3. Tier 3 tenants are those tenants that do not store or use chemicals and have activities that have little interaction with the environment. These tenants are audited once every three years.

The auditing process is undertaken by the HBA Environment Manager. Individual reports are prepared for all audits undertaken and are provided to the AEO on completion. The tenant environmental audits are available on request. In the 2020-2021 financial year all audits undertaken on tenants were completed using iAuditor, a mobile reporting system with built in analytics and reporting tools. As the new risk management system is implemented, the auditing of tenants will be undertaken using the platforms available, and which can be developed within the system to ensure fit-for-purpose.

### 3.3 Site Management Procedures (SMPs)

All Site Management Procedures (SMPs) have been updated in the past 12 months. All SMPs updated are reviewed internally by HBA and provided to the AEO for comment. These include the following:

- SMP01 – Contaminating Substances
- SMP02 – Asbestos Management
- SMP03 – Air Quality and Noise
- SMP04 – Waste Management
- SMP06 – Stormwater Runoff and Treatment
- SMP07 – Significant Areas
- SMP08 – Vegetation Management
- SMP09 - Mowing
- SMP10 – Weed Management

- SMP13 – Environmental Awareness
- SMP14 – Llanherne House
- SMP15 – Environmental Monitoring
- SMP16 – Stockpile Management

### 3.4 Administrative

#### Sustainability Strategy

A Draft Sustainability Strategy was developed for Hobart Airport throughout 2020. The Strategy incorporates the ESG principles of Environment, Society and Governance with a focus on how each business unit can embed sustainability into planning, projects and activities. A collaborative approach to its development was undertaken, involving all Business Units and the Executive Leadership Team. This combined input resulted in the identification of three primary pillars for sustainability at Hobart Airport (**Appendix A**). These are:

1. Inspiring People and Community
2. Environmental Stewardship, and
3. A Trusted Business with Strong Growth

With the significant impact of COVID19 still being felt across the aviation industry, it has been prudent for us to further refine our Sustainability Strategy to ensure it aligns with a revised whole of business strategic plan. Now that we are in a position where the longer-term impacts and timeline for recovery from COVID 19 are more fully understood, this process is well underway, and the final Sustainability Strategy will be integrated into the broader business strategy.

#### Climate Change Adaptation Plan

Hobart Airport developed a Climate Change Adaptation Plan (CCAP) which was finalised and endorsed by the Board in October 2020. The CCAP provides an overarching policy to articulate the Airport's approach to managing climate change risks and opportunities. The Plan outlines four adaptation themes to guide effective climate adaptation and resilience which have been incorporated into a climate change risk assessment. Climate change adaptation actions have been identified and assigned to relevant Business Units. The CCAP action plan is also subject to the whole of business strategic plan review, outlined above for the Sustainability Strategy. The CCAP Action plan will be finalised following this process.

#### GRESB Reporting

In 2021 Hobart Airport commenced our first year of GRESB Reporting, a commitment by the Airport to assess materiality and sustainability performance under the Infrastructure Assets benchmarking process. GRESB will provide us with comparative business intelligence on where we stand against peers, whilst providing insights into the actions required for us to improve our ESG performance. Based on our results, we can identify the key areas for focus, as we continue to work towards more sustainable operations.

### Reconciliation Action Plan (RAP)

Hobart Airport commits to develop a Reconciliation Action Plan (RAP), consistent with our sustainability objectives. A RAP working group has been developed to guide the process in consultation with Reconciliation Tasmania, the statewide body that promotes and facilitates reconciliation for all Tasmanians. Reconciliation Tasmania partners with Reconciliation Australia to support action and development of RAPs for all sectors and communities. The RAP process will enable Hobart Airport to develop an accountable framework in which to map our reconciliation journey.

We will embark on our “Reflect” Reconciliation Action Plan in FY22 and will be completed early 2022. The outcomes of the RAP will be provided in the following reporting period.



### 3.5 Energy and Resource Use

#### Carbon Accreditation – Level 2 Reduction and Pathway to Carbon Neutrality

The Airport Carbon Accreditation Scheme (ACA) is the only institutionally endorsed carbon management certification standard for airports and provides the platform in which airports can work towards reducing carbon emissions. Hobart Airport first participated in the ACA Carbon Accreditation process in January 2017 and were awarded with Level 1 Carbon Accreditation - Mapping. In February 2018, Hobart Airport’s level 1 accreditation rating was renewed, and in February 2019, Level 2 carbon accreditation – Reduction, was achieved. Due to disruption caused by the Covid-19 pandemic, Hobart Airport will maintain Level 2 accreditation for the year 2021.

The program provides the framework and tool for active carbon management, providing measurable results from year to year. There are four levels of carbon accreditation that can be achieved. These include:

1. Mapping
2. Reduction
3. Optimisation
4. Neutrality



Level 2 carbon accreditation enables an airport to fulfil all the requirements of carbon mapping, provide evidence of effective carbon management procedures including target setting, and demonstrate a reduction in the airport’s carbon footprint by analysing the carbon emissions data of consecutive years. This understanding enables Hobart Airport to guide and support continual

environmental improvement in reducing carbon emissions through new initiatives and stakeholder engagement.

Hobart Airport is committed to being a carbon neutral airport in 2022 and have engaged consultant Conversio to assist in developing a clear pathway to reach that goal. It is anticipated that due to our airport's already low carbon footprint (Scope 1 & 2) that any remaining emissions can be offset through a reputable carbon offset program. Carbon neutrality will be dependent on defining further actions to guide and influence airport tenants in achieving carbon reduction from their business operations. Actions towards this goal has commenced.

#### Greenhouse Gas (GHG) Calculator

Hobart Airport has been participating in the Airports Carbon Accreditation (ACA) program since 2016. The ACA program requires that emissions are reported in line with the GHG Protocol and that airports also identify where they have direct control over emissions and where they can guide or influence emissions from other organisations' activities and facilities.

As a requirement for accreditation at Level 2, Hobart Airport is required to submit an annual GHG inventory of the airport's scope 1 and 2 emissions, as well as relevant scope 3 emissions. The ACA program recommends that all relevant data and information for establishing the GHG inventory be consolidated into a GHG inventory report. In 2020, Hobart Airport engaged carbon specialist consultant Conversio to develop and consolidate all carbon related data from 2016 for future carbon reporting purposes. The GHG inventory can present data by calendar year or financial year and accommodates the monthly uploading of data which can be used for other internal reporting purposes. The GHG inventory and associated calculator enables monthly generated data that can be incorporated into Hobart Airport's ESG reporting.

The GHG inventory report will be updated annually to allow comparison of annual GHG emissions and to compare GHG intensity over years. The GHG report is provided in **Appendix B**.

#### Carbon Offsets

Since July 2018, HBA contributes to Airline carbon offset programs each time a staff member books a flight. The commitment to fly neutral is not-for-profit, with all money going towards government accredited projects. For example, Qantas carbon offsets contribute to the following environmental causes:

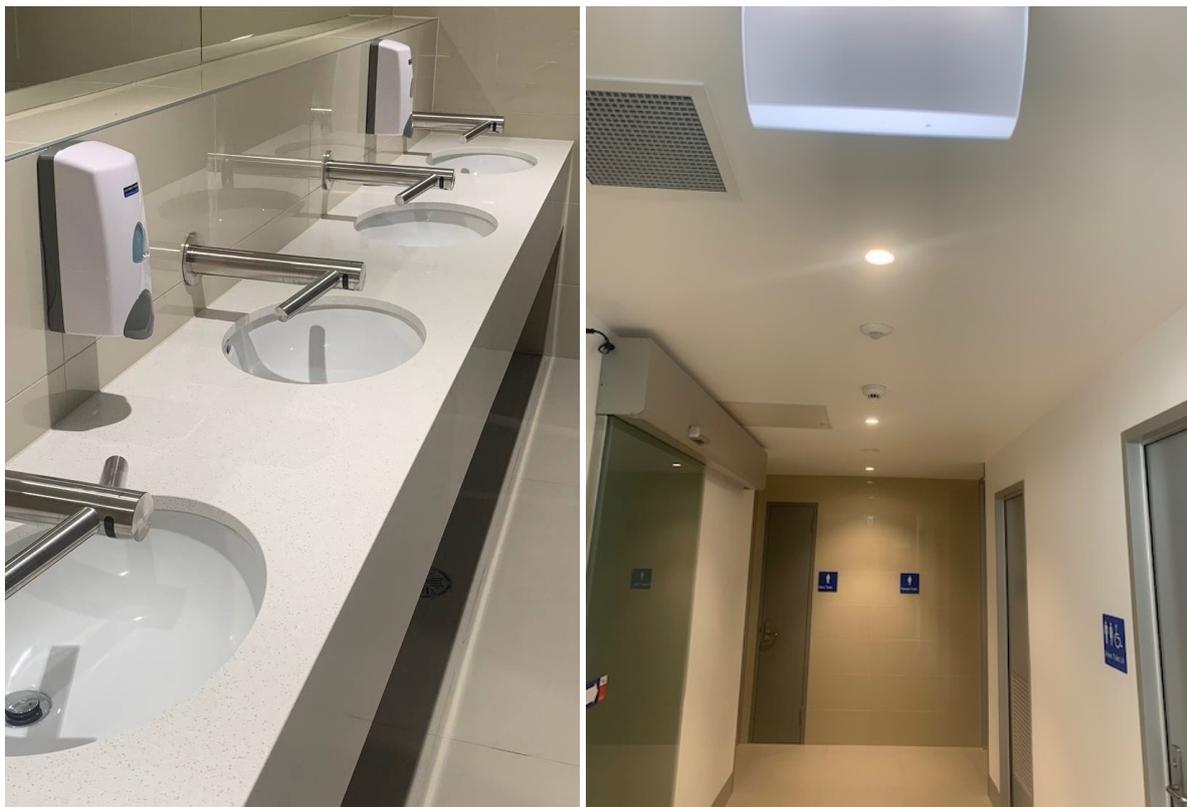
- The protection of 7,000 hectares of native Tasmanian forest.
- Prevention of wildfires in the North Kimberley using 50,000 years of knowledge applied by Aboriginal Rangers.
- Contributing to clean, renewable energy sources for communities in Southern India, from 812 wind turbines.

Hobart Airport continues our commitment to offsetting carbon impacts associated with business travel. In the last financial year, a total of 18 flights (including those with multiple connections) had offsets applied, from July 2020 -June 2021.

#### Terminal International Processing Facility

The development of Hobart Airport’s International Processing Facility was the only major project to commence in the last financial year. The facility was developed in collaboration with the State and Commonwealth governments as part of the safe “travel bubble” between Australia and New Zealand. The development involved some internal demolition of the southern end of the terminal, which had become isolated during the reduced travel period. This allowed for the complete isolation of the works from the remainder of the terminal building.

The re-development of this area includes new amenities that feature both energy and water efficient utilities. LED lighting is used throughout, along with natural lighting and insulation for effective heating and cooling.



**Figure 3** Water efficient facilities and natural lighting

### 3.6 Water Quality

#### Groundwater Monitoring

Groundwater monitoring occurs twice yearly, increasing from annually in 2018. The change in frequency was initiated to better understand the seasonal influences and the effects these influences have on the movement and migration of contaminants. This is deemed particularly important for project planning where groundwater has the potential to be intercepted. The summer Groundwater Monitoring Event (GME) was undertaken in February 2021, with the normal scope of investigation applied. The winter event occurred in July 2021.

Groundwater reports are provided in **Appendix C**.

#### Surface Water Monitoring

Surface water monitoring occurs twice yearly in March and September. A wet weather sampling event was undertaken in June for PFAS contaminants only at sites HIA06 and HIA09. The wet weather sampling approach is based on an environmental risk assessment and is approved by the AEO.

Routine monitoring resumed in September 2020 and March 2021. All parameters are analysed by a NATA accredited laboratory and include the following:

- Nutrients
- Faecal coliforms and *E.coli*
- Heavy metals and hydrocarbons
- PFAS suite (HIA06 and HIA09) – plus wet weather sampling
- Total suspended solids
- In-field measurements which include Dissolved Oxygen (DO), conductivity, temperature and pH.

The results of each surface water monitoring event are compared against limits indicated in Schedule 2 of the *Airports (Environment Protection) Regulation 1997*, and the trigger values for toxicants of the ANZECC Guidelines for Fresh and Marine Water Quality (2000). All PFAS results are compared against the limits provided in the *PFAS National Environmental Management Plan V02*.

Overall results indicate the following trends:

- The conductivity at all sampling locations outside the tidal zone is characteristic of freshwater environments from lowland rivers. Sites within the tidal zone (HIA03A and HIA09) record higher salinity levels, influenced by tidal movement of estuarine waters, with higher levels noted on incoming tides.
- The pH range for all samples was within the specified range for lowland rivers, remaining relatively consistent throughout all seasons.
- Total suspended solids fluctuated throughout the year with higher-than-normal levels attributed by rainfall events that are sediment loaded. The Sinclair Creek system is subject to

intermittent flows which are usually episodic and short in duration. As such variations in suspended solids are expected in a water course of this nature.

- Thermotolerant coliform levels were relatively consistent across most sites throughout the year with all sites displaying elevated levels. Levels are consistently lower at HIA09 where Sinclair Creek discharges at Five Mile Beach, dilution being the major factor.
- Hydrocarbon results were within the AEPR recommended limits for all sites.
- Ammonia results across all sites are generally above the recommended AEPR limit and fluctuate with rainfall events. Results indicate that these levels are influenced by a combination of seasonal factors and the sampling site's proximity to the WWTP (HIA07). Similarly, if samples are taken close to the time of discharge from the WWTP, this too can influence general nutrient concentrations. Downstream values for ammonia are largely within, or marginally above, the recommended limits, indicating a low risk of toxicity to the receiving waters.
- Results of all samples collected during the period are at or above the recommended limits for total nitrogen and occasionally, total phosphorus. Elevated nutrient concentrations in the upstream environment are representative of a disturbed drainage environment with possible sources including agricultural runoff and/or other soil disturbances in the catchment area upstream external to the airport site. Discharges from the WWTP may also contribute to fluctuations in nutrient levels. HBA is working in consultation with TasWater to improve nutrient concentrations and within Sinclair Creek and define sources.
- Copper and zinc (metals) levels were generally within the AEP recommended limits across all sites throughout the year, with some minor, but not significant fluctuations. It is unlikely that any elevation in metal concentrations of the levels encountered will have an adverse impact of in-stream aquatic fauna off site. Environmental buffers exist between the airport boundary and receiving waters which allows for the dissolution of metals and mixing with tidal flows.
- PFAS concentrations generally meet the Commonwealth PFAS NEMP Guideline levels for 90% species protection at the offsite sampling location (HIA09). PFOS levels exceed the criteria for 99% protection of species, and concentrations increased between spring and autumn months when less rainfall is generally received. PFAS concentrations at HIA06 (landside) meet the PFAS NEMP Guideline levels for 80% species protection, which is acceptable for the condition of the creek at this location and its highly modified state.
- Wet weather event sampling results indicate a flushing effect on Sinclair Creek and the mobilisation of PFAS contaminants. Results indicate a minor reduction in PFOS contaminants at the confluence, and a significant dilution of PFOS concentrations in the upstream environment.

All results from surface water sampling events have been provided in the surface water monitoring reports to the AEO. Any distinct trends and anomalies are analysed and discussed with the AEO at monthly meetings and with stakeholders as required.

A trend analysis for PFAS has been undertaken since PFAS monitoring commenced in 2016. The results of this trend analysis are provided in **Appendix D**.

### 3.7 Contaminated Land Management

#### Airservices Wastewater Treatment Trial

The Airservices Australia (Airservices) fire training ground at Hobart Airport currently produces wastewater from training exercises and rainfall. A research and development trial into the treatment



of PFAS impacted water was initiated by Airservices in 2017, with the first of two treatment trial processes commissioned in September 2018 on site at the Hobart Airport Fire Training Ground. The second trial commenced in January 2020 and continued throughout the reporting period. The purpose of the trials is to assess the potential for the effective treatment of PFAS impacted wastewater along with other co-contaminants from the training

ground. The first pilot trial plant has demonstrated its technical ability to reduce PFAS concentration in wastewater to below Limit of laboratory reporting (LOR). The first trial pilot plant was decommissioned at the end of 2019. The second trial plant is currently in the operational phase. The plant has demonstrated success in removing PFAS from the training wastewater last year however facing some challenges to remove co-contaminants like heavy metals. The second trial has been extended until the end of 2021.

#### Figure 4 Insite PFAS Treatment Trial at Fire Training Ground

##### Rotorlift UST Decommissioning and Removal

Two Underground Storage Tanks (5,500 litres each) have been used by Rotorlift engineering for the refuelling of vehicles. The two tanks are filled with 5,500 L of ULP and 5,500 L of diesel. These two tanks are included in HBA's UST register and remain the final two tanks under HBA ownership. Whilst daily dip testing occurs, no testing on tank integrity has been undertaken since their installation in 2010. Due to the lack of information/records on the types of tanks installed, the type of integrity testing required could not be determined. Based on a risk assessment the two USTs will be decommissioned from use by Rotorlift by the end of 2021. HBA will have 12 months from that date to remove and undertake the appropriate environmental testing requirements. An update on this project will be provided in next year's AER.

### 3.8 Biodiversity

Flora, fauna and natural values are continuously managed throughout the site through annual monitoring and project specific investigations. Monitoring activities include the mapping of threatened species, condition monitoring of vegetation communities and targeted flora and fauna investigations as required. Mapping and monitoring of plant species predominantly occur over spring and summer during optimal flowering seasons, whereas fauna investigations are specific to the individual targeted species. Floristic monitoring occurred throughout the 2020/2021 flowering season. Weed species have been monitored throughout the year. All monitoring data on flora and fauna is provided to the Tasmanian Natural Values Atlas (NVA) database managed by the Department of Primary Industries, Water and Environment (DPIPWE).

#### Camera Trapping

Camera traps remain in operation around the airside perimeter fence in high fauna movement areas and are monitored every 2-3 weeks for new data. A number of native fauna species, including threatened species, have been observed moving through the airport site, predominantly near Gate 11 and 13. A range of fauna use the airport for foraging or habitat, including the Tasmanian Devil, Spotted-tailed Quoll, Tasmanian Bettong, Echidna, the Tasmanian Pademelon, Bennett's Wallaby, Brushtail Possum and both Bandicoot species.



**Figure 5 Echidna airside captured on camera**

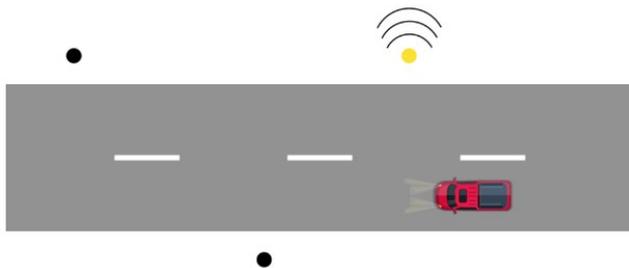
The information captured on the camera traps has been collated and used to determine the range of fauna utilising this area of the airport, frequency and time of visitation. This information adds to the Airport’s knowledge of wildlife and potential hazards created in airside environments, enabling improved management approaches for the range of species that call Hobart Airport home. All information is recorded and provided to the Threatened Species Unit within the Department of Primary Industries, Parks, Water & Environment (DPIPWE). The information is subsequently recorded on the state NVA database for threatened fauna.

#### Virtual Fencing

In May 2019, a virtual fence was installed along 1km of Grueber Avenue in an area that was subject to wildlife impacts. The installation of Virtual Fencing has a twofold benefit, in preventing adverse harm to wildlife and creating a safer road for tourists and the public.

Virtual Fencing is an active electronic protection system that prevents animals from crossing the road when a vehicle is approaching at night. It has proven to be extremely effective in preventing wildlife-vehicle collisions in Australia and around the world. Latest tests have seen a 60-70% reduction in wildlife vehicle collisions. The virtual fence uses the latest non-invasive audio and visual systems to

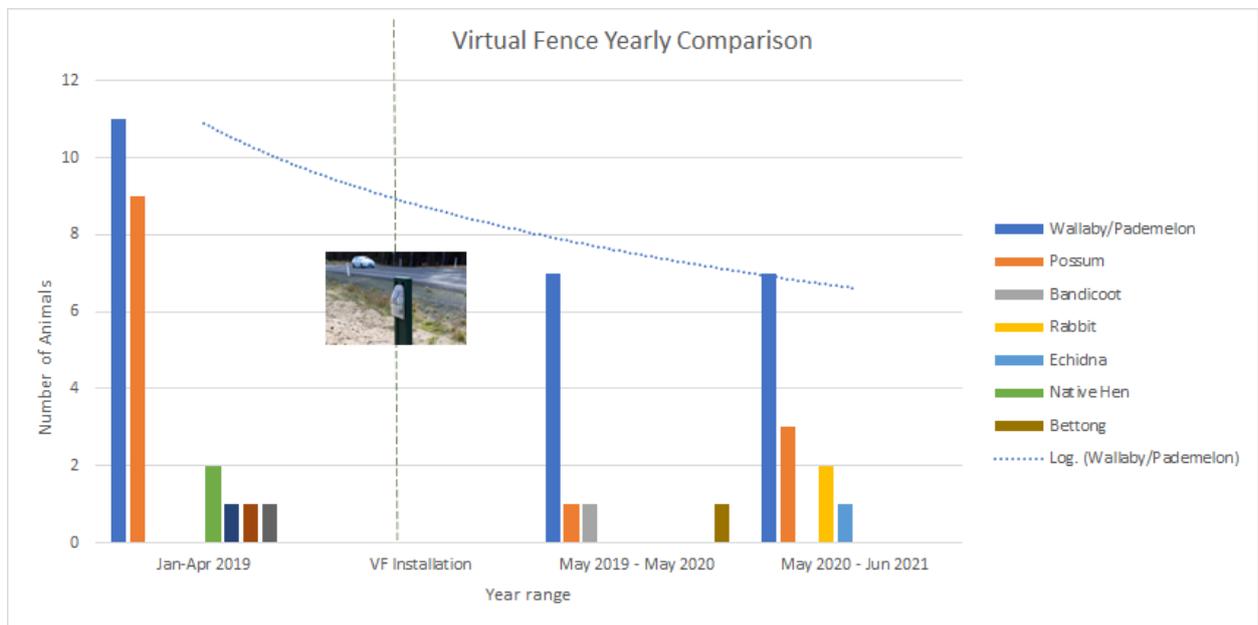
alert animals and prevent vehicle contact, all of which are solar powered. This project was undertaken as part of Hobart Airport’s Corporate Social Responsibility platform.



**Figure 6 Virtual Fence Operation**

The fence was installed in early May 2019, and in the first 12 months of its installation resulted in a 63% reduction in animal fatalities compared to the previous year. The initiative has been welcomed by the local community, with feedback on a notable reduction in animals being impacted on the road. We know that a number of threatened species utilise the surrounds of the airport, including the critically endangered Tasmanian Devil and the Spotted-tailed Quoll. On this basis, the virtual fence initiative was proposed to ensure potential impacts to all species were minimised.

It is anticipated that reduced vehicle traffic in 2020 will result in skewed data for the current reporting period. Another observation has been notable fauna impacts at the northern end of the virtual fence end. Studies have identified that fence “end-effects” and behaviour habituation have not been fully realised. It is not certain whether the presence of the virtual fence is causing an increase in fauna mortality at the northern end, as this environment also provides increased diversity in habitat and contains a permanent water source which animals would gravitate to. No fence “end-effects” are noted in the southern end; therefore, it is more than likely the animal fatalities in this area are a direct result of habitat and resource availability.



**Figure 7 Virtual Fence statistics since installation**

### Watch out for Wildlife

In Tasmania hundreds of thousands of native animals are killed by motor vehicles each year. In a bid to protect wildlife from the impacts of vehicles, Hobart Airport and Bonorong Wildlife Sanctuary launched the Furry Feathered Friends campaign in 2018, encouraging travellers to watch out for our furry friends as they move around the state. The partnership aims to drive mass awareness in order to prevent unnecessary animal deaths on our roads and eliminate potentially dangerous situations for motorists.

The campaign has grown over the past two years with the watch out for wildlife messaging now in visitor centres in Triabunna and Cradle Coast as well as on the windscreens of 5000 rental cars around Tasmania. In early 2020, stickers were distributed to all car rental agencies on Airport and new bins were installed as part of the recently completed forecourt area sharing the same messaging – to slow down between dusk and dawn and to take extra care on our roads.

Further to this, the East Coast Tourist Drive has committed to installing the same messaging, using Hobart Airport’s “Watch out for Wildlife” designs at the entry of every township along the east coast tourist route. Hobart Airport and Bonorong are committed to spreading the wildlife road safety message to as many Tasmanian road users as possible to make our roads safer for both everyone, especially our iconic species. This initiative and program as a whole is the focus of Hobart Airport’s submission for the 2021 Tasmanian EPA sponsored community award for sustainability.

### Fifteen Trees

At Hobart Airport we are always looking for ways to reduce our carbon footprint and play our part in preserving Tasmania’s unique natural environment. This year, we partnered with Fifteen Trees for the second year to plant a new tree in Tasmania for each day our airport is in operation.

In addition to our 365 trees planted to reinvigorate the Polonia Park landscape in the Brighton community, an additional 255 trees were planted at the Bruny Island District School. The school community revegetated areas within the school grounds in collaboration with a local farmer to rehabilitate some of their land.



**Figure 8 Trees planted by students at the Bruny Island District School**

### Seven Mile Beach Seedling Monitoring

The dune and beach area of Seven Mile Beach is currently defined as one of the Airport’s Environmentally Sensitive Areas (ESAs) due to its coastal nature and the vulnerabilities associated with this type of landform. In addition to this, the site contains the Tasmanian threatened vegetation community DVC – *Eucalyptus viminalis* (White gum) coastal forest and woodland. Hobart Airport has developed a Conservation Management Plan for this area of coastline, given its coastal vulnerability and susceptible natural values.

Occasional tree lopping, and removal of White gum and pines is required to meet the CASA compliance requirements for the Obstacle Limitation Surface (OLS). To assist the local Seven Mile

Beach Community in the regeneration of the White gum community, the Airport planted 63 juvenile trees in 2016 and contributes to weed removal in the area to facilitate natural recruitment. The success of the planting is monitored annually and continues four years post planting. This will be the last year in which monitoring will be reported. At the time of reporting, the number of seedlings remaining stand at 25. Ongoing monitoring of the White Gum seedlings will continue, alongside on ground practical efforts to encourage natural recruitment. Measures include removal of coastal wattle (which has a shading effect on juveniles) and pine trees, and the continuation of working with the local Seven Mile Beach Coast Care Group.



**Figure 9 Juvenile White gum plantings – August 2020 and healthy sapling (right)**

#### Indigenous Land Management Practices

In the wake of the 2019-2020 Australian wildfires, it has never been more important to undertake effective land management to protect both life and our biodiversity values. Our landscape has been traditionally managed for thousands of years by indigenous communities, resulting in land that is both productive and sustainable. In Tasmania there are many sites that are seeing the return of traditional forms of management such as cool mosaic burning, with very positive outcomes. Hobart Airport is privileged to have an EPBC listed Lowland Native Tasmanian Grassland which is currently listed as Critically Endangered nationally. To better manage our grasslands Hobart Airport has initiated consultation with traditional land managers to undertake management actions that will continue to improve the integrity of the grassland, while offering an educational opportunity for other land management agencies.

Last year we applied for a Part 13 EPBC permit from the Commonwealth in partnership with the Tasmanian Aboriginal Council Inc (TAC) and the permit was granted in November 2020. The permit includes specified conditions that must be applied to the activity. These are provided in **Appendix E**.



**Figure 10 Tasmanian Lowland Native Grassland at Hobart Airport**

#### Weed Management

The mapping of weed species on airport managed land enables HBA to determine the effectiveness of the Hobart Airport Weed Management Plan and actions implemented to date. A review of the plan is undertaken on an annual basis and modified where required.

Weed species on the airport are continually targeted with priorities based on current listing (i.e. WoNS, State Declared or environmental weeds) and areas where weed control is a priority due to operational reasons or risk of weed transfer. Environmentally Significant Areas (ESAs) have site specific weed management approaches which are scheduled and implemented throughout the year. All weed species are targeted in ESA areas to maintain their listing status and environmental value. For example, weed species continue to be progressively removed from the EPBC saltmarsh community east of the runway and the EPBC grassland community west of Holyman Avenue. Spanish Heath has been another target species in this area, where at least 100 plants have been removed by hand. African lovegrass has been observed in notable infestations at the Freight Precinct, northern airport end and surrounding areas and has been a site targeted for weed removal over the reporting period.

### 3.9 Waste Management

The development of the Airport’s Waste Management Strategy in May 2018 resulted in fifteen actions being identified to effectively manage and improve the ways in which waste is managed at Hobart Airport (Table 1). In the last two years, eleven of the initiatives have been actioned or are in progress, the status of which is highlighted in the table below.

**Table 1 Hobart Airport’s Waste Management Action Plan**

Goals	Management Actions	Timeframe	Status
Improve knowledge of waste type, and relative volumes for the Terminal and Hobart Airport office	Undertake a waste management audit	2018-2020	Achieved in Airport office areas only. Delayed in terminal due to Covid-19
Understand waste streaming and ways in which waste streams can be better segregated within the Terminal and Hobart Airport office	Undertake a waste stream review and determine where segregation can be improved to maximise diversion rates	2018-2020	Achieved in Airport office areas only. Delayed in terminal due to Covid-19
Improve the function and design of the external waste collection station	Incorporate redesign of waste collection centre(s) in Terminal design	2020	Achieved (but project delayed)
Increase the amount of waste diverted from landfill (+ 25% of 2017 levels) by 2022	Standardise waste management infrastructure processes and services throughout the terminal and Hobart Airport office	2019	Achieved
	Assess potential for collection of compostables (food scraps and coffee grinds) in the Terminal and Hobart Airport office	2019	Achieved
	Assess potential for recycling of soft plastics for back of house and Hobart Airport office	2021	Achieved
	Improve the segregation of waste in car parking areas	2021	On track

Goals	Management Actions	Timeframe	Status
	Engage with stakeholders to improve understanding of waste management at the airport	2018	Achieved
	Investigate options for auctions for lost property, with money raised donated to charity	2018	Achieved
	Increase and improve the capture of waste data and analysis	2019	Achieved
Provide waste management guidance to tenants and contractors	Engage tenants and contractors to inform and liaise on waste management efficiencies and recycling	2019	Achieved
Encourage tenants to use one management body for waste	Liaise with and engage tenants on the benefits of using HBA to manage waste streams	2022	On track
Reduce the amount of Quarantine waste to landfill	Investigate opportunities for reducing quarantine waste from airside environments	2022	Delayed due to Covid-19 disruptions (partially achieved with magazine waste)
	Engage with airlines and cleaning contractors	2022	Delayed due to Covid-19 disruptions
	Develop an Operational Manual for quarantine waste segregation in consultation with airlines and ground handling staff. Biosecurity endorsement required.	2020	Achieved

While the diversion of organic waste reduced dramatically in 2020, we did undertake our first Circular Economy experiment using coffee grounds from one of our food and beverage tenants, Red Square Café, who also operate out of nearby Cambridge Park. Coffee grounds generated from the café were incorporated into a locally produced compost, which in turn was used on airport grounds. In just five months more than a tonne of coffee ground waste was diverted from landfill because of the experiment. Since January 2021 organics waste collection resumed within the terminal and from February 2021 all food and beverage outlets resumed coffee ground diversion. The Circular Experiment with Red Square Café ceased at the end of 2020, as the café no longer operated within the Terminal building. Hobart Airport will continue to investigate opportunities and incorporate Circular Economy principles into projects as they arise.

Waste auditing commenced in the Administration building in January 2021. Results indicated opportunities for further segregation as pod bins (landfill and recycling) were indicating cross-contamination regularly. An initiative from the Executive Leadership Team led to the removal of all pod bins and an enhancement of our six-stream segregation system in the kitchen area. This change was initiated to take some of the confusion out of waste segregation in the desk areas and to encourage more efficient segregation using colour coding and educational information. This change was initiated as a trial with the intent to transition towards a permanent arrangement.



Figure 11 Six-stream waste segregation in the Administration Building

The streams of waste segregation include:

1. Soft plastics (taken off site for disposal)
2. Cardboard
3. Co-Mingled (yellow)
4. Organics (green)
5. Landfill (red)
6. Compostable coffee cups (black)

To embed improved waste segregation in the Administration Building, a training module was developed for all staff to complete. The module provides waste information relating to the Airport's overarching Waste Management Strategy and sustainability targets, as well as embedding this knowledge through a series of multiple choice questions to test staff knowledge on waste management practices and expectations within the organisation. Waste audits on the Administration bins will commence in July 2021 to gauge efficacy.

All compostable coffee cups can be diverted to the organics waste stream. Coffee grounds generated within the office building have been segregated for two years. This location is now clearly designated and is in a former bin area. Staff take coffee grounds home for gardening or compost.



**Figure 12 Coffee ground segregation**

#### Diversion of Biosecurity Magazine Waste

Biosecurity waste is a regulatory requirement in Tasmania and constitutes all waste collected from aircraft and in airside areas. All biosecurity waste is deep buried in landfill as per the Tasmanian Government requirements. In 2018, biosecurity waste comprised 35% of the Terminal generated waste. This waste is largely comprised of food waste, packaging, beverage containers and non-putrescible items that include magazines, newspapers and headsets.

At the end of each month airlines dispose of in-flight magazines, all of which are currently disposed into biosecurity waste. This equates to approximately 850 magazines per month which are transferred

to deep burial landfill environments. Magazines are already segregated on the aircraft and transferred by Ground Handling Agent (GHA) staff to separate biosecurity bins awaiting collection. Hobart Airport proposed to Biosecurity Tasmania that magazine waste can be transferred to a co-mingled recycling stream with minimal risk to existing biosecurity measures.

Hobart Airport’s intention is to target magazine segregation in the first instance, as this is perceived as the lowest risk item, and in time, advance to segregating newspapers, and eventually beverage containers as practices are embedded and training/education transferred to airline staff. Endorsement from the Biosecurity Operations Branch was sought prior to the initiative being implemented on preparation and endorsement of an Operations Manual. The diversion of magazine waste at the end of month occurred in February 2020 for all aircraft. The initiative has been suspended during the Covid-19 pandemic and is intended to resume when it is deemed safe to do so.

#### Carpark bin sensors

There are approximately 25 stand-alone general waste bins distributed throughout the car parking



areas and connecting locations. Under normal circumstances, the bins are emptied daily, as per routine maintenance requirements, however not all bins are at capacity when emptied, resulting in smaller collections in some locations and unnecessary use of plastic bin liners which end up in landfill.

To better understand the filling rates of bins, sensors have been placed on 20 bins in car parking areas. The sensors identify when the bin is ¾ full, sending a message via SMS to contractors and therefore improving the efficiency of waste management in car parking areas. The sensor trial was near completion when disruption occurred from the Covid-19 pandemic.

The trial remains stalled, however the number of bins provided for the car parking areas has been reduced dramatically and will be replaced with a

**Figure 13 Car parking bin with sensor**

two-stream waste segregation option that aligns with the outdoor forecourt areas. The placement of bins will occur in FY22, the outcomes of which will be summarised in next year’s AER.

### 3.10 Tenant Audits

A total of 20 Tier 1 and 2 tenants were individually audited during the months of October 2020 – June 2021 by the HBA Environment Manager and assisted by a trained HBA staff member. Tier 1 tenants include those tenants undertaking activities that have the highest likelihood of interacting with the environment and those that have the potential to significantly impact environmental values i.e., fuel stations and storage, car rental agencies, those storing hazardous chemicals. Tier 2 tenants are audited every 2 years and include tenants that undertake lower risk activities. All Tier 1 and Tier 2 tenants were audited during the reporting period.

The individual audits assessed compliance against the AEP Regulations and HBA targets and objectives outlined in Chapter 13 *Environment* of the current Master Plan. The audits address issues pertaining to the management of natural resources, energy, water, soil, biodiversity, noise and waste. Any follow up actions identified from the previous year's audit were also undertaken. A report on each tenant was completed and provided to the AEO for review. All audit reports are incorporated into the IMS.

The key outcomes of the audits identified the following:

#### Cultural Aspects

Most tenants were aware of the cultural aspects associated with airport land and buildings. All were aware of the historical significance of Llanherne House and were aware that there were Aboriginal heritage sites present. While the location of the Aboriginal heritage sites was not necessarily known, this is largely due to state government requirements into keeping information on these sites out of the public arena. All tenants were informed of the recent listing of the Air Traffic Control Tower as a site of heritage significance, due to its World War II heritage value. Airservices manage the site in accordance with their Cultural Heritage Management Plan.

#### Natural Values

There is the potential for impacts to protected values by contractors and tenants who may have the need to interact with the natural environment as part of their day-to-day activities. Most tenants are aware of the conservation zones or environmentally sensitive areas across the airport site, particularly those tenants whose activities had potential interaction with environmental values. All tenants were made aware of the excluded areas associated with environmentally significant areas.

#### Air Quality

Potential air quality issues are largely associated with hot fire training exercises by the Air Rescue Fire Fighting (ARFF) Service at the fire training grounds. ARFF provide hot fire reports to the Airport Environment Officer (AEO) and the HBA Environment Manager on completion of each exercise. The report provides details on the time and date of the exercise, duration, the type and quantity of fuels, extinguishing agent, and any unusual environment event.

Asbestos related material exists in various buildings and structures throughout the airport site. All tenants were aware if their building contained asbestos or not and where the signage was located, if

present. Asbestos related material was removed from the non-heritage extension to Llanherne House in April 2021. All sites are documented in HBA's Asbestos Register which is updated regularly. Asbestos locations discovered as part of projects are incorporated into the Asbestos register.

#### Water Quality

Lower Sinclair Creek receives runoff from a range of sources across the airport site including aprons, taxiways, airside wash down areas, surface drainage, grated drain inlets in car parking areas and open drains. Runoff from these areas has the potential to contain a range of contaminants including hydrocarbons, bacteria, general litter, and silt. Surface water quality monitoring is undertaken at strategic locations around the airport to detect levels of contaminants (if any), and to effectively manage the airport site so that impacts to surface water quality are minimised. All reports are provided to the AEO on completion throughout the year.

Groundwater is monitored across the airport site, around the perimeter and at specific locations where activities with potential environmental risk occur, such as the fire training ground and fire station. Estimated aquifer levels around the airport's perimeter range in depth from 0.5 – 4.5m. Due to the nature of the sandy soils, there is the potential for contaminants to migrate through soils and into the underlying groundwater. Groundwater Monitoring Events (GMEs) are undertaken by HBA twice yearly, and annually by ARFF through specialist consultants. Reports are provided to the AEO and the HBA Environment Manager. The HBA GME reports are provided in **Appendix C**.

#### Natural Resources

A review of the electricity usage for the airport was undertaken in July 2021. The total energy usage (kwh) is documented per quarter. It is important to note that the electricity usage is best estimate only. This is due to the gradual transition to smart meters for tenancies across the airport and the disruption to energy readings during construction periods.

Overall results in energy usage for the past 12 months indicate a general decrease in energy usage over the last financial year which is expected due to the impacts from the Covid-19 Pandemic. A quarterly breakdown is provided below and includes all users on site, including the Department of Health and Human Services (DHHS) catering kitchen, which is a high energy user. In addition to the impacts caused by the pandemic, it is also expected that seasonal influences affect energy usage, with more heating required in winter months and cooling in summer.

- A decrease in energy usage in Quarter 1 (September 2020) by 20.33%
- A decrease in energy usage in Quarter 2 (December 2020) by 22.33%
- A decrease in energy usage in Quarter 3 (March 2021) by 1.04%
- An increase in energy usage in Quarter 4 (June 2021) by 27.71%

Hobart Airport uses potable water except for the HBA Administration Building which operates off filtered tank water and is supplied by treated drinking water during lower rainfall periods. The total

water usage for 2020-2021 was 32,648 kL. Comparisons are made to previous year's usage and is incorporated into the ACI sustainability inventory and the GHG calculator for carbon reporting.

#### 4. Environmental Site Register

The Environmental Site Register (ESR) is a written record of the airport's environmental condition and its approach to environmental management. The range of information held by the airport and that relate to environmental matters includes:

- Environment Chapter 13 within the current Master Plan (2015) which outlines the targets and objectives for environmental management over a five-year period. The revised Master Plan which is currently being drafted and will include revised targets and objectives.
- Site management plans i.e., Llanherne House, Weed Management Field Manual, HBA Weed Management Plan, Seven Mile Beach Conservation Area Management Plan, Waste Management Strategy, Carbon Management Plan, Climate Change Adaptation Plan.
- Monitoring programs i.e., surface water, groundwater, threatened species, vegetation communities, weeds.
- Information within investigation reports.
- Preliminary Site Investigations (PSIs).
- Detailed Site Investigations (DSIs).
- Details of remedial/rehabilitation plans for areas on airport land where applicable.
- Site Management Procedures.
- Registers i.e., Asbestos register, stockpile register, ozone depleting substances register, contaminated sites register, Environmental Aspects and Impacts register, environmental compliance register.
- Details of the nature, date and place of any occurrence of environmental significance.
- Details of any discoveries made during investigations or routine procedures on matters that affect the environment i.e., asbestos sites, areas for further investigation etc.

##### 4.1 Monitoring by Hobart Airport

Routine environmental monitoring is undertaken at the airport by HBA and sub-lessees. Monitoring that has been undertaken by HBA includes:

- Surface water monitoring at locations (HIA01, HIA03A, HIA04, HIA06, HIA07 and HIA09). HIA04 rarely contains water. The AEO has approved the change in monitoring frequency of this site to one sample per year, when water is present. When HIA04 is dry and there is standing water in HIA04A (new drainage line from northern runway extension area), then sampling will be undertaken at this site.
- Twice yearly groundwater monitoring of five groundwater bores around the perimeter of the airport (HA19, HA20, HA21, HA22 and HA23) is undertaken. Monitoring events are timed to

ensure that summer and winter groundwater levels are obtained. This information will inform contaminant movement and groundwater levels under seasonal influences.

Surface water monitoring locations are summarised in Table 2 and illustrated in Figure 15.

**Table 2 Surface water sampling locations**

Sampling Site	Physical location
HIA01A	Upstream at the airport property boundary in open drains (Sinclair Creek catchment)
HIA03A	Downstream drainage channel on estuary of Sinclair Creek catchment at security fence
HIA04	Stormwater swale draining to Barilla Bay, northern boundary
HIA04A	Stormwater drainage line extending from the northern runway extension area
HIA06	Stormwater drain off Gatty Street and buildings complex
HIA07	Stormwater drain from passenger terminal, central area and WWTP discharge point
HIA09	Sinclair Creek confluence with Pittwater at Five Mile Beach



**Figure 14 Surface water monitoring locations**

## Surface Water

Surface water monitoring events were undertaken in September 2020 and March 2021 by the HBA Environment Manager. All parameters are analysed by a NATA accredited laboratory and include the following:

- Nutrients
- Faecal coliforms and *E.coli*
- Heavy metals and hydrocarbons
- Total suspended solids
- In-field measurements which include Dissolved Oxygen (DO), conductivity, temperature and pH.

The results of each surface water monitoring event are compared against limits indicated in Schedule 2 of the *Airports (Environment Protection) Regulation 1997*, and the trigger values for toxicants of the ANZECC Guidelines for Fresh and Marine Water Quality (2000). All PFAS results are compared against the limits provided in the *PFAS National Environmental Management Plan 2.0*.

Results from the monitoring events indicate the following trends:

- The conductivity at all sampling locations outside the tidal zone generally characterizes freshwater environments from lowland rivers. Sites within the tidal zone (HIA03A and HIA09) record higher salinity levels, influenced by tidal movement of estuarine waters, with higher levels noted on incoming tides.
- The pH range for all samples was within the specified range for lowland rivers, remaining relatively consistent throughout all seasons.
- Total suspended solids fluctuated throughout the year consistent with rainfall events or flows that are sediment loaded. The Sinclair Creek system is subject to intermittent flows which are usually episodic and short in duration. As such variations in suspended solids are expected in a water course of this nature.
- Thermotolerant coliform levels were relatively consistent across most sites throughout the year with all sites displaying elevated levels. Levels are consistently lower at HIA09 where Sinclair Creek discharges at Five Mile Beach, dilution being the major factor.
- Hydrocarbon results were within the AEPR recommended limits for all sites.
- Ammonia results across all sites are generally within the recommended AEPR limit. Results indicate that these levels are influenced by a combination of seasonal factors and the sampling site's proximity to the WWTP (HIA07). Similarly, if samples are taken close to the time of discharge from the WWTP, this too can influence general nutrient concentrations. Downstream values for ammonia are also within the recommended limits, indicating a low risk of toxicity to the receiving waters.
- Results of all samples collected during the period are at or above the recommended limits for total nitrogen and occasionally, total phosphorus. Elevated nutrient concentrations in the

upstream environment are representative of a disturbed drainage environment with possible sources including agricultural runoff and/or other soil disturbances in the catchment area upstream external to the airport site. Discharges from the WWTP may also contribute to fluctuations in nutrient levels. TasWater is continually working on solutions to improve nutrient concentrations and within Sinclair Creek and define sources. During the last reporting period approximately 90% of water was reused for agricultural purposes as a result of salinity improvements.

- Copper and lead (metals) levels were generally within the AEP recommended limits across all sites throughout the year, with some minor, but not significant fluctuations. It is unlikely that any elevation in metal concentrations of the levels encountered will have an adverse impact of in-stream aquatic fauna off site. Environmental buffers exist between the airport boundary and receiving waters which allows for the dissolution of metals and mixing with tidal flows.
- PFAS concentrations meet the Commonwealth PFAS NEMP Guideline 2.0 levels for 90% species protection at the offsite sampling location (HIA09). PFAS concentrations at HIA06 (landside) meet the PFAS NEMP Guideline levels for 80% species protection, which is acceptable for the condition of the creek at this location and its highly modified state.

All results from surface water sampling events have been provided in the surface water monitoring reports to the AEO. Any distinct trends and anomalies are analysed and discussed with the AEO at monthly meetings and with stakeholders as required.

#### Groundwater

Consultants were engaged by HBA to undertake the Groundwater Monitoring Event (GME) of the perimeter bores in February and July 2021. A summary of the groundwater assessments is provided below:

##### February 2021

- Comprehensive groundwater analysis was undertaken in February 2021 for the HBA perimeter bores to meet regulatory compliance and to inform the Airport on any associated level of risk in groundwater to human health and the environment, resulting from site activities.
- All wells were analysed for PFAS species, due to the known historical use of AFFF containing PFAS at various locations onsite.
- Groundwater elevation on site was measured to be between 0.61 and 3.22 m below top of casing (BTOC) and were comparable with previous GME's.
- Flow directions on site have changed to a south-easterly direction, which is consistent with the Summer 2020 GME.
- PFAS concentrations fluctuate at well HA-23, however PFOS continues to exceed the HEPA 2018 ecological guideline limits. Groundwater at this location is likely to discharge to Pitt Water Nature Reserve.

- Dissolved metal concentrations on site fluctuate, with possible seasonal trends in copper and zinc concentrations, and a probable increasing trend in chromium and zinc concentrations in HA- 23. Risks to the environment and human health are considered low from these metals.
- Nitrate and total Nitrogen concentrations are elevated and increasing at HA-20.
- The nitrate concentration in HA-19 is fluctuating. This well is at least 1.2 km from the nearest coastline of Seven Mile Beach and is unlikely to be a risk to the receiving environment based on likely natural attenuation.
- Pesticides and hydrocarbons were below guideline limits at all wells, and typically below laboratory limits of reporting.
- Phosphorus concentrations are stable across monitored bores.

#### July 2021

- Groundwater elevations were comparable with previous GME's.
- Flow directions have changed to an east-south-easterly direction, which is consistent previous GMEs at this Site.
- PFAS concentrations fluctuate at well HA-23, however PFOS continues to exceed the HEPA 2018 ecological guideline limits. Groundwater at this location is likely to discharge to Pitt Water Nature Reserve.
- Dissolved metal concentrations on site fluctuate (especially copper, chromium, cobalt, nickel and zinc), with increasing trend in zinc concentrations in HA-23. No other trends were observed. Currently the risks to the environment and human health are considered low from these metals.
- Nitrate and nitrogen concentrations are steadily increasing at HA-20 which is the closest well to the receiving environment of Seven Mile Beach. HA-20 is 300 m up gradient from the receiving environment of Seven Mile Beach, and down gradient from the TasWater wastewater treatment plant and the Westland Nursery, these facilities may be contributing nutrients to the groundwater.
- The nitrate concentration in HA-19 is fluctuating. This well is at least 1.2 km from the nearest coastline of Seven Mile Beach and is unlikely to be a risk to the receiving environment based on likely natural attenuation.
- Pesticides and hydrocarbons were below guideline limits at all wells and continue to remain below laboratory limits of reporting.
- Phosphorus concentrations are elevated in HA-21, HA-22 and HA-23, however the concentrations are stable.

Groundwater monitoring reports for both GMEs are provided in **Appendix C**.

## Asbestos

The Asbestos Register is a working document that is reviewed and updated regularly, particularly as work is undertaken around the airport site in buildings/structures that contain asbestos related material. An assessment on buildings and infrastructure that contain asbestos was undertaken in June 2015. A review of the register is undertaken annually.

Any asbestos removal is undertaken by a licensed contractor and all works are approved by the Airport Building Controller, in accordance with the *Airports (Building Control) Regulations 1996*.

### 4.2 Monitoring by Sub-Lessees

Routine monitoring by sub-lessees is undertaken for the following:

- Routine monitoring of effluent from the Cambridge Wastewater Treatment Plant, reported by TasWater.
- Annual groundwater monitoring is undertaken by Airservices Australia from bores located at the fire training ground and Airservices building. Reports are provided to the AEO and the HBA Environment Manager.
- Airservices Australia undertake a Groundwater and Surface Water monitoring program that meets Airservices' environmental and site management obligations associated PFAS contamination and other firefighting activity related impacts. The plan includes an increase in monitoring sites and frequency for both surface water and stormwater, and a continuation of groundwater monitoring from existing wells.
- Annual groundwater monitoring of three groundwater bores located at the BP Bulk Fuel Depot and reported by Air BP.
- Annual surface water monitoring of the Air BP stormwater treatment system by Air BP.

Additional monitoring may be required by tenants because of construction or operational activities. Similarly, if monitoring is requested, all reports are provided to the HBA Environment Manager and AEO for review.

### TasWater Wastewater Treatment Plant (WWTP)

The Cambridge Wastewater Treatment Plant is operated by TasWater and is located on the south eastern side of the airport (Figure 16). The WWTP is regulated by an Environment Protection Notice (EPN) No. 7447/2 which outlines the environmental conditions and limits in which the plant must operate. The conditions are set by the Tasmanian Environment Protection Authority (EPA).



**Figure 15 Cambridge Wastewater Treatment Plant location**

Source: [www.thelist.tas.gov.au](http://www.thelist.tas.gov.au)

An annual report is prepared by TasWater and summarises the performance of the WWTP. The report is submitted to the EPA for review.

A full copy of the TasWater Annual Environment Report is provided in **Appendix F**.

Key findings of the TasWater Annual Environment Report can be summarised as follows:

- Monthly flow data for 2019-2020 is submitted directly to the EPA (Tasmania).
- Average daily influent volume for the reporting period totaled 620.8 kL/day.
- The total effluent discharged to waters was 54.9 ML. Discharge to reuse totaled 191.4 ML and is a significant increase to reuse from the last reporting period.
- BOD and Chlorine achieved 92% compliance.
- Ammonia, Nitrogen, oil and grease, Phosphorus, E.coli and suspended solids achieved 100% compliance.
- There were ten bypass events in the reporting period. All bypass events were the results of rainfall and discharged via the effluent discharge location.
- Three non-compliances were reported to the EPA, details of which are provided in the STP report.

## Groundwater and Surface water Monitoring

Airservices Australia's Aviation Rescue and Fire Fighting (ARFF) service operate and manage the firefighting facilities at the airport. The current year's Airservices Australia Groundwater and Surface water Monitoring Event was undertaken on 20-22 July 2021. The event included monitoring bores from both the Hot Fire Training Ground (HFTG) and the Main Fire Station (MFS) at Hobart Airport, comprising 11 groundwater locations, and seven surface water locations. The findings of this report are as follows:

### *Groundwater - Hot Fire Training Ground (HFTG) and Main Fire Station (MFS)*

- PFOS concentrations in the 14 groundwater samples exceeded the adopted PFAS NEMP (2020) Freshwater and Interim Marine Water values for 99% Species Protection, with ten samples also exceeding the 95% Species Protection value. One sample, FTG\_MW3 was reported below the LOR, but it is noted that the 99% guideline value is lower than the LOR.
- With the exception of this sample, concentrations for PFOS ranged between 0.007 µg/L and 1,540 µg/L.
- Eight groundwater samples exceeded the adopted ADWG (2018) Health Drinking Water Guideline for PFOA with concentrations ranging between 0.581 µg/L (AR3) and 136 µg/L. Two of these samples also exceeded the NHMRC (2019) Health Recreational Water.
- Sum of PFHxS and PFOS concentrations exceeded the adopted ADWG (2018) Health Drinking Water for 12 of the samples with concentrations ranging from 0.486 µg/L to 2,860 µg/L. Ten of the samples also exceeded the NHMRC (2019) Recreational Water guideline.
- One groundwater sample (within the CFTG) was analysed for PFAS post-TOP assay. The sum total of PFAS post-TOPA increased considerably from pre-TOPA concentrations for (3,740 to 4,560 µg/L). The high concentration of the sum total of PFAS post-TOPA indicates that precursors may be present in the sample (preTOPA).
- The 2021 monitoring results were generally within an order of magnitude for PFOS, PFOA, PFHxS and sum of PFHxS and PFOS groundwater concentrations trends, except for the following locations were reported with some notable fluctuations:
  - DG6
    - PFHxS has increased nearly by a magnitude greater compared to last few monitoring rounds.
    - PFOS concentrations have shown fluctuations in the last few rounds, however the historical trend shows an overall decreasing trend over time.
  - AR2 and AR4 are showing a notable drop in PFHxS, PFOS, PFOA and sum of PFHxS and PFOS since the last monitoring round.
  - Despite the drop of PFOS concentration from last monitoring round, DG5 appears to have a generally increasing trend over time.
- There were no exceedances of adopted groundwater guidelines for sulfate or fluoride in any of the 14 samples analysed.

- There were no exceedances of adopted groundwater guidelines for TRH and BTEXN at any of the locations sampled at the site.
- There were no results for PAH above the LOR. However, it is noted that the LOR for Benzo(a)pyrene was greater than the adopted ADWG (2018) Health and Recreational groundwater guidelines.
- The MBAS concentration was reported above the LOR for three of the five analysed samples ranging between 70 to 2,700µg/L.

#### *Surface Water - Sinclair Creek*

- PFOS concentrations in the ten surface water samples exceeded the adopted PFAS NEMP (2020) Freshwater and Interim Marine 99% and 95% Species protection, with concentrations ranging between 0.343 µg/L and 46.4 µg/L. No samples exceeded the guideline values for PFOA.
- Seven surface water samples exceeded the NHMRC (2019) Recreational Water guideline, with concentrations ranging between 7.32 and 54.6 µg/L.
- Three surface water samples were analysed for PFAS post-TOP assay. The sum total of PFAS post-TOPA increased slightly from pre-TOPA concentrations. This indicates precursors may be present to a limited extent in the sample (pre-TOPA).
- The 2021 monitoring results were generally within the historical range for PFOS, PFOA, PFHxS and sum of PFHxS and PFOA concentration with some fluctuations noted.
- There were no exceedances of adopted surface water guidelines for sulfate or fluoride in any of the ten samples analysed.
- There was one exceedance of adopted surface water guidelines for TRH and BTEXN of the two samples analysed with the concentration of C10-C36 (Sum of Total).
- There were no results for PAH above the LOR. However, it is noted that the LOR for Benzo(a)pyrene was greater than the adopted ADWG (2018) Health and Recreational surface water guidelines.
- The MBAS concentration reported for one surface water site was 540 µg/L.

The full groundwater report has been provided to the AEO.

#### Groundwater Bores at AirBP Bulk Fuel Depot

AirBP Australia Pty Ltd (BP) undertakes annual groundwater monitoring at the bulk fuel storage and refueling area located airside. A groundwater monitoring event was undertaken on 16 June 2021 to gauge and sample the 2 groundwater monitoring wells. Results of the sampling event indicate the following:

- Groundwater was intersected between 0.628 and 0.916 metres below top of well casing (mBTOC).
- Groundwater flow is generally towards the north with an approximate average hydraulic

gradient of 0.0062.

- Light Non-Aqueous Phase Liquids (LNAPL) was not observed in any of the wells, nor has it been reported in the past.
- No hydrocarbon or unusual odours were observed.
- All COPC concentrations were reported as below the LOR, which is consistent with historical results.
- No exceedance of the adopted assessment criteria was reported.

The annual GME program will continue, with the next event scheduled for 2022.

#### Air BP Stormwater Treatment System

BP undertakes monthly surface water sampling at discharge points of the stormwater treatment system. SW1 was sampled on 17 June 2021. All parameters listed below were within the AEPR accepted limits of contamination for water (Part 11, Schedule 2):

- Total dissolved solids
- Total BTEX
- TPH C6-C9, C10-14, C15-C28, C29-C36

#### Air BP NPI Reporting

Air BP submits a National Pollutant Inventory (NPI) Report on an annual basis via the NPI online reporting system. The 2020-2021 report provides information on any increase or decrease in emissions when compared to previous reporting years.

Copies of all the above-mentioned environmental monitoring reports for Air BP are provided in **Appendix G**.

#### BP Hobart Airport Service Station GME

An annual GME was undertaken in wells at this site on 17 June 2021. The GME was completed in accordance with BP's Standard Operating Procedure and all samples were analysed by a NATA accredited laboratory for Total Petroleum Hydrocarbons (TPH), Total Recoverable Hydrocarbons (TRH), Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and Naphthalene. Results of the sampling event indicate the following:

- Groundwater was intersected between 1.920 and 2.402 metres below top of well casing (mBTOC)
- Light Non-Aqueous Phase Liquids (LNAPL) was not identified in any of the wells gauged
- Inferred groundwater flow direction is to the west, with an approximate average hydraulic gradient of 0.018
- The reported results from the existing monitoring well network is reported consistent with historical results, with all COPC concentrations below LOR.

- All wells reported hydrocarbon concentrations below the *Airports (Environment Protection) Regulations 1997* – accepted limit of contamination for fresh water or marine water.
- No exceedances of the adopted assessment criteria were reported.

A copy of the BP Airport Service Station GME report is provided in **Appendix G**.

#### 4.3 Remedial Plans

No remedial plans are required or have been developed for any area of airport land at the time of reporting.

#### 4.4 Additional Environmental Initiatives

Additional environmental initiatives undertaken during the reporting period are summarised within the above sections of this report. They include the expansion of the Watch Out for Wildlife Campaign to include messaging at the entry of every town on the East Coast Tourist Drive.

#### 4.5 Occurrences of Environmental Significance

There were no occurrences of environmental significance documented during the 2020-2021 reporting period that have not already been addressed within this report.

#### 4.6 Cultural Discoveries

There were no discoveries of Aboriginal cultural heritage or historic heritage during the 2020-2021 reporting period. The requirement for an Unanticipated Recovery Plan remains in areas where cultural artefacts are known to exist.

### 5. Progress against Environmental Commitments in the AES

Environmental commitments are outlined within Environment Chapter 13 of the current Master Plan (2015-2020). Environmental commitments are defined as Environmental Management Framework Commitments and Environmental Value Commitments. Each commitment is linked to the Hobart Airport Policy Objectives.

Progress against these commitments is outlined in **Appendix H**. Each commitment is colour coded for easy identification as to the commitments achieved, those commitments that are routine and therefore addressed as required, and those that are continuous and require ongoing action.

A total of 53 environmental objectives and targets are identified in Chapter 13 of the Master Plan within the Environment Chapter. These achievements are reflected in the number of commitments met, and those that remain routine and ongoing. Routine and ongoing commitments are achieved as a matter of course should the need arise. Of the 53 commitments identified, all have been achieved within the strategy period.

	Commitments Achieved	<b>44</b>
	Routine (as required)	<b>6</b>
	Continuous (ongoing)	<b>3</b>
	To be completed	<b>0</b>

### 6. Enduring Environment Pollution Problems

Enduring environmental issues are discussed in Section 4.2.

### 7. Incidents of Pollution and Contraventions of the Regulations

There have been two incidents of pollution or contravention of the Airport regulations during the 2020-2021 reporting period. Both incidents are related to the activities undertaken by external contractors in their leased area of the Gate 15 A Compound. The events were identified in June 2021 and escalated internally within HBA and to the Commonwealth appointed AEO. Each incident was recorded in the Airport’s incident management system BA365 and can be summarised as follows:

1. The Contractor transported fill material on site without testing and stockpiled within the compound. The material was deemed virgin material but resulted in a non-compliance against the *Airports (Environment Protection) Regulations 1997*. The Contractor was instructed to test the material as soon as possible to determine classification of the material. This was undertaken and the stockpiled material was formally classified as Level 1 fill material – suitable for reuse.
2. The same Contractor mixed stockpiled material at the compound that had been segregated due to low level contamination risk. The mixed material formed an unauthorised “slurry” or wastewater pit, for material to be discharged. It became evident that sub-contractors to Fulton Hogan were using the pit to discharge wastewater from unknown sources outside the airport. The Contractor was instructed to decommission the wastewater pit and sample the surrounding soils to determine whether cross contamination had occurred. Testing was undertaken with most of the mixed stockpile formally classified as clean fill. Several stockpiles were recorded as having hydrocarbon levels above the virgin material classification and will be disposed of in accordance with the Regulations.

Both incidents will continue to be managed during the subsequent reporting period.

APPENDIX A – Sustainability Strategy – Pillars





## APPENDIX B – GHG Inventory Report

APPENDIX H – Progress Against AES Commitments

	Commitments Achieved	<b>44</b>
	Routine (as required)	<b>6</b>
	Continuous (ongoing)	<b>3</b>
	To be completed	<b>0</b>

Target – Resource Use	Timeframe	2020/2021 Deliverable	KPI
Development and implementation of energy efficient strategies using information provided from reputable sources and adopt recommended actions where applicable	As required	Y	Energy efficient strategies adopted and identified in CMP
Incorporate energy efficient measures for new developments	As required	Y	Incorporated into new developments
Continue to identify opportunities to improve natural resource use during annual tenant audits and review HBA resource use for the AER	2015-2020	Y	Number of new opportunities identified from audits
Continue to investigate and promote recycling initiatives for tenants	2015-2020	Y	Number of recycling initiatives promoted for tenants
Ensure Contractor CEMPs include measures to reduce generation of waste	2015-2020	Y	Waste reduction included in all CEMPs
Promote water reuse from the WWTP when water quality is suitable for reuse	2015-2020	Y	Water reuse promoted when suitable

Target - Land	Timeframe	2020/2021 Deliverable	KPI
Continued investigations into PFOS and PFOA and remediation measures and liaison with Airservices	Ongoing	Y	PFC investigations undertaken and ongoing communication with Airservices
Annual review and update of contaminated sites and UPSS register	Annual	Y	Reviewed annually and updated in IMS
Investigations into the remediation of disused landfill site (airside)	2016	Y	Investigation undertaken
Incorporation of mitigation measures to land in CEMPs	As required	Y	Included in all CEMPs
Site investigations of potential contaminated sites prior to disturbance or development projects, including analytical testing	As required	Y	Site investigations undertaken in areas of known contamination
Incorporation of the Commonwealth PFAS Management Guidelines for the management of PFAS impacted soil and water	As required	Y	Guidelines incorporated into assessments
Assessment and clearance of sites where UPSS are removed by a qualified consultant	As required	Y	Environmental clearance gained
Appropriate mitigation measures in place where the potential for disturbance of acid sulphate soils exist	As required	Y	Mitigation measures included in CEMPs

Target – Surface water and groundwater	Timeframe	2020/2021 Deliverable	KPI
Continuation of surface water quality monitoring and groundwater monitoring (reduced scope due to Covid-19 Pandemic)	Ongoing	Y	Number of events undertaken
Water quality monitoring reports to be provided to AEO and review program periodically based on results	Ongoing	Y	Reports submitted to AEO

Communication with TasWater regarding wastewater discharges and potential impacts or complaints	Ongoing	Y	Incidents raised with HBA
Communication with tenants on stormwater control devices (servicing and maintenance) and effectiveness of mitigation measures	Annual	Y	Evidence of communication and audit reports
Annual review of SMPs relevant to water quality, update as required and include within the IMS	Annual	Y	Reviewed annually and updated in IMS
Review and update of SMPs 05 and 06	2016-2017	Y	Reviewed annually and updated in IMS
Ensure all CEMPs on projects identify environmental risks to water quality and the appropriate mitigation measures are in place to prevent/minimise environmental harm	As required	Y	Mitigation measures included in CEMPs

Target - Biodiversity	Timeframe	2020/2021 Deliverable	KPI
Continued liaison with relevant departments at the state and Commonwealth level regarding biodiversity issues as they arise	As required	Y	Liaison on biodiversity issues
Continue to ensure that all CEMPs incorporate measures to minimise potential adverse impacts to biodiversity values	As required	Y	Mitigation measures included in CEMPs
Annual review of site management procedures relevant to biodiversity, update as required and include within the IMS	Annual	Y	Reviewed annually and updated in IMS
Annual assessment of targeted threatened species populations during optimal flowering periods and updated mapping	Annual	Y	Priority annual assessments undertaken
Continue to raise awareness of airport biodiversity values through annual tenant auditing	Annual	Y	Included in tenant auditing
Continued monitoring and management of pest and weeds throughout the site	Annual	Y	Weed monitoring occurs

Target - Biodiversity	Timeframe	2020/2021 Deliverable	KPI
Development and implementation of management actions to improve selected areas of grassland to EPBC qualification level and monitoring of success	2015-2020	Y	Management actions implemented (weed control, inspections)
Undertake targeted fauna survey for the Tussock skink in grassland areas	2015	Y	Survey undertaken Alternative survey methods to be trialled in future site investigations
Ensure construction activities incorporate mitigation measures to minimise impacts to adjacent wetlands e.g., silt traps, detention facilities, run-off control	As required	Y	Mitigation measures included in CEMPs
Review operational activities and procedures to ensure potential impacts to adjacent Ramsar listed wetlands are minimised	Annual	Y	Reviewed annually and updated in IMS

Target – Cultural Heritage	Timeframe	2020/2021 Deliverable	KPI
Continued liaison with relevant departments at the state and Commonwealth level and community organisations regarding heritage issues as they arise	As required	Y	Liaison with Departments on historic and Aboriginal heritage issues
Continue to ensure that all contractor CEMPs incorporate measures to minimise potential adverse impacts to heritage values	As required	Y	Mitigation measures included in CEMPs
Implementation of the CHMP and recommendations	Annual	Y	Recommendations of CHMP implemented
Annual review of site management procedures relevant to heritage values, update as required and include within IMS	Annual	Y	Reviewed annually and updated in IMS

Continue to raise awareness of airport heritage values through annual tenant auditing	Annual	Y	Awareness raised through auditing process
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Target – Air quality	Timeframe	2020/2021 Deliverable	KPI
Document and respond to air quality related complaints raised because of activities at the airport	Ongoing	N	Complaints responded to and documented in IMS
Review of ARFF firefighting training reports and notifications and liaison as required	Ongoing	Y	Review undertaken
Review of contractor CEMPs to ensure potential air quality impacts are addressed	As required	Y	Mitigation measures included in CEMPs
Liaise with Government Departments regarding air quality initiatives/requirements where relevant to airport operations	As required	N	Liaison with Departments on air quality initiatives
Review and update of the environmental risk register within the IMS	Annual	Y	Reviewed annually and updated in IMS
Review and update of the HBA asbestos and ozone depleting substances register	Annual	Y	Reviewed annually and updated in IMS

Target - Noise	Timeframe	2020/2021 Deliverable	KPI
Continuation of discussions with CACG on potential noise related issues	Quarterly	Y	Noise issues addressed in CACG meetings
Review and update ground-based noise management procedures and implement accordingly	Bi-annually	Y	Reviewed annually and updated in IMS
Continue to liaise with tenants on mitigation measures for ground-based noise	Annual	Y	Ground-based noise issues addressed

Review of contractor CEMPs to ensure potential ground-based noise impacts are addressed	As required	Y	Mitigation measures included in CEMPs
Update complaints register regarding ground-based noise issues	As required	N	Register updated
Undertake noise quality assessments where impacts persist and remain unresolved	As required	N	Assessments undertaken
Participate in Government programs or initiatives on noise mitigation schemes	As required	N	Participation undertaken

Target – Hazardous materials	Timeframe	2020/2021 Deliverable	KPI
Review of legislative changes in waste management and implement any changes as required, including internal SMPs e.g., disposal of controlled waste and update IMS accordingly	Annual	Y	Review undertaken annually
Continue to liaise with tenants on mitigation measures for the handling and storage of contaminating substances during annual audits	Annual	Y	Mitigation measures discussed during annual audits
Ensure all potentially hazardous waste is classified and disposed of by a licensed contractor to an appropriate receiving facility	As required	Y	Hazardous waste disposed effectively
Review of contractor CEMPs to ensure the storage and handling of contaminating substances are addressed appropriately	As required	Y	Mitigation measures included in CEMPs