CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN

CLEARING AND CIVIL WORKS
EPBC 2009/4796 and EPBC 2013/7032

July 2015

Jandakot Airport Holdings Pty Ltd
16 Eagle Drive
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This Construction Environment Management Plan (CEMP) fulfils the requirements of the Airports (Environment Protection) Regulations 1997 and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Additional components are included in the CEMP to address conditions of approval for EPBC Act Referral EPBC 2009/4796 and EPBC 2013/7032. This CEMP for was submitted to the Department of the Environment (as required under the relevant EPBC Conditions of approval) on 13th February 2015. The Department of the Environment's review comments were received on 4th June 2015, and the amended CEMP was resubmitted 17th June 2015. Further amendments were submitted 12th July 2015.

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ABBREVIATIONS

ABC	Airport Building Controller
AEO	Airport Environment Officer
AEP	Aerodrome Emergency Plan
AER	Annual Environment Report
ASS	Acid Sulfate Soils
BC Regulations	Airports (Building Control) Regulations 1996
CACG	Community Aviation Consultation Group
CEMP	Construction Environment Management Plan
CMP	Conservation Management Plan
DIRD	Department of Infrastructure and Regional Development
DoE	Department of the Environment
DPAW	Department of Parks and Wildlife
EMP	Environment(al) Management Plan
EMS	Environmental Management System
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
EP Regulations	Airports (Environmental Protection) Regulations 1997
ERMP	Emergency Response Management Plan
JAH	Jandakot Airport Holdings
JAH EC	Jandakot Airport Holdings Environment Coordinator
JAH EM	Jandakot Airport Holdings Environment Manager
JAH FM	Jandakot Airport Holdings Facilities Manager
JUWPCA	Jandakot Underground Water Pollution Control Area
NEPM	National Environment Protection Measures
PDWSA	Public Drinking Water Supply Area
UWPCA	Underground Water Pollution Control Area

1 INTRODUCTION

1.1 Background

Jandakot Airport is leased from the Commonwealth Government by Jandakot Airport Holdings (JAH) and is an important piece of state infrastructure, being Western Australia's major general aviation airport. The airport covers an area of approximately 622 ha which has been developed over a period of more than 50 years. 119 ha are designated Conservation Precincts within Master Plan 2014. The Conservation Precincts are important habitat for a wide variety of flora and fauna species, some of which are rare or endangered.

Jandakot Airport has a responsibility to aviation business and the community to ensure that infrastructure, including the construction and widening of runways, taxiways and aprons, is in place to meet aviation demand and ensure the safety, efficiency and regularity of aviation and other traffic on and around the Airport. In 2008/09 JAH undertook extensive consultation and obtained approval of the Jandakot Airport Master Plan 2009 for runway and taxiway upgrades and a commercial development Precinct.

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) approval 2009/4796 (refer to Appendix A) was granted in March 2010 for the clearing of vegetation in accordance with the Jandakot Airport Master Plan 2009 (Figure 1) and the Jandakot Airport Offset Plan. The Department of the Environment (DoE) approved variations to the conditions of approval in April 2014. To date, three of the five clearing stages and associated civil works have been completed under the previous Construction Environment Management Plan (CEMP) (Version 7 June 2010) approved by the DoE 10 June 2010.

EPBC Act approval 2013/7032 (refer to Appendix B) was granted in July 2014. This approval allows for the clearing and development of Precincts 6 and 6A, as detailed in Master Plan 2014 (Figure 2).

1.2 Environmental Management Policy and Systems

This CEMP adheres to the JAH Environment Policy, which forms the basis of the JAH Environmental Management System (EMS). The policy recognises JAH's responsibility to maintain and protect the quality of the environment in and around its operations. In achieving this, JAH commits to establishing and maintaining a system that strives to:

- develop and manage Jandakot Airport in an environmentally sound manner
- comply with environmental legislation and regulations
- work with relevant authorities and the community to identify specific objectives and targets to minimise adverse environmental impacts
- pursue opportunities to promote efficient use of resources and increase recycling
- continually measure, monitor, report and improve upon the environmental performance defined by our objectives and targets
- promote the JAH commitment to the environment, employees, tenants, customers and neighbours.

1.3 Legislative and Statutory Obligations.

Jandakot Airport is principally subject to Commonwealth law. The key pieces of legislation controlling the operation of Jandakot Airport are the EPBC Act and the *Airports Act 1996* (Airports Act). The Airports Act is principally applied by way of the Airports (Environment Protection) Regulations 1997.

State legislation only applies to Commonwealth leased airports where it does not conflict with the above listed legislation. Where any inconsistency occurs, Commonwealth legislation prevails.

State legislation which is potentially relevant to construction at Jandakot Airport includes:

- *Dangerous Goods Safety Act 2004*
- *Environmental Protection (Controlled Waste) Regulations 2004*
- *Occupational Safety and Health Act 1984*
- *Environmental Protection (Noise) Regulations 1997*
- *Aboriginal Heritage Act 1972*
- *Wildlife Conservation Act 1950*.

1.3.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act provides protection to matters of national environmental significance which includes fauna and flora communities. The actions to clear and develop portions of the airport (as detailed within EPBC 2009/4796 and EPBC 2013/7032) have been assessed under the EPBC Act and approved subject to conditions.

1.3.2 Airports Act 1996

The Airports Act sets up a system for the regulation of airports and establishes an environmental management regime at leased Commonwealth airports. The Airports Act provides for all leased airports to be subject to a planning framework, including the requirement for a Master Plan and Environment Strategy.

1.3.3 Jandakot Airport Master Plan and Environment Strategy

A master plan is a 20-year strategic vision and guidance document for the airport and is required to be reviewed and approved every five years. As required under recent amendments to the Airports Act, the Jandakot Airport Master Plan 2014 incorporates the Jandakot Airport Environment Strategy, which provides a framework for the environmental management of the airport. This CEMP has been prepared to be consistent with the Jandakot Airport Master Plan 2014.

1.3.4 Airports (Environmental Protection) Regulations 1997

The *Airports (Environmental Protection) Regulations 1997* (EP Regulations) establish, in conjunction with National Environment Protection Measures (NEPM) made under s 14 of the *National Environment Protection Council Act 1994*, a Commonwealth regulatory and accountability system for activities at airports that generate or have the potential to generate pollution or excessive noise. Part 3 of the EP Regulations also promote the improvement of environmental management practices for activities carried out at airport sites. Airport Environment Officers (AEOs) are appointed by Department of Infrastructure and Regional Development (DIRD, formerly the Department of Infrastructure and Transport) to oversee the day to day implementation of the EP Regulations at each airport.

The EP Regulations set out provisions for potentially major sources of environmental impact including air, water and soil pollution and excessive noise. The EP Regulations provide guidance for the formulation of this CEMP. Importantly, the Regulations require all operators (including contractors) at Jandakot Airport to take all reasonable and practicable measures to prevent or at least minimise pollution. Contractor compliance can be enforced under the EP Regulations.

1.3.5 Airports (Building Control) Regulations 1996

Building activities are legislated under the Airports Act and regulated under the *Airports (Building Control) Regulations 1996* (BC Regulations). The BC Regulations outline the requirement for applications for works and building approvals. In relation to works being undertaken at Jandakot Airport, these take the form of a works or building permit. Permits are granted by DIRD Airports Building Controller (ABC), on application by the proponent taking the action. For actions detailed in EPBC 2009/4796 and 2013/7032, the proponent is the airport lessee (i.e. JAH). **No works are to commence without the express approval of DIRD and JAH through the issue of a Permit.** Actions approved under the EPBC Act still require a DIRD Permit prior to commencement.

1.4 Purpose and Scope of the CEMP

This CEMP describes the proposed measures to be implemented to help achieve and maintain acceptable levels of environmental impact. The CEMP is developed to ensure that all contractors, sub-contractors, employees and site visitors comply with environmental requirements and that environmental risks are adequately managed for the life of the project.

The CEMP forms the basis of environmental management during the planning and implementation of the clearing and civil works. The CEMP specifically applies to the remaining clearing and civil works stages approved in EPBC 2009/4796 (i.e. stages 3 and 5 as detailed in Figure 3 and the East Link Road component of Stage 2) as well as all clearing and civil works approved in EPBC 2013/7032 (i.e. Precincts 6 and 6A).

The CEMP does not apply to lot development (i.e. building construction and related lot development activities once clearing and civil works covered under this CEMP are complete).

This CEMP comprises the following:

- measures to incorporate environmental considerations into the construction of the proposed works
- environmental management measures which will be implemented during construction
- environmental management checklists to assist with monitoring the implementation of environmental management obligations during construction works.

Appendix C sets out the relevant requirements of Condition 8 of EPBC 2009/4796 and Condition 3 of EPBC 2013/7032 and describes where the requirements are addressed in the CEMP.

This CEMP has been developed to meet the requirements of the EPBC Act as well as the Airports Act (including BC and EP Regulations and Master Plan 2014).

1.5 Relationship to Other Management Plans

Other management plans associated with this CEMP (as they are required under EPBC 2009/4796 and/or EPBC 2013/7032) include:

- Jandakot Airport Conservation Management Plan
- Jandakot Airport Offset Plan
- Jandakot Airport Groundwater Management Plan.

The current approved versions of these and other relevant environmental plans are published on the Jandakot Airport website (http://www.jandakotairport.com.au/).

This CEMP prevails and takes precedence over any contractor construction management plans.

1.6 Relevant Key Environmental Factors

Key environmental issues addressed in this CEMP include:

- training and inductions
- noise and vibration
- air quality and dust
- erosion and sediment control
- water quality management
- waste management
- hazardous material
- flora and fauna
- dieback
- fire
- cultural heritage

2 IMPLEMENTATION

2.1 Roles and Responsibilities

Responsibility for implementation of this CEMP rests with both JAH as identified in EPBC 2009/4796 and EPBC 2013/7032 and any contractors (including subcontractors) undertaking the works.

Due to the staged nature of the works (and the contractor procurement processes undertaken by JAH), it is not feasible for contractors to be identified within this CEMP. Different contractors are likely to undertake different tasks and may operate in different work areas at different times. Therefore, contractors will be required to complete Appendix D prior to the commencement of works in order to specifically identify the scope of works (i.e. location, timing etc.,) as well as the relevant specific roles, responsibilities and contact details for actions described within this CEMP. This CEMP and the completed Appendix D (once reviewed and endorsed by the JAH EM and DIRD AEO) will constitute the CEMP applicable to the works undertaken by a particular contractor (and if relevant, all subcontractors under their management).

Key roles regarding the implementation of this CEMP consist of the following:

- JAH Senior Management
- JAH Environment Manager
- Contractor Site Manager. (Note throughout this CEMP, responsibilities attributed to the contractor are allocated to the 'Contractor Site Manager'. Responsibilities and actions attributed to the 'Contractor Site Manager' may be allocated to other relevant contractor positions as detailed in Appendix D).

The requirement to implement the CEMP is a condition of both EPBC 2009/4796 and EPBC 2013/7032, with this responsibility delegated internally to the JAH Environment Manager.

The requirement to implement the CEMP by the designated contractor (and their subcontractor(s)) is implicit in inclusion of the contractor in Works Permits issued under the BC Regulations of the Airports Act by DIRD, and also by contractual obligation.

The responsibilities for implementation of various control measures for each management factor are outlined within each EMP in this document. Generic responsibilities for key roles are outlined in Table 1 below.

Table 1 Roles and Responsibilities	
Clearing and Civil Works Environmental Management	
Role	Responsibility
JAH senior management	Overall responsibility for implementation of CEMP under the EPBC Act and Airports Act. Generic responsibilities of JAH senior management are as follows: • accountability for the implementation, reporting and maintenance of this CEMP • provision of the necessary resources and staff to meet contractual terms • facilitate attendance of relevant JAH staff at site inductions and applicable training to achieve awareness of the contents of this CEMP and procedures related to applicable tasks • verify that contracts include provisions for environmental management, including compliance with this CEMP • establish reporting and document management procedures as documented in Section 3 of this CEMP • provide support as necessary for the JAH Environment Manager to carry out their role • provide support to contractor site manager and other JAH staff as required
JAH Environment Manager (supported by the JAH Environment Coordinator)	Implementation of actions ascribed to JAH Environmental Manager within this CEMP, responsibility for contractor management with regards to implementation of the CEMP including enforcement of Contractor Site Manager complying with the provisions of this CEMP. Generic responsibilities of the JAH Environment Manager are as follows: • act as site contact for environmental matters in relation to day-to-day construction activities • inspection of site activities to monitor and record conformance with the CEMP • provide advice with regards to compliance matters, meeting environmental objectives and ongoing improvement of environmental performance • ensure contractors are provided with (or have access to) the latest approved version of other relevant Management Plans (e.g. Jandakot Airport Dieback Management Plan). • liaise with community members to address complaints related to clearing and civil works • obtain (with senior management) the necessary regulatory environmental approvals under Commonwealth and state legislation, as applicable • review the CEMP for effectiveness at achieving stated environmental objectives • implement procedures as outlined in this CEMP • identify environmental risks and opportunities to improve environmental performance and manage accordingly • ensure relevant documents are maintained (e.g. incident register) • report to regulatory authorities.
Contractor Site Manager	Implementation of actions ascribed to Contractor Site Manager within this CEMP, including enforcement of subcontractor personnel complying with the provisions of this CEMP. Generic responsibilities of each Contractor Site Manager are as follows: • implement the CEMP as applicable to each work area • comply with requirements of applicable legislation as outlined in this CEMP, and all requirements of this CEMP • verify that personnel are inducted and trained in this CEMP • ensure relevant documents are populated and maintained (e.g. inspection checklists, work permits etc.) • maintain regular liaison with JAH Environment Manager regarding the requirements of this CEMP.

2.2 Contact details

Contact details are summarised in Table 2 below. Contact details for relevant contractors are to be provided with Appendix D.

Table 2 Contact Details	
Contact details – key stakeholders	Name / telephone contact
Jandakot Airport Holdings	
Administration Office	(08) 9417 0900
Managing Director	John Fraser Tel: (08) 9417 0900
Environment Manager (JAH EM)	Joanne Wann Tel: (08) 9417 0915 environmental@jandakotairport.com.au
Environment Coordinator (JAH EC)	Heather Fergusson Tel: (08) 9417 0913 heatherf@jandakotairport.com.au
Operations Manager (Airport Operations)	Kevin Smith Tel: (08) 9417 0914 ksmith@jandakotairport.com.au
Facilities Manager (JAH FM)	Tel: (08) 9417 0911
Development Approvals Manager	Guy Palmer Tel: (08) 9417 0912 gpalmer@jandakotairport.com.au
Mains Services (24 hour contact for Power, Sewer, Water and Security)	0429 602 333
Duty Reporting Officer (Airside)	0417 827 557
Department of Infrastructure and Transport	
Airport Building Controller (Ian Lush & Associates)	Tel: (08) 9479 5170
Airport Environment Officer	Tel: 0423 847 376
Department of Parks and Wildlife	
DPAW (Head Office General Enquires)	Tel: (08) 9219 9000
Wildcare Help Line (24 hour assistance for injured/orphaned wildlife).	Tel: (08) 9474 9055

2.3 Stakeholder and Community Liaison

2.3.1 General stakeholder consultation

Stakeholder consultation is recognised as an important component of sound environment management practices.

Jandakot Airport holds regular internal consultation meetings as well as with government departments and other external stakeholders as required. Stakeholder consultation relevant to the CEMP is summarised below:

Table 3 Stakeholder Consultation	
Stakeholder	Timing
INTERNAL	
Jandakot Airport Holdings Management Committee Meetings	Monthly
Jandakot Airport Staff Meetings	Monthly
Jandakot Airport Safety Management System Meetings	Monthly
Airport Environment Officer – Department of Infrastructure and Regional Development	Weekly
Airport Building Controller - Department of Infrastructure and Regional Development	Weekly
EXTERNAL	
Department of the Environment	As required
Department of Parks and Wildlife WA	As required
Jandakot Airport Community Aviation Consultative Group meetings	Quarterly
Jandakot Regional Parks Community Advisory Committee meetings	Quarterly
City of Canning, City of Cockburn and City of Melville	As required
Department of Planning WA	As required
Jandakot Airport Neighbouring Residents	As required

JAH has established a Community Aviation Consultation Group (CACG). The CACG is independently chaired and includes community, aviation, local government and state government representatives. Meetings are held quarterly and it has specific terms of reference for consultation, which among other things, cover noise and environmental issues associated with the airport.

Consultation with the WA Department of Parks and Wildlife occurs on a regular basis, particularly when expert advice relating to environmental matters (other than matters protected under EPBC) is required in order to manage local and regional issues.

2.3.2 CEMP stakeholder consultation

The following stakeholders have been consulted regarding relevant aspects of the CEMP (including previous approved versions):

- Jandakot Airport Holdings
- DIRD Airport Environment Officer – Jandakot
- Department of the Environment
- Current and former contractors
- Current and former consultants
- DPAW.

2.3.3 Community liaison

The JAH Managing Director, supported by the Environment Manager, is responsible for maintaining community liaison, principally through the Jandakot Airport Community Aviation

Consultative Group meetings. Further consultation will be undertaken by the JAH Environment Manager as necessary in relation to complaints or other inquiries relevant to this CEMP received from individual members of the public.

2.4 Incidents and Complaints

JAH staff, tenants and contractors are required to report all environmental incidents and complaints to JAH for investigation.

Incidents are events that result (or are likely to result in) environmental harm and must be reported to JAH within 24 hours. These include uncontained spills that impact soil or groundwater (regardless of volume), aircraft wildlife hazards and unauthorised damage to vegetation.

All incidents are recorded within the JAH Safety Management System (SMS) and are subject to an initial investigation, and corrective actions are identified if warranted. For incidents resulting in potential contamination, corrective actions may include groundwater and/or soil sampling or the development and implementation of a remediation programme.

Complaints associated with clearing and construction activities are likely to be related to dust, noise and vibration. Complaints are generally received via:

- A direct notification to JAH from the complainant. If applicable, the JAH Environment Manager advises the relevant contractor for investigation and action within 24 hours of the complaint being received.
- A direct notification to the contractor from the complainant. The contractor is to advise the JAH Environment Manager (or in their absence, a representative of JAH management) within 24 hours of the complaint being received, providing adequate details to assist in the initial investigation and advise of actions proposed to rectify the issue.

The JAH Environment Incident Report Form is provided in Appendix E. Whilst the use of the form is not mandatory for the reporting of environmental incidents and complaints to JAH (written notification via email or contractor-specific reporting templates is sufficient, and initial verbal notification can be used in the event of an emergency situation), it provides guidance on the types of information JAH requires. The information provided will be utilised by JAH to populate the JAH Safety Management System incident report, which serves as an electronic Incident Register.

2.5 Environmental Emergency Response Procedures

The Aerodrome Emergency Plan (AEP) has been developed to ensure effective and efficient arrangements for the response to, and recovery from, an emergency at Jandakot Airport. This includes emergency response plans for potentially polluting events such as ‘fuel and oil spills’ and ‘hazardous materials’. The AEP is focused on emergencies associated with aerodrome operations, and JAH typically takes on a facilitation role, allowing emergency services personnel to respond as appropriate. Similarly, as there is no central emergency response or spill control team based at the airport, spill response (and subsequent remediation) is the responsibility of the contractor.

Contractors will be required to develop an Emergency Response Management Plan (ERMP) or similar (e.g. a documented procedure). If the ERMP does not specifically address spill management (consistent with fuels and chemicals stored and used during construction), a separate Spill Management Plan is required to be developed (refer to Appendix D). The contractors’ ERMP should be consistent with the general points listed below:

- Contractor – Institute a ‘stop-work’ (either in the immediate vicinity of the emergency or the entire work site as appropriate), ensure site safety and security, move people from the immediate area.
- Contractor – Warn of any hazard that may affect traffic or adjacent properties using temporary lights, warning signs, barriers etc.

- Contractor – Notify emergency services (000) and/or a spill control contractor if external assistance is required.
- Contractor – Take practical steps to contain the hazard and prevent it from spreading.
- Contractor – Notify Jandakot Airport Holdings.
- JAH EM – Notify relevant stakeholders and authorities (dependent on the type of emergency and environmental impacts) and liaise with contractor to ensure the emergency/incident is investigated and remedial actions are undertaken.

3 INSPECTION, REPORTING AND REVIEW

3.1 Monitoring

Informal communication of day-to-day issues pertaining to environmental management at Jandakot Airport occurs frequently between the JAH Environment Manager and Contractor Site Manager(s). Such communication generally takes place at the construction site. This negates the need for formalised inspections of construction that would otherwise be undertaken by JAH Environmental personnel. The JAH Environment Manager will maintain dated notes (e.g. follow-up emails) of key points and agreed actions resulting from these informal meetings and will use these as the basis for the issue of formal instructions from time to time, as necessary.

3.1.1 Contractor Monitoring and Reporting

Regular, formal monitoring of construction must be undertaken by Contractor Site Managers using the appropriate checklist (Appendix F). The checklists are divided as follows:

- pre-construction
- during construction
- post-construction.

The checklists are designed to assist Contractor Site Managers in fulfilling their reporting obligations to the JAH Environment Manager and providing a formal record of contractor compliance with the CEMP. Where incidents have been recorded by the Contractor Site Manager or personnel during that reporting month, incident report forms (complementing incidents noted on the checklist) should accompany the checklist (if not provided earlier). Further detail with regards to incident reporting is provided in Section 2.4.

Completion of monthly checklists may not necessarily fulfil all reporting requirements of the contractor. Other records addressing environmental management issues (e.g. start-up meetings, toolbox meetings that may address non-conformances identified via incident reports and monitoring) must be documented and made available to JAH on request. Further reporting requirements are defined under each environmental management plan in Section 5.

Checklists are loosely ordered to reflect the body of the CEMP. Items incorporated reflect performance objectives, management measures and monitoring and reporting requirements of each area of environmental management.

3.2 Site Records

A dedicated file(s) will be established by each Contractor Site Manager to contain all documentation pertaining to environmental management of construction; including:

- a copy of the CEMP
- site induction records (may be kept on a separate Induction file)
- completed checklists
- details of environmental incidents and complaints
- start-up and toolbox meetings minutes addressing environmental management issues (may be kept on a separate file).

3.3 Audits and Inspections

Compliance with the requirements of the CEMP may be subject to audits and/or inspections.

Inspections may take place at any time before or during construction and at the end of construction to ensure compliance with the provisions of this CEMP by personnel in the following roles:

- DIRD Airport Environment Officer (AEO)

- DIRD Airports Building Controller (ABC)
- DoE officers
- JAH Environment Manager
- other relevant JAH management staff
- external compliance auditors as appointed by JAH.

All audits will be conducted after providing reasonable notice to the contractor, confirming the schedule and scope of the audit, to allow the contractor to properly prepare. The contractor site manager will be required to be available to assist the auditors.

Inspections may occur with minimal notice, especially if in response to a complaint, incident or potential non-conformance.

3.3.1 Compliance Audits

External audits may be conducted from time to time as directed by the Minister for the Environment pursuant to s 458(1) of the EPBC Act through a 'Notice to carry out an environmental audit' (refer Conditions 14 and 15 of EPBC 2009/4796 and Condition 6 of EPBC 2013/7032). The results of this type of audit, if required, will be formally reported to the Minister, describing all potential compliance breaches and any mitigating response JAH and the contractors have implemented to address identified issues.

3.3.2 Internal Audits

Internal audits may be conducted by JAH (or the contractor) at any time during construction and may be triggered if potential non-conformances are identified during internal inspections (see Section 3.3.3 below) or monitoring. These are for internal reporting purposes and will be used to identify where the requirements of the CEMP may not be being met and to assist JAH and contractors make improvements to address any potential gaps in implementation.

Potential breaches of the requirements of the CEMP identified during internal audits will be reported annually as part of compliance reporting (Section 3.4). Major non-compliances (i.e. breaches that directly impact matters of national environmental significance) will be reported to DoE within 7 days of the breach being identified by JAH.

3.3.3 Internal Inspections

Internal inspections may be conducted by JAH at any time during construction. These are typically informal and will be used to identify where the requirements of the CEMP may not be being met and to assist JAH and contractors make improvements to address any potential gaps in implementation. Inspections will typically be undertaken in response to complaints, incidents and potential non-conformances.

3.4 Compliance Reporting

Reporting against actions described in this plan will be included within the Jandakot Airport Annual Environment Report (AER). In line with the *Airports (Environmental Protection) Regulations 1996*, the AER will be submitted to the DIRD by 28th October each year. A copy of the report will be provided to DoE by 28th October each year.

In addition, EPBC 2009/4796 Condition 16 requires JAH to publish on the JAH website by 28 October each year an Annual Compliance Report addressing compliance with each of the conditions of approval, including the implementation of the CEMP.

The above reporting is to occur annually until final construction is completed.

3.5 Review and Amendment of CEMP

The CEMP is a 'live' document and as such may require review and amendment in order to meet practical requirements on site as changing circumstances demand. Amendments to

the CEMP may also arise in response to audit recommendations, legislative changes or changes in project scope.

Where amendments are unlikely to have a material impact on matters protected under the EPBC Act or the intent of EPBC 2009/4796 and 2013/7032 conditions of approval, copies of the amended plan, including appropriate rationale and justification for each amendment, will be provided to DoE and DIRD. If DoE deem it necessary, the amended plan will be elevated for the Minister's approval.

Where amendments to the CEMP impact matters protected under the EPBC Act or are deemed not to be in accordance with that approved by the Minister (ref Conditions 6 and 12 of EPBC 2009/4796 approval and Conditions 3 and 7 of EPBC 2013/7032), the amended Plan will be submitted to DoE for review and approval by the Minister. Once approved, the CEMP shall be published on the JAH website within one month of the approval date and copies distributed to all relevant contractors.

4 SUMMARY OF ACTIONS

The Table below contains a list of summary actions relating to Sections 1 to 4 of this CEMP. Actions associated with specific management plans are detailed in Section 5.

Table 4. Construction Environment Management Plan Summary of Actions.			
Action		**Responsibility**	**Timing**
Contractor Details			
CEMP1	Appendix D to be reviewed and endorsed by the JAH EM and DIRD AEO.	JAH EM	Prior to site works commencing.
Stakeholder Consultation			
CEMP2	Report on Stakeholder Consultation within JAH AER.	JAH EM	28 October Annually.
Incidents and Complaints			
CEMP3	Complaints and incidents that have the potential to cause environmental harm are recorded in the JAH SMS. (Noting information regarding incidents is often initially reported/recorded in other formats (e.g. email) and relevant information transferred to the SMS at a later date. This does not cause delays in the initial assessment/response of an environmental incident). The SMS database report will include details of corrective actions required (and timing that required corrective actions were completed).	All JAH staff, overseen by JAH EM.	ASAP after incident is reported.
CEMP4	Complaints and reported incidents that have the potential to cause environmental harm are immediately reviewed by JAH Environmental staff and if required, further investigated and corrective actions assigned if necessary.	JAH EM in collaboration with the Contractor Site Manager responsible for the incident.	The timing of this action is dependent on the nature of the incident and associated risk (e.g. volume, location, potential impacts etc.).
Compliance Audits and Inspections			
CEMP5	Undertake Compliance Audits as directed by the Minister for the Environment pursuant to s 458(1) of the EPBC.	JAH EM	As specified within DoE issued Notice.
Reporting Requirements			
CEMP6	Report against actions of the CEMP within the Jandakot Airport Annual Environment Report (AER) and provide copies to DIRD and DoE.	JAH EM	28 October Annually.
CEMP7	Publish an Annual Compliance Report on the JAH website addressing the compliance with each of the conditions of EPBC 2009/4796 which is to include the implementation of the CEMP as required by EPBC 2009/4796 Condition 16.	JAH EM	28 October Annually
Review, Amendment and Publishing of CEMP			
CEMP8	Review and amend CEMP.	JAH EM	As required. No defined timeframe required unless specified by DoE in relation to Condition 11 of EPBC 2009/4796

Table 4. Construction Environment Management Plan Summary of Actions.			
Action		**Responsibility**	**Timing**
			and/or Condition 8 of EPBC 2013/7032.
CEMP9	Ensure amended CEMP is distributed to relevant contractors.	JAH EM	Within 30 days of DoE approval.
CEMP10	Publish amended approved CEMP on the JAH website.	JAH EM	Within 30 days of DoE approval.
CEMP11	Retain published version of CEMP on the JAH Website.	JAH EM	Ongoing - for the duration of the Action (i.e. clearing and civil works as defined under EPBC 2009/4796 and EPBC 2013/7032)

5 MANAGEMENT PLANS

Environmental management plans detail the management actions required to protect environmental values of Jandakot Airport during construction. Management plans outline the following:

- construction activities and potential impacts to each environmental factor
- performance objectives for that factor
- performance criteria for that factor
- management actions to address or mitigate potential impacts
- a monitoring programme to identify the effectiveness of management actions
- reporting requirements
- contingency actions in the event that monitoring (or incidents/complaints) identifies possible improvements to current management strategies.

Actions assigned to the 'Contractor Site Manager' may be allocated to other relevant contractor positions as detailed in Appendix D.

5.1 Training and Inductions

A component of environmental management will comprise staff and contractor training and induction to ensure all contractor personnel (and JAH staff associated with the site) are aware of their environmental responsibilities.

Induction and training of contractor and subcontractor personnel is the responsibility of the Contractor Site Manager.

Activities

The following construction activities will be managed in part using staff and contractor training and inductions:

- clearing
- civil earthworks
- installation of roadside services.

Impacts

The absence of appropriate inductions and training has the potential to impact all key environmental issues identified in Sections 5.2 to 5.11.

Table 5.1 Training and Inductions			
Element	**Training and Induction Management**		
Performance Objectives	• All personnel (i.e. JAH staff and contractors) accessing the work site are inducted in the CEMP and their responsibilities in working in accordance with the CEMP prior to commencing work on site. • Personnel are aware of who holds responsibility for environmental management at the site. • Contractors are provided with training, where training requirements beyond the scope of the induction are identified as necessary to implement work in accordance with the requirements of the CEMP.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Planning	Develop a site Induction that addresses relevant sections of the CEMP and submit to the JAH EM for review and endorsement. This induction must contain content about the requirement to protect priority and threatened species in accordance with legislation.	Contractor Site Manager	Prior to Construction.
Record of CEMP site induction	Create an Site Induction Register	Contractor Site Manager	Prior to Construction.
Site induction to CEMP	Induct any new contractor personnel (including JAH staff that are required to access the construction area) and record on the Site Induction Register.	Contractor Site Manager	Throughout construction – prior to personnel commencing unsupervised work on site.
Training	Assess the ability of each new member of personnel to carry out requirements of CEMP based on their understanding of the environmental risks associated with their work tasks, and create a record of any ensuing training requirements on the Contractor's Training Register.	Contractor Site Manager	Throughout construction – prior to personnel commencing unsupervised work on site.
Training	Undertake training, as identified on the training register, and create a record of training completed.	Contractor Site Manager	Timing to be determined by the Site Manager when the training requirement is identified and entered on the Training Register.
Inductions	Any JAH staff or JAH engaged contractors/consultants needing to access the site that do not fall under the responsibility/management of the Contractor(s) engaged to undertake clearing and civil works will be inducted (specifically in relation to the requirements of the CEMP) by JAH. This induction must contain content about the requirement to protect priority and threatened species in accordance with legislation.	JAH EM	Throughout construction – prior to personnel commencing unsupervised work on site.
Monitoring			
Monthly (Documented)	Environmental Checklists completed.	Contractor Site Manager	Monthly throughout construction.
Reporting to JAH			
	Environmental Checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.

Table 5.1 Training and Inductions			
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.

Performance Indicator	Trigger	Contingency Measures/Corrective Actions*
Inductions completed and recorded for all contractor personnel working on site.	Contractor personnel identified working on site that have not been inducted or have not had their induction recorded.	1. Contractor Site Manager to instruct identified personnel to cease work and undertake a documented induction. 2. Contractor Site Manager to record event as non-conformance in Monthly Checklist.
Relevant training completed and recorded for all contractor personnel working on site.	Contractor personnel identified on site undertaking tasks for which they have not been trained or their training has not been recorded.	1. Contractor Site Manager to instruct identified personnel to cease work on specified task(s) and retrain as required. 2. Contractor Site Manager to record event as non-conformance in Monthly Checklist.
Staff undertake tasks consistent with CEMP.	Staff observed or recorded undertaking tasks in a manner contrary to that documented in CEMP.	1. Contractor Site Manager to confer with personnel regarding breach of procedure. 2. Contractor Site Manager to record event as (a) an Environment Incident Report if task results (or is likely to result in) environmental harm or (b) a non-conformance in Monthly Checklist – whichever is applicable. 3. Contractor Site Manager to re-induct personnel in that area of CEMP and assess the need for retaining.
No more than one Incident or non-conformance associated with above PIs reported to JAH within a single reporting (monthly Period).	Multiple incidents or non-conformances associated with above triggers reported to JAH within a single reporting (monthly) period.	1. JAH EM to follow up with Contractor Site Manager and review training and Induction processes to identify potential improvements to be subsequently implemented.

*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.

5.2 Noise and Vibration

Activities associated with the development that are likely to generate noise include building and site construction activities and traffic noise generated by vehicles transporting materials to and from the site. Noise management during construction will be consistent with the EP Regulations and, when applicable to off-site sensitive receptors, the *Environmental Protection (Noise) Regulations 1997*. Construction will be restricted to the hours of 7am – 7pm Monday to Saturday. Material and personnel transport to and from site may occur outside of these hours.

Activities

The key activities during construction that have been identified to have potential to generate noise and/or vibration are:

- clearing
- earthmoving
- vehicle movements (including reversing beepers)
- compacting.

Impacts

Potential impacts associated with noise emissions and vibration include:

- detrimental impact to public amenity
- damage to neighbouring infrastructure (from vibration)
- changes to fauna movements (avoidance or attraction)
- disruption of fauna feeding or breeding patterns.

Table 5.2 Noise and Vibration Management Plan			
Element	**Noise and Vibration Management**		
Performance Objectives	To mitigate impacts of noise and vibration generated as a result of works activities.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Planning	Identify location of nearest potential sensitive receptors to noise/vibration impacts.	Contractor Site Manager	Prior to construction.
Planning	Neighbouring residents will be notified in writing prior to construction occurring detailing works being undertaken, indicative timing of works and a point of contact for all queries and complaints.	Contractor Site Manager assisted by JAH EM	Prior to construction.
Planning	Where compaction activities are considered to have the potential to impact off-site structures (as determined by the Site Contractor), dilapidation reports will be completed.	Contractor Site Manager	Prior to compaction occurring in areas where potential impacts can occur.
Construction Program	Construction will occur during the hours of 7am – 7pm Monday- Saturday. (Note: Material and personnel transport to and from site may occur outside of these hours).	Contractor Site Manager	Throughout construction.
Vibration	Compaction activities that have the potential to impact external stakeholders will consider (and apply as necessary) mitigation methods including: • Static rolling • Oscillating compaction systems • Reduced amplitude settings	Contractor Site Manager	Throughout construction.
Plant, Equipment & Vehicles	Maintain and service plant, equipment and vehicles used during works regularly to ensure that noise levels associated with construction are as low as can be reasonably achieved. Records are to be retained by the contractor and made available to JAH upon request.	Contractor Site Manager	Throughout construction.
Plant, Equipment & Vehicles	Silencing devices or noise reducing barriers installed on appropriate equipment.	Contractor Site Manager	Throughout construction.
Monitoring			
Monthly (Documented)	Environmental Checklist completed.	Contractor Site Manager	Monthly throughout construction.
Dedicated Noise Monitoring Equipment	Where there is the potential for noise/vibration to affect external stakeholders, the use of monitoring equipment will be considered. Based on previous stages of development, noise/vibration monitoring is unlikely to be warranted. If monitoring is required, it will likely be the result of an action arising from a noise/vibration incident or complaint.	Contractor Site Manager	If required, timing to be determined following complaint/incident investigation.

Table 5.2 Noise and Vibration Management Plan			
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.

Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***
No noise/vibration complaints received.	Receipt of noise/vibration complaint.	1. JAH EM to consult immediately with Contractor Site Manager regarding noise/vibration management. 2. Contractor Site Manager to arrange for action to be taken to alleviate the problem. 3. Contractor Site Manager to record the event as an Environment Incident Report. 4. JAH EM to undertake a follow-up check within 24 hours, including liaising with complainant (unless Contractor Site Manager advises they will liaise with the complainant directly).
No repeated and/or unresolved noise or vibration complaints relating to a specific activity or work area.	Repeated and/or unresolved noise or vibration complaints relating to a specific activity or work area.	1. JAH EM to consult with Contractor Site Manager regarding unresolved noise/vibration management and review adequacy of mitigation actions taken to date. 2. Contractor Site Manager to arrange for action to be taken to alleviate the problem. 3. JAH EM to undertake a follow-up check within 24 hours, including liaising with complainant(s) (unless Contractor Site Manager advises they will liaise with the complainant(s) directly). 4. Where the impact of noise remains unresolved or is disputed between the Contractor Site Manager and the complainant(s), the DIRD AEO will be consulted to determine if all practical and reasonable measures have been taken to mitigate noise impacts and if measured noise monitoring is required at the surrounding sensitive receptor site(s), utilising 75 dB (A) LA_{eq} as the applicable trigger. 5. Contractor Site Manager to report noise monitoring results to JAH EM.
Measured noise monitoring confirms noise levels do not exceed 75 dB (A) LA_{eq} at surrounding sensitive receptors.	Measured noise monitoring confirms noise levels exceeding 75 dB (A) LA_{eq} at surrounding sensitive receptors.	1. JAH EM to consult with Contractor Site Manager regarding noise/vibration management. 2. JAH EM and Contractor Site Manager to consult with DIRD AEO to determine if all practical and reasonable measures have been taken to mitigate noise impacts (noting the AEO may request additional mitigation measures be implemented to further alleviate the impacts of noise at surrounding sensitive receptor site and/or additional monitoring be undertaken). 3. JAH EM to undertake a follow-up check within 24 hours, including liaising with complainant(s) (unless Contractor Site Manager advises they will liaise with the complainant(s) directly).

*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.

5.3 Air Quality and Dust Management

The two primary causes of air quality issues will be emissions from construction machinery and airborne dust (including wind-blown sand). Airborne dust results from the excavation and stockpiling of soil as well as vehicle movement around the site.

Jandakot Airport lies approximately 3 km east of the Spearwood dune system boundary, within the Bassendean dune system. Bassendean sands are Aeolian, or windborne, soils derived from particles washed up by the ocean and blown by wind to form dunes. These sands are characterised as pale grey, white, medium grained, moderately sorted quartz sand with black heavy minerals scattered throughout.

All reasonable and practicable measures will be implemented during the construction and operation phase. Management measures to be implemented prior to construction and for the duration of operation will be compliant with the Airports (Environment Protection) Regulations 1997 and where applicable consistent with the Western Australian Department of Environment Regulation guideline "*A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities".*

Activities

The key activities during construction identified as having potential to generate dust and emissions are:

- vegetation clearance (leading to exposed soil surfaces)
- construction earthworks, haulage and topsoil stripping and stockpiling
- vehicle movements on unsealed roads
- emissions from construction machinery/equipment.

Impacts

Potential impacts of dust and emissions generated through construction include:

- reduced visual amenity
- decline in vegetation health
- risk to human health
- nuisance to terrestrial fauna
- risk to aircraft safety.

Table 5.3 Air Quality & Dust Management Plan			
Element	**Air Quality & Dust Management**		
Performance Objectives	To minimise (and where possible prevent) dust and particulate matter impacts beyond the construction site boundary.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Planning	Identify location of nearest potential sensitive receptors to air quality impacts (e.g. residential properties, aircraft movement areas, neighbouring tenants etc.).	Contractor Site Manager	Prior to construction.
Planning	Erect a notice at the site entrance identifying the contractor and contact details of a point of contact for works.	Contractor Site Manager	Throughout construction.
Dust Suppression	During activities that have the potential to generate dust, suitable water carts (the number and capacity commensurate to the disturbed area) will be available on site or at an off-site location where they can reach the site in one hour or less.	Contractor Site Manager	Throughout construction.
Dust Suppression	Suppress dust using non-potable water (e.g. water carts) where it is determined to potentially or actually reach nuisance levels / pass the boundary of the construction site. Note in instances where potable water is not accessible/available or is not suitable for specialised tasks/equipment, permission can be sought from the JAH EM to temporarily access metered potable water.	Contractor Site Manager	Throughout construction.
Dust Prevention	Observe weather conditions and keep dust-generating activities to a minimum during dry and windy conditions. Cease all works that have the potential to generate dust in excessively windy conditions and/or use methods (e.g. water carts) to suppress the dust.	Contractor Site Manager	Throughout construction.
Dust/Erosion Prevention	Position stockpiles in locations that will minimise impacts on sensitive receptors, taking prevailing winds conditions into consideration.	Contractor Site Manager	Throughout construction.
Dust/Erosion Prevention	Stabilise large unprotected surfaces (including stockpiles) in windy weather where off site impacts can be anticipated (e.g. use of water/water carts, soil binders, dust retardants etc.).	Contractor Site Manager	Throughout construction.
Dust/Erosion Prevention	Stabilise tracks subjected to large numbers of vehicle movements (e.g. use of compacted limestone or gravel, soil binders, dust retardants etc.).	Contractor Site Manager	Throughout construction.
Dust/Erosion Prevention	Restrict construction traffic to designated areas/ roads/tracks, avoiding areas adjacent to sensitive receptors wherever possible.	Contractor Site Manager	Throughout construction.
Transport/Erosion Prevention	Keep impacted public roads (e.g. entry and exit points, adjacent roads etc.) free of potentially dangerous levels of dust and wind-blown sand by undertaking road sweeping as required.	Contractor Site Manager	Throughout construction.
Transport	If required (as an alternative to regular road sweeping), install a wheel wash at exit points to minimise dust impacts on public roads.	Contractor Site Manager	Throughout construction.
Transport	All soil/fill will be covered during transport.	Contractor Site Manager	Throughout construction.

Table 5.3 Air Quality & Dust Management Plan			
Movement of dust off site/Erosion Prevention	Use dust barriers (e.g. wind fence, shade cloth etc.) to limit transport of dust off work areas to minimise impacts on neighbouring sensitive receptors such as residential areas. An appropriate length of wind fencing (for new requirements or repairs of existing wind fencing) must be stored on site or available within 1 hour of being required. Where potential impacts are reasonably anticipated, dust barriers are to be installed prior to the dust generating activity commencing.	Contractor Site Manager	Throughout construction.
Plant, Equipment & Vehicles	Maintain and service plant, equipment and vehicles used during works regularly to demonstrate equipment is running efficiently and fumes are minimised. Records are to be retained by the contractor and made available to JAH upon request.	Contractor Site Manager	Throughout construction.
Dust/Erosion Prevention	Ensure areas cleared, levelled and ready for lot level construction are stabilised (e.g. seeding with a soil stabilising species, soil binders, dust retardants etc.).	Contractor Site Manager in consultation with JAH EM	Once all construction activities within a lot have been completed.
Monitoring			
Monthly (Documented)	Environmental Checklist completed.	Contractor Site Manager	Monthly throughout construction.
Daily (Visual)	Ongoing visual assessment of air quality impacts and the effectiveness of mitigation measures (not documented).	Contractor Site Manager	Daily throughout construction.
Dedicated Dust/Air Quality Monitoring Equipment	Where there is the potential for air quality to affect external stakeholders, the use of monitoring equipment will be considered (noting the AEO or JAH EM may instruct the contractor to undertake measures air quality monitoring in response to a complaint/incident). Based on previous stages of development, measured air quality monitoring is unlikely to be warranted. If monitoring is required, it will likely be the result of an action arising from an air quality incident or complaint.	Contractor Site Manager	If required, timing to be determined following complaint/incident investigation.
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.

Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***
No air quality complaints received.	Receipt of Air Quality complaint.	1. JAH EM to consult immediately with Contractor Site Manager regarding air quality management. 2. Contractor Site Manager to record the event as an Environment Incident Report and arrange for action to be taken to alleviate the problem (noting actions to alleviate the problem are anticipated to be one or more of the mitigation measures listed above). 3. JAH EM to undertake a follow-up check within 24 hours, including liaising with complainant

Table 5.3 Air Quality & Dust Management Plan		
		(unless Contractor Site Manager advises they will liaise with the complainant directly).
No repeated and/or unresolved air quality complaints relating to a specific activity or work area.	Repeated and/or unresolved air quality complaints relating to a specific activity or work area.	1. JAH EM to consult with Contractor Site Manager regarding unresolved air quality management and review adequacy of mitigation actions taken to date. 2. Contractor Site Manager to record the event as an Environment Incident Report and arrange for action to be taken to alleviate the problem. 3. JAH EM to undertake a follow-up check within 24 hours, including liaising with complainant(s) (unless Contractor Site Manager advises they will liaise with the complainant(s) directly). 4. Where the impact of is disputed between the Site Contract Manager and the complainant(s) (or the JAH EM or AEO suspects impacts trigger regulatory requirements), measured monitoring (consistent with National Air Quality Standards) will be undertaken by the contractor to confirm whether levels are acceptable at surrounding sensitive receptors. Contractor Site Manager to report dust monitoring results to JAH EM.
Measured air quality monitoring confirms levels are within acceptable limits at surrounding sensitive receptors.	Measured air quality monitoring confirms levels are above acceptable limits at surrounding sensitive receptors.	1. JAH EM to consult immediately with Contractor Site Manager regarding air quality management. 2. Contractor Site Manager to arrange for action to be taken to alleviate the problem and confirm via monitoring that air quality levels do not exceed acceptable limits at surrounding sensitive receptors. 3. JAH EM to undertake a follow-up check within 24 hours, including liaising with complainant(s) (unless Contractor Site Manager advises they will liaise with the complainant(s) directly).
No incidents of visible dust emissions.	**Incidents of visible dust emissions	1. Contractor Site Manager to halt dust-emitting activity on identifying occurrence of highly visible or excessive emissions of dust. 2. Contractor Site Manager to arrange for action to be taken to alleviate the problem. 3. JAH EM to undertake a follow-up check to observe effectiveness of new dust control measures implemented if the trigger is the result of a reportable environmental incident**.
No visible vehicle emissions observed to be emitted for a period of ten seconds or more.	Visible vehicle emissions observed to be emitted for a period of ten seconds or more.	1. Contractor Site Manager to stop machinery responsible for excessive vehicle emissions. 2. Contractor Site Manager to arrange for action to be taken to alleviate the problem. 3. Contractor Site Manager to record event as non-conformance in Monthly Checklist. 4. JAH EM to undertake a follow-up check within one week.
No excessive dust accumulated on native vegetation.	Excessive dust accumulated on native vegetation.	1. JAH EM to consult with Contractor Site Manager regarding dust accumulation on native vegetation. 2. Contractor Site Manager to arrange for action to be taken to alleviate the problem. 3. JAH EM to undertake a follow-up check within one week.
*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.		
**Dust/wind-blown sand emissions are reasonably expected to occur throughout construction. Dust emissions, whilst required to be controlled/contained, are only considered to be a reportable environmental incident if they generate a complaint or the dust is observed to be causing an impact beyond the construction site boundary.		

5.4 Erosion and Sediment Control Management

Jandakot Airport surface geology consists of highly permeable Bassendean Sand with a low level of erosion or sedimentation risk. The site exhibits low relief topography and no surface water bodies exist on site besides damplands. To date, erosion and sedimentation either during or following clearing have not been evident. Although significant erosion and sedimentation is unlikely, erosion and sedimentation controls are to be identified and implemented during and following clearing.

Activities

Activities that may cause erosion and sedimentation include the following:

- clearing of native vegetation
- vehicle movement (light vehicles and heavy vehicles) over un-stabilised surfaces
- earthworks and changes to existing topography
- waste water storage and disposal
- stockpiling of topsoil or mulch
- poor drainage.

Impacts

Impacts of the activities above might include the following:

- clearing of native vegetation
  - exposing topsoil to wind and water potentially leading to loss of topsoil by erosion, degrading landforms and reducing the quality of runoff
- vehicle movement
  - disturbance of sandy surface material, exposing loose sand to wind and water potentially leading to erosion, reducing the quality of runoff
- earthworks
  - alteration of surface flow patterns and infiltration
- stockpiling
  - providing a large surface area of un-stabilised, loose material exposed to wind and water potentially leading to erosion, reducing the quality of runoff
- poor drainage
  - allowing water to collect, potentially resulting in uncontrolled escape across areas of un-stabilised sand potentially leading to erosion, reducing the quality of runoff

Mitigation Measures/Actions already described in Section 5.3 Air Quality and Dust Management also serve to address issues of erosion and have therefore not been repeated in this section.

Table 5.4 Erosion and Sediment Control Management Plan			
Element	**Erosion and Sediment Control Management**		
Performance Objectives	To mitigate the potential for erosion and sedimentation to occur as a result on clearing and construction activities.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Sediment Control Fences	Construct fence along downstream edge of exposed construction areas and at the base of fill embankments, where risk of erosion is high.	Contractor Site Manager	Prior to commencing works.
Catch Drains	Construct catch drains to collect sediment-laden runoff along downstream boundary of construction activities, where risk of sediment-laden runoff being generated is high.	Contractor Site Manager	Throughout construction.
Sand Bags	Place sand bags along catch drains to slow flow and capture coarse sediment, where required.	Contractor Site Manager	Throughout construction.
Stockpiles	Position stockpiles in locations that will minimize impacts on sensitive receptors, taking prevailing winds conditions into consideration.	Contractor Site Manager	Throughout construction.
Monitoring			
Monthly (Documented)	Environmental Checklist completed	Contractor Site Manager	Monthly throughout construction.
Daily (Visual)	Where sediment control measures are in place, they will be visually inspected daily to ensure they are in sound condition and working effectively.	Daily	Throughout construction.
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.

Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***
No erosion observed.	Erosion observed.	1. JAH EM to consult with Contractor Site Manager regarding erosion of exposed surfaces. 2. Contractor Site Manager to arrange for surfaces to be stabilised. 3. JAH EM to undertake a follow-up check after one week.
No runoff observed moving offsite containing sediment or reported in incident report form.	Runoff observed moving offsite containing sediment or reported in incident report form.	1. JAH EM to consult with Contractor Site Manager regarding movement of sediment-laden runoff. 2. Contractor Site Manager to arrange for control of surface runoff and prevent release of sediment. 3. Contractor Site Manager to record event as non-conformance in Monthly Checklist. 4. JAH EM to undertake a follow-up check after one week.

Table 5.4 Erosion and Sediment Control Management Plan		
Runoff not exceeding capacity of catch drains.	Runoff exceeding capacity of catch drains.	1. JAH EM to consult with Contractor Site Manager to reassess constructed capacity of catch drains and revise volume requirements. 2. Contractor Site Manager to arrange for holding capacity of catch drains to be adjusted to accommodate actual volumes of flow. 3. Contractor Site Manager to record event as non-conformance in Monthly Checklist. 4. JAH EM to undertake a follow-up check after one week.
*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.		

5.5 Water Quality Management

Within Jandakot Airport there are no natural drainage channels or defined areas of surface water.

The Airport is partially located on the northern margin of the Jandakot Groundwater Mound, with the crest of the mound located just south of the Airport. The Jandakot Mound is gazetted as both a Public Drinking Water Supply Area (PDWSA) and an Underground Water Pollution Control Area (UWPCA). The Jandakot UWPCA (JUWPCA) defines the area of the Jandakot Mound groundwater system that provides public water supply as part of the Integrated Water Supply Scheme (Figure 4). Portions of the airport land are within the P1 Source Protection Area of the Jandakot UWPCA, including:

- Conservation Precincts 2A, 2B and a portion of 1B;
- Portions of Precinct 4 and 5, which are already under development;
- Precinct 3, including existing infrastructure and portions of the proposed fourth runway and runway extension; and
- Portions of Precincts 6 and 6A.

JAH has developed a Local Water Management Strategy and a Groundwater Management Plan for Jandakot Airport. The Groundwater Management Plan details actions to be taken in the event of groundwater contamination and contains details of the groundwater monitoring undertaken by JAH across the airport site. This CEMP therefore focusses on the mitigating actions that need to be implemented in order to prevent contamination and associated impacts on groundwater quality. Sediment control measures are described in the Erosion and Sediment Control Management Plan (Section 5.4) . The risk of contamination of water with hydrocarbons and hazardous materials is managed through actions in the Waste Management Plan (Section 5.6) and Hazardous Materials Management Plan (Section 5.7).

Activities

Key construction activities that have the potential to impact on water quality include:

- clearing of vegetation
- earthworks
- storage and handling of chemicals and hydrocarbons.
- dewatering

Impacts

Potential impacts of construction on water quality include:

- contamination of groundwater

Table 5.5 Water Quality Management Plan			
Element	**Water Quality Management**		
Performance Objectives	To minimise impacts on water quality resulting from construction.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Planning	Identify locations of groundwater abstraction and monitoring infrastructure and prevent damage during construction with the use of fencing or barriers.	Contractor Site Manager	Prior to construction.
Planning	Establish the extent/boundaries of the JUWPCA (i.e. P1 Source Protection Area) in relation to the area of clearing/construction.	Contractor Site Manager	Prior to construction.
Planning	Identify approved sources of non-potable water (e.g. groundwater abstraction bores) for use during construction.	Contractor Site Manager	Prior to construction.
Dewatering	Any dewatering/excavation below groundwater levels will be consistent with the Groundwater Management Plan for investigation and, if required, management of acid sulphate soils.	Contractor Site Manager	Throughout Construction. Refer to Groundwater Management Plan for specific requirements.
Monitoring			
Monthly (Documented)	Environmental Checklist completed.	Contractor Site Manager	Monthly throughout construction.
Daily (Visual)	Implementation of groundwater monitoring program consistent with the Groundwater Management Plan.	JAH EM	As detailed within Groundwater Management Plan.
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.
	The reports of any required ASS Investigations undertaken.	Contractor Site Manager	Upon completion of any ASS investigation undertaken.
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.
	The reports of any monitoring undertaken as required by ASS/Dewatering Management Plans.	Contractor Site Manager	Consistent with ASS/Dewatering Management Plan.
Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***	
No contamination detected in groundwater monitoring.	Groundwater quality monitoring detects contamination.	Investigation and (if required) remediation will be consistent with the Jandakot Airport Groundwater Management Plan.	
*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.			

5.6 Waste Management

Unlike building construction works that can potentially generate large volumes of wastes, clearing and civil works that prepare a site ready for lot level constructions typically generate relatively small volumes of waste materials.

Activities

Waste streams associated with construction might include:

- construction waste such as packaging, fencing, wiring, conduit
- contaminated material
- food waste
- recyclable plastic, glass, aluminium and paper
- equipment service waste
- hazardous material waste.

Impacts

Where waste is not dealt with appropriately, it might result in the following:

- loose, windblown waste
  - loss of local amenity
  - potential risk to aircraft safety
- exposed waste stockpiles
  - attraction of vermin and scavenging birds
  - generation of odour
  - creation of fauna trap hazards
  - loss of local amenity
  - potential health risk in the event of unauthorised access
- poor management of liquid waste or hazardous materials waste
  - contamination of surface soil or groundwater
  - creation of fire hazard
- unnecessary placement of inert waste to landfill
  - wider implications for waste minimisation strategies of whole Jandakot Airport operations.

Table 5.6 Waste Management Plan			
Element	**Waste Management**		
Performance Objectives	To minimise, as far as reasonably practicable, the potential for adverse environmental impact due to handling, storage or disposal of wastes.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Storage Location	Designate waste storage areas for each waste stream.	Contractor Site Manager	Prior to construction.
Hazardous Waste	Establish a suitable location for storage of hazardous waste outside the JUWPCA and drainage lines. If a location outside of the JUWPCA is not practicably possible, the designated storage location must be approved by the JAH EM (noting the JAH EM may approve waste storage within JUWPCA boundaries subject to conditions such as imposing maximum permissible waste volumes, specifying secondary containment requirements etc.).	Contractor Site Manager	Prior to construction.
Waste Segregation	Separate waste into different streams (for example inert, recyclable, domestic [putrescible], contaminated, liquid, hazardous).	Contractor Site Manager	Throughout construction.
Storage Method (domestic waste)	Store all domestic (putrescible) waste in lidded bins located in designated storage area.	Contractor Site Manager	Throughout construction.
Storage Method (loose/inert waste)	Secure loose/inert waste, in designated storage area.	Contractor Site Manager	Throughout construction.
Storage Method (liquid waste)	Contain all liquid waste in appropriate containers, in designated liquid waste disposal storage area.	Contractor Site Manager	Throughout construction.
Hazardous Waste Disposal	Handle and transport waste off site in appropriate containers with necessary placarding for dangerous goods or hazardous materials.	Contractor Site Manager	Throughout construction.
Hazardous Waste Disposal	Waste dockets to be retained on site for transport/disposal of controlled wastes (*Environmental Protection (Controlled Waste) Regulations 2004*).	Contractor Site Manager	Throughout construction.
Disposal	Collect and transport waste to appropriately-licensed disposal facility when (or before) storage containers reach capacity.	Contractor Site Manager	Throughout construction.
Reuse	Prioritise reuse of dieback-free topsoil in rehabilitation works (off-site via DPaW, or on-site) and landscaping requirements.	Contractor Site Manager in consultation with JAH EM	During operations.
Reuse	Reuse mulched vegetation (excluding dieback infested vegetation) in landscaping.	Contractor Site Manager in consultation with JAH EM	Throughout construction.

Table 5.6 Waste Management Plan			
Storage	Remove all waste from site.	Contractor Site Manager	Within 1 month of completion of construction.
Monitoring			
Monthly (Documented)	Environmental Checklist completed.	Contractor Site Manager	Monthly throughout construction
Weekly (Visual)	Weekly visual inspection of waste storage areas to ensure appropriate management (not documented).	Contractor Site Manager	Monthly throughout construction
Weekly (Visual)	Weekly visual inspection for wind-blown waste/litter on site boundary and internal fence lines.	Contractor Site Manager	Monthly throughout construction
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.

Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***
No windblown waste observed on fence lines or in work areas.	Windblown waste observed on fence lines or in working areas.	1. JAH EM to consult with Contractor Site Manager regarding waste disposal and storage. 2. Contractor Site Manager to arrange for waste to be collected and securely disposed (noting where the aircraft safety is potentially impacted, this must occur immediately). 3. Contractor Site Manager to record event as (a) an Environment Incident Report if aircraft safety is potentially impacted or (b) a non-conformance in Monthly Checklist – whichever is applicable. 4. JAH EM to undertake a follow-up check after one week (or within 24 hours if aircraft safety was potentially impacted).
Wastes stockpiled within JUWPCA have, and are consistent with, JAH EM's approval.	Waste stockpiled within JUWPCA P1 Area without JAH EM approval or in a manner not consistent with JAH EM's initial approval.	1. JAH EM to consult with Contractor Site Manager regarding waste storage within JUWPCA. 2. Contractor Site Manager to arrange for waste to be moved to designated storage area outside JUWPCA. 3. Contractor Site Manager to record event as (a) an Environment Incident Report if waste involved hazardous/potentially polluting substances or (b) a non-conformance in Monthly Checklist – whichever is applicable. 4. JAH EM to undertake a follow-up check after one week (or 24 hours if wastes are hazardous/potentially polluting substances).
Wastes are separated into different streams.	Mixed waste prevents recycling or appropriate disposal.	1. JAH EM to consult with Contractor Site Manager regarding streams of waste being mixed, preventing recycling or appropriate disposal. 2. Contractor Site Manager to arrange for waste to be separated into streams.

Table 5.6 Waste Management Plan		
		3. Contractor Site Manager to record event as non-conformance in Monthly Checklist. 4. JAH EM to undertake a follow-up check after one week.
No rodents, vermin, scavenging birds or other pests observed on site.	Rodents, vermin, scavenging birds or other pests observed on site.	1. JAH EM to consult with Contractor Site Manager regarding storage of domestic (putrescible) waste. 2. Contractor Site manager to arrange for waste storage containers to prevent access to rodents, and enforce waste collection and disposal measures. 3. Contractor Site Manager to record event as non-conformance in Monthly Checklist. 4. JAH EM to undertake a follow-up check after one week.
Storage, transport and disposal of Controlled Wastes (Including Hazardous Wastes) is consistent with regulatory requirements.	Monitoring identifies storage, transport or disposal of Controlled Wastes (Including Hazardous Wastes) in a manner not consistent with regulatory requirements.	1. JAH EM to consult with Contractor Site Manager regarding controlled wastes. 2. Contractor Site Manager to arrange for action to be taken to rectify the issue. 3. Contractor Site Manager to record event as an Environment Incident. 4. JAH EM to undertake a follow-up check after one week.
*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.		

5.7 Hazardous Materials Management

During the clearing and civil construction projects, the most likely source of any chemical spill is oil or diesel from plant and machinery. Provided that good handling and storage practices are employed on site the risk of contaminating the environment due to chemical spills should be very low.

For the purpose of this management plan, hazardous materials are considered to be those that have the potential to cause alteration to the environment leading to degradation of environmental value if released.

These goods will be managed in accordance with legislative requirements, and consistent with the Jandakot Airport Dangerous Goods and Hazardous Materials Policy (http://www.jandakotairport.com.au/environment/tenant-resources.html).

The management of hazardous material waste is dealt with in Section 5.6.

Activities

Key activities during construction that involve hazardous materials or dangerous goods include:

- storage and handling
- transportation, including delivery and receipt
- operations of plant and equipment
- refuelling and lubrication of plant, vehicles and other equipment.

Impacts

Impacts from dangerous goods if poorly handled are identified on the MSDS of each product, and might include:

- explosion and fire leading environmental harm
- contamination of surface soil and infiltration to groundwater.

The scale of impact from surface spills or leakage is dependent on the nature of the material and the volume released to the environment.

Table 5.7 Hazardous Materials Management Plan			
Element	**Hazardous Materials Management**		
Performance Objectives	To minimise, as far as reasonably practicable, the potential for adverse environmental impact due to handling or storage of hazardous goods.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Spill control plan	Provide a contractor spill control plan to JAH EM.	Contractor Site Manager	Prior to construction.
Planning	Establish the extent/boundaries of the JUWPCA (i.e. P1 Source Protection Area) in relation to the area of clearing/construction.	Contractor Site Manager	Prior to construction.
Spill kit	Ensure fully stocked spill kit available on refuelling truck(s) and (if applicable) in the vicinity of hazardous material storage area(s).	Contractor Site Manager	Throughout construction.
Storage location during construction	Provide bunded storage area outside the JUWPCA and drainage lines. If a location outside of the JUWPCA is not practicably possible, the designated storage location must be approved by the JAH Environment Manager (noting the JAH EM may approve waste storage within JUWPCA boundaries subject to conditions such as imposing maximum permissible volume limits, specifying secondary containment requirements etc.).	Contractor Site Manager	Prior to construction.
Hazardous Materials Register & MSDS	Establish a register of hazardous materials & dangerous goods (including potentially polluting substances) for use on site and ensure current MSDS is held onsite.	Contractor Site Manager	Throughout construction.
Refuelling area	Designate appropriate refuelling area(s) outside the JUWPCA and drainage lines. If a location outside of the JUWPCA is not practicably possible, the designated refuelling area will be approved by the JAH EM.	Contractor Site Manager	Prior to construction.
Mobile refuelling	Refuel within designated refuelling area(s) only.	Contractor Site Manager	Throughout construction.
Minor machinery maintenance	Restrict onsite machinery maintenance to minor/emergency maintenance undertaken only within hardstand area designated suitable by JAH EM.	Contractor Site Manager	Throughout construction.
Leakage or spills	Clean up all leaks and spills in accordance with the contractor spill control plan.	Contractor Site Manager	Throughout construction.
Containers	Containers holding hazardous substances will be labelled and stored upright with lids closed on bunds in designated areas when not in use.	Contractor Site Manager	Throughout construction.
Hazardous waste disposal	Collect and transport waste to appropriately licenced disposal operation when (or before) storage containers reach capacity. Waste dockets to be retained on site consistent with controlled wastes (*Environmental Protection (Controlled Waste) Regulations 2004*).	Contractor Site Manager	Throughout construction.
Storage	Remove all hazardous materials and dangerous goods.	Contractor Site Manager	Within 1 month of completion of construction.

Table 5.7 Hazardous Materials Management Plan			
Monitoring			
Monthly (Documented)	Environmental Checklist completed.	Contractor Site Manager	Monthly throughout construction.
Weekly (Visual)	Weekly visual inspection of all hazardous material storage areas and practices to ensure appropriate management (not documented).	Contractor Site Manager	Weekly throughout construction.
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.

Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***
Dangerous goods stored in accordance with MSDS, codes or standards.	Dangerous goods not stored in accordance with MSDS, codes or standards.	1. JAH EM to consult with Contractor Site Manager regarding hazardous materials storage. 2. Contractor Site Manager arrange for materials to be stored in accordance with MSDS. 3. Contractor Site Manager to record event as an Environment Incident Report. 4. JAH EM to undertake a follow-up check after one week.
Dangerous goods or hazardous materials stored in designated storage location.	Dangerous goods or hazardous materials stored outside designated storage location.	1. JAH EM to consult with Contractor Site Manager regarding hazardous materials storage. 2. Contractor site manager have hazardous materials moved to appropriate storage location. 3. Contractor Site Manager to record event as an Environment Incident Report. 4. JAH EM to undertake a follow-up check after one week.
No spills/ leaks observed /reported.	Spills or leaks observed /reported.	1. JAH EM to consult with Contractor Site Manager regarding observation of spill or leak. 2. Contractor Site Manager to arrange to have vertical and horizontal extent of spill or leak delineated and documented. 3. Contractor Site Manager to record event as an Environment Incident Report. 4. Contractor Site Manager to arrange for clean-up of spilled material and provide evidence of validation to JAH EM.
Waste stored in appropriate containers and removed once containers at capacity.	Waste stored in inappropriate containers or not removed once containers at capacity.	1. JAH EM to consult with Contractor Site Manager regarding storage of hazardous waste. 2. Contractor Site Manager to arrange to have waste removed from site. 3. Contractor Site Manager to record event as an Environment Incident Report. 4. JAH EM to undertake a follow-up check after one week.

*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.

5.8 Flora and Fauna Management

Flora and fauna is managed in accordance with the Jandakot Airport Conservation Management Plan (http://www.jandakotairport.com.au/environment/environment-plans.html).

There are five EPBC Act listed fauna species that are known to occur or potentially occur within the Airport.

The three EPBC Act listed threatened species are:

- Carnaby's Black-cockatoo (*Calyptorhynchus latirostris*) – foraging non-breeding seasonal visitor
- Forest Red-tailed Black-cockatoo (*Calyptorhynchus banksii naso*) - potential foraging non-breeding occasional seasonal visitor
- Baudin's Black-Cockatoo (*Calyptorhynchus baudinii*) - potential occasional non-breeding seasonal visitor (noting there are no known records of Baudin's Black-Cockatoo occurring within a 5km radius of the airport).

The two EPBC Act listed migratory species that may potentially occur are:

- Rainbow Bee-eater (*Merops ornatus*) – seasonal visitor
- Fork-tailed Swift (*Apus pacificus*) – likely to fly over the airport rather than visit and utilise habitat noting there are no records of this species at the airport or nearby.

As the areas subject to clearing and development do not contain cockatoo roosting or breeding habitats, the risk of direct impact/injury to cockatoos is considered negligible (indirect impacts due to loss of foraging habitat have been addressed via offsets consistent with EPBC 2009/4796 and EPBC 2013/7032 conditions of approval). Ongoing management of Carnaby's Black-cockatoo at Jandakot Airport will be achieved via the implementation of measures and processes within the Jandakot Airport Conservation Management Plan (see CMP section 6.2.1 Carnaby's Black-cockatoo).

Other recorded species of conservation significance are the Western Brush Wallaby (*Macropus irma*) and the Southern Brown Bandicoot (*Isoodon obesulus fusciventer*), which are listed as Priority 4 and Priority 5 respectively under the Western Australian *Wildlife Conservation Act 1950.*

Two endangered flora species protected under the EPBC Act (Grand Spider Orchid (*Caladenia huegelii*) and the endangered Glossy Leaved Hammer Orchid (*Drakaea elastica*)) have been previously identified as occurring within Conservation Precincts 1A and 1B. It is now suspected that the Glossy Leaved Hammer Orchid was initially misidentified and that no specimens are present on site. **No rare flora have been identified within the remaining bushland areas proposed to be cleared for development under EPBC 2009/4796 and EPBC 2013/7032.**

Dieback Management is addressed separately in Section 5.9 below.

Activities

The key activities during construction that have the potential to impact flora and fauna are:

- vegetation clearing
- earthworks and levelling
- vehicle and machinery activity
- waste storage
- human contact.

Impacts

Potential impacts to flora and fauna during construction include:

- loss/damage of permanent Conservation Precincts not intended for clearing
- loss of listed flora and fauna species
- loss of biodiversity
- vegetation and habitat fragmentation
- weed infestations and pathogen infection
- dust smothering vegetation
- fire outbreaks
- increase in abundance or distribution of feral fauna
- destruction and reduction of fauna habitats

Table 5.8 Flora and Fauna Management Plan			
Element	**Flora and Fauna Management**		
Performance Objectives	To mitigate the loss of priority species during construction and protect neighbouring Conservation Precincts.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Flora Relocation	If rare flora (i.e. *Caladenia huegelii*) are present within the area to be cleared, undertake a plant salvage program in conjunction with flora experts (noting no rare flora have been identified within the remaining bushland areas proposed to be cleared).	JAH EM	Prior to clearing.
Clearing	The total area of vegetation to be cleared will be surveyed / measured to confirm the total area is within the limit approved under EPBC conditions of approval.	Contractor Site Manager	Prior to clearing.
Fencing	Demarcate designated areas for work with an appropriate barrier (e.g. steel stake and single strand wire) around the perimeter.	Contractor Site Manager	Prior to construction.
Fencing	Where work areas are adjacent to Conservation Precincts, the Conservation Precinct boundary will be located via survey, pegged and identified with an appropriate barrier (e.g. steel stakes and single strand wire).	Contractor Site Manager	Prior to construction.
Fencing (Permanent)	Install permanent fence at the conservation precinct boundary, consistent with the requirements of the Conservation Management Plan Appendix H, Jandakot Airport Wildlife Fencing and Underpass Strategy. Note that this does not apply to Precinct 2B.	Contractor Site Manager assisted by JAH EM.	Upon completion of works adjacent to Conservation Precincts. For the purpose of this action, 'Completion of Works' has been defined as within 6 months of the completion of vegetation clearing.
Fauna Relocation	Where areas are adjacent to Conservation Precincts, clearing is to occur in a manner that encourages fauna to move into Conservation Precincts.	JAH EM assisted by the Contractor Site Manager.	Throughout construction.
Fauna Relocation	Employ experts to relocate fauna to appropriate habitat where fauna relocation is required.	Contractor Site Manager	Throughout construction.
Weed prevention	Vehicles (including plant/machinery) are to be cleaned off-site prior to initially accessing the airport for works. If vehicles temporarily leave site, they must be re-cleaned before returning unless they have remained on sealed roads in low-risk areas (e.g. trucks that make multiple daily journeys to cart sand from Jandakot airport development areas to off-site storage facilities).	Contractor Site Manager	Throughout construction.
**Weed Control	Outbreak of weeds within the Construction Site will be controlled to prevent impacts on neighbouring Conservation Precincts. Herbicide use within the JUWPCA is to be approved by the JAH EM and consistent with the herbicide label/instructions.	Contractor Site Manager	Throughout construction.
Landscaping	Where landscaping is a component of the scope of works, landscaping shall be consistent with the Jandakot Airport Landscaping Design Guidelines (as published on the	Contractor Site Manager	Throughout construction.

Table 5.8 Flora and Fauna Management Plan			
	Jandakot Airport website).		
Rehabilitation	Where rehabilitation requirements are a component of the scope of works, or required as a component of corrective actions, works shall be consistent with the Conservation Management Plan Appendix D, Bushland Rehabilitation and Revegetation Guidelines.	JAH EM	When rehabilitation is required.
Monitoring			
Monthly (Documented)	Environmental Checklist completed	Contractor Site Manager	Monthly throughout construction.
Daily (Visual)	During clearing in the vicinity of work area/Conservation Area boundaries, ensure that barriers are in place and works are confined to permissible areas.	Contractor Site Manager	Daily during clearing.
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.

Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***
No complaint received regarding flora or fauna.	Complaint received regarding flora or fauna.	1. All complaints regarding flora/fauna impacts are immediately referred to the JAH EM. 2. JAH EM to investigate and liaise with the Contractor Site Manager and (if necessary) the complainant to ascertain the nature of the complaint. 3. JAH EM, in liaison with the Contractor Site Manager, to implement any required actions that are identified during the investigation process and (if appropriate) undertake follow-up liaison with the complainant.
Vegetation cleared in authorised areas only.	Clearing of native vegetation inconsistent with approved Works/Building permit/EPBC approvals in regards to the permissible area (i.e. unauthorised clearing).	1. JAH EM to consult with Contractor Site Manager to confirm if unauthorised clearing has occurred. 2. If confirmed, Contractor Site Manager to record event as an Environment Incident Report. 3. JAH EM and Contractor Site Manager to investigate and define extent of unauthorised clearing as well as the contributing factors and root cause. 4. Contractor site manager to arrange for action to be taken to alleviate the problem (including redefinition of boundaries if due to inadequate boundary marking). 5. JAH EM to advise DoE and DIRD or unauthorised clearing event within 7 days. 6. Contractor Site Manager to develop and implement a rehabilitation plan (consistent with Conservation Management Plan Appendix D).
No multiple occurrences of fauna injury or death from vehicle impacts at	Multiple occurrences of fauna injury or death from vehicle impacts at single location(s).	1. JAH EM to consult with contractor site manager regarding incident trend. 2. Contractor site manager to arrange for action to be taken to alleviate the problem (such as reduced traffic speed limits, re-induction of staff). 3. JAH EM to undertake a follow-up check after one week.

Table 5.8 Flora and Fauna Management Plan		
single location(s).		
No injured/orphaned fauna located within worksite.	Injured/orphaned fauna located within worksite.	1. Contractor Site Manager to contact Wildcare (08) 9474 9055 for advice/instruction.
*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.		
**Weed management within Conservation Precincts is undertaken in accordance with the Conservation Management Plan Appendix B Weed Management Plan.		

5.9 Dieback Management

Dieback is caused by an introduced soil and water borne pathogen known as *Phytophthora cinnamomi* which infects the roots of plants causing roots and foliage to die off. This often leads to the eventual death of the infected plant. Many local native plants are susceptible to dieback and its spread can have devastating effects on the ecology of remnant bushland areas. Death of susceptible species in large numbers can encourage weed infestation and impact on fauna habitat and feeding sources. Areas identified as containing dieback cannot be cured once infested, however appropriate management can minimise the spread of the disease.

The boundaries of dieback infestation at Jandakot Airport have been defined and mapped (Figure 5). This Construction Dieback Management Plan is consistent with the Jandakot Airport Dieback Management Plan (Appendix C to the Jandakot Airport Conservation Management Plan).

Disposal options for cleared vegetation and excess soil from dieback infested areas was considered by Glevan Consulting whilst undertaking dieback assessment and mapping of Jandakot Airport in 2014. The following disposal options and management advice was provided:

- Where practicable soil and plant material collected during clearing operations within infested areas should be buried at an appropriate depth immediately beneath where it was removed (i.e. within the dieback boundaries).
- Woody vegetative material may be provided for use in selective commercial industries that require woody material for the production of commercial grade charcoal, silica and similar products. Appropriate dieback hygiene methods will need to be utilised for the transport and storage of the woody material prior to its ultimate use (i.e. burning).
- Where burying infested material, or transporting the infested material offsite is not practicable, vegetation should be stockpiled in an appropriate area, and burned when possible. The infested soil may be deposited at an appropriate (infested) receiver site, either onsite, or offsite. Note burning would require consultation with Department of Fire and Emergency Services, the relevant Council, and airport/aircraft safety authorities.
- Soil and plant material of infested or unknown dieback status should not be introduced to the uninfected sections of the site.
- Soil and plant material should not be transported from the infested sections of the site for use at any other protectable area. Infested soil can however be used beneath the pavements of new runways and taxiways where there is no natural vegetation in the immediate vicinity (i.e. areas that are currently the cleared runway offshoot areas).
- Soil movement within each category is permissible, but should not occur across category boundaries, except where the source is uninfected.

Disposal of cleared vegetation and excess soil during clearing and civil works within dieback infested areas will be consistent with the above.

Activities

The key activities during construction that have the potential to impact dieback management are:

- vegetation clearing

- earthworks and levelling
- vehicle and machinery activity.

Impacts

Potential dieback impacts include:

- Introduction of dieback to new sites (either on the airport of off-site)
- loss/damage/change to vegetation and fauna habitats
- loss of biodiversity.

Table 5.9 Dieback Management Plan			
Element	**Dieback Management**		
Performance Objectives	To prevent the loss of vegetation and fauna habitat through the spread of dieback.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Planning	Where possible, schedule activities that involve soil disturbance for dry summer months (November – March) or dry conditions (noting clearing in winter months is often preferential is dust management is high risk).	Contractor Site Manager in consultation with JAH EM	Prior to clearing.
Demarcation of Infested Dieback Areas	Where clearing/works includes dieback infested areas, the boundary of the infestation (and a buffer zone) will be clearly defined.	Contractor Site Manager in consultation with JAH EM	Prior to clearing.
Works in Infested Dieback Areas	When undertaking works across dieback category boundaries (i.e. in areas that include both infested and uninfected), complete activities in the uninfected part of the bushland, before moving to the infested part of the bushland. Alternatively, if the dieback infestation is within a low lying area requiring fill, consideration should be given to clearing the dieback infestation (and a buffer) first to allow capping with clean fill, thus enabling the site to be managed as a dieback-free location for subsequent vehicle movements through the entire area.	Contractor Site Manager	Throughout construction.
Washdown upon exit from dieback infested areas.	A temporary washdown facility will be established on a hard, well-drained surface at the dieback area exit point for cleaning vehicles/footwear/equipment exiting the dieback infested area. Any wash-down effluent (water, mud and slurry) must be collected on-site within the dieback infestation boundary and must not be allowed to drain into uninfected bushland.	Contractor Site Manager	Prior to clearing dieback infested area.
Cleaning upon exit from dieback infested areas.	Upon exiting dieback infested areas, all vehicles, equipment and footwear that have come in contact with the soil will be cleaned free of mud and soil, using either the washdown facility, dry cleaning (e.g. stiff brush) or sterilisation techniques. Effort will be made to minimise the volume of water used in dieback cleaning.	Contractor Site Manager	Throughout construction when existing dieback infested areas.
Works in Infested Dieback Areas	Restrict access to dieback infested areas to essential vehicles/equipment only, using a designated entry and exit point(s).	Contractor Site Manager	Throughout construction.
Works in Dieback-Free Areas	Soil/sand/gravel required on site will be obtained from certified dieback-free sources.	Contractor Site Manager	Throughout construction.

Table 5.9 Dieback Management Plan			
Works in Dieback-Free Areas	Vehicles (including plant/machinery) are to be cleaned off-site prior to initially accessing the airport for works. If vehicles temporarily leave site, they must be re-cleaned before returning unless they have remained on sealed roads in low-risk areas (e.g. trucks that make multiple daily journeys to cart sand from Jandakot airport development areas to off-site storage facilities).	Contractor Site Manager	Throughout construction.
Works in Dieback-Free Areas	Footwear and equipment to be free of mud and soil when entering dieback-free bushland.	Contractor Site Manager	Throughout construction.
Dieback Infested Vegetation and Soil Disposal.	Cleared vegetation and excess soil from within dieback infested areas will be managed and disposed of in a manner consistent with options proposed within the 2014 dieback assessment report by Glevan Consulting (or alternative advice provided by DPaW).	Contractor Site Manager	Throughout construction.
Monitoring			
Monthly (Documented)	Environmental Checklist completed	Contractor Site Manager	Monthly throughout construction.
Daily (Visual)	Where dieback control measures are required, they will be visually inspected daily to ensure they are being implanted.	Daily	Throughout construction.
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.
Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***	
All actions of this Dieback Management Plan are implemented.	Observation or Incident Report indicating one or more actions of this Dieback Management Plan is not being implemented.	1. JAH EM to consult Contractor Site Manager and investigate the incident/non-compliance. 2. Contractor site manager to arrange for action to be taken to alleviate/rectify the problem. 3. JAH EM to undertake a follow-up check after one week, including liaising with complainant on actions undertaken and outcome.	
*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above. Refer also to Conservation Management Plan Appendix G Bushfire Management Plan.			

5.10 Fire Prevention

The Jandakot Airport Bushfire Management Plan has been prepared as Appendix G to the Jandakot Airport Conservation Management Plan.

Activities

The key activities during construction that have the potential to cause fire include:

- vegetation clearing
- earthworks and levelling
- vehicle and machinery activity
- Storage and use of hazardous materials.

Impacts

Potential fire impacts include:

- loss/damage/change to vegetation and fauna habitats
- loss/injury of fauna
- loss of biodiversity
- loss/damage of infrastructure/human lives

Table 5.10 Fire Prevention Management Plan			
Element	**Fire Prevention Management**		
Performance Objectives	To minimise the risk of fires caused by clearing or construction activities.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Fire Prevention	Total Fire Bans will be adhered to unless an exemption permit is obtained.	Contractor Site Manager	Throughout construction during Total Fire Bans.
Fire Prevention	Areas within 3 metres of where dangerous goods are stored shall be free from combustible materials.	Contractor Site Manager	Throughout construction.
Fire Prevention	No open fires are permitted on site (except if permission is obtained from relevant authorities to burn dieback infested vegetation stockpiles following clearing).	Contractor Site Manager	Throughout construction.
Monitoring			
Monthly (Documented)	Environmental Checklist completed	Contractor Site Manager	Monthly throughout construction.
Weekly (Visual)	Weekly visual inspection of all hazardous material storage areas.	Contractor Site Manager	Weekly throughout construction.
Daily (Visual)	Daily visual inspection during Total Fire Bans to ensure no prohibited activities are occurring on the worksite without a relevant permit.	Contractor Site Manager	Daily throughout construction (applicable to days of Total Fire Bans).
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.
	Incidents and complaints to be reported to JAH EM.	Contractor Site Manager	Within 24 hours.
Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***	
All actions of the Fire Prevention Management Plan are implemented.	Observation or Incident Report indicating one or more actions of the Fire Prevention Management Plan is not being implemented.	1. JAH EM to consult Contractor Site Manager and investigate the incident/non-compliance. 2. Contractor site manager to arrange for action to be taken to alleviate/rectify the problem. 3. JAH EM to undertake a follow-up check after one week, including liaising with complainant on actions undertaken and outcome.	
*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.			

5.11 Cultural Heritage Management

Cultural Heritage Management described below is consistent with the Jandakot Airport Cultural Heritage Management Plan (Conservation Management Plan Appendix I V1).

No European heritage sites have been registered within the City of Cockburn Local Government Inventory and Heritage List, the State Heritage Register or the Commonwealth Heritage List. There are also no visible signs of European heritage on site.

Surveys to locate potential sites of indigenous significance were undertaken in 1990 and again in 2008 involving archaeologists and indigenous custodians. The 2008 surveys encompassed all areas of development to which this CEMP applies.

Archival research revealed two sites (artefact scatters) which were believed to be within the airport boundary; Site 4309 Princep Road and Site 3513 Lukin Swamp. The 2008 investigation concluded:

- no new ethnographic or archaeological sites were identified;
- Site 3513 Lukin Swamp could not be located within Jandakot Airport and previously identified Site 4309 Princep Road is no longer a site within the meaning of Section 5 of the *Aboriginal Heritage Act 1972*.
- a Section 18 application is not required for the Jandakot Airport Master Plan to proceed.

However, the potential for ground disturbing activities to encounter previously unknown archaeological deposits (which may contain cultural materials) was noted.

Activities

Activities that might impact on cultural heritage within Jandakot Airport include:

- vegetation clearing
- construction earthworks, including site levelling and trenching.

Impacts

Impacts of the above activities might include:

- disturbance, damage or loss of previously unknown items or sites of Aboriginal heritage significance in construction areas.

Table 5.11 Cultural Heritage Management Plan			
Element	**Cultural Heritage Management**		
Performance Objectives	To minimise the potential to damage any items of cultural significance which may be present in construction area.		
Mitigation Measures/Actions		**Responsibility**	**Timing/Frequency**
Planning	The Site Induction material specifically addresses: • The need for personnel to monitor areas subjected to clearing and soil disturbance for items of potential cultural significance • Actions required (i.e. Stop work and notify the Contractor Site Manager) in the event personnel identify an item of potential cultural significance.	Contractor Site Manager	Prior to construction.
Monitoring			
	Environmental Checklist completed	Contractor Site Manager	Monthly throughout construction.
	Ongoing visual monitoring of areas subjected to clearing and soil disturbance for items of potential cultural significance.	All personnel engaging in ground disturbing activities	Throughout construction.
Reporting to JAH			
	Environmental checklists provided to JAH EM.	Contractor Site Manager	Monthly throughout construction.
	Immediate verbal/written notification to JAH EM if any items of potential cultural significance are discovered.	Contractor Site Manager	Immediately following a potential discovery.
Performance Indicator	**Trigger**	**Contingency Measures/Corrective Actions***	
No item(s) of potential cultural significance (excluding skeletal items) are identified during clearing and soil disturbance activities.	Item(s) of potential cultural significance (excluding skeletal items) are identified and reported to the Contractor Site Manager.	1. Contractor Site Manager to immediately stop all ground disturbing activities in vicinity of discovery, secure the area to prevent all access and contact the JAH EM. 2. JAH EM to consult with the Registrar of Aboriginal Site (Registrar) at the Department of Aboriginal Affairs (DAA). 3. JAH EM to enact advice of DAA. 4. JAH EM to complete an incident report (with necessary input from the Site Contract Manager). 5. Work will not be permitted to recommence in the secured area until the Contractor Site Manager is advised by the JAH EM.	

Table 5.11 Cultural Heritage Management Plan		
No skeletal item(s) of potential cultural significance are identified during clearing and soil disturbance activities.	Skeletal item(s) of potential cultural significance are identified and reported to the Contractor Site Manager.	1. Immediately stop all ground disturbing activities in vicinity of discovery, secure the area to prevent access and contact the Police and JAH EM. 2. JAH EM to consult with the Registrar of Aboriginal Site (Registrar) at the Department of Aboriginal Affairs (DAA). 3. Upon notification that the remains are of Aboriginal origin and not a matter for further police involvement, the Registrar will seek the immediate involvement of relevant Aboriginal people. 4. JAH EM to complete an incident report (with necessary input from the Site Contract Manager). 5. JAH EM to develop an appropriate action plan for the management of the remains, in consultation with relevant Aboriginal people and the Registrar. 6. JAH to consult with police and Registrar regarding requirements to carry out further development activities at the discovery site location. 7. Work will not be permitted to recommence in the secured area until the Contractor Site Manager is advised by the JAH EM.
*Note Contingency Measures/Corrective Actions identified in this table are anticipated recommended actions. The Corrective Action(s) taken in response to any trigger/incident will be dependent on the outcomes of the investigation undertaken into the reported incident, and may therefore differ from that described above.		

6 APPENDICES

6.1 Appendix A EPBC 2009/4796 Approval and Conditions

Australian Government

Department of the Environment

VARIATION TO CONDITIONS ATTACHED TO APPROVAL

Jandakot Airport Expansion, Commercial Development and Clearance of Native Vegetation, WA (EPBC 2009/4796)

This decision to vary a condition of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Approved action

Person to whom the approval is granted	Jandakot Airport Holdings Pty Ltd **ACN 081643156**
Approved action	To construct a fourth runway and associated taxiways, runway extensions, and clear land for the development of aviation and commercial precincts as described in the Jandakot Airport Master Plan 2009, as described in the referral received on 17 March 2009 (EPBC 2009/4796)

Variation

Variation of conditions of approval	The variation is: Delete conditions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and Annexure A and B attached to the approval dated 25 March 2010 and substitute the conditions and Annexure A attached to this instrument. Add conditions 14, 15, 16, and 17 as specified in this instrument. Delete definitions for 'Construction' and 'Fauna Species' attached to the approval dated 25 March 2010 and substitute the definitions as specified in this instrument. Add new definitions as specified in this instrument. To provide clarity, all definitions for the approval are included below
Date of effect	This variation has effect on the date the instrument is signed

Person authorised to make decision

name and position

Shane Gaddes
Assistant Secretary
Compliance and Enforcement Branch
Environment Assessment and Compliance Division

Signature S. Gaddes

Date of decision 8 April 2014

Conditions attached to the approval

1. The person taking the action must not clear more than 167 hectares of native vegetation within precincts 1B, 3, 4 and 5 on Jandakot Airport shown in Annexure A. For all **clearing** the following requirements must be met:

a) Vegetation **clearing** must be undertaken in a staged manner, with **clearing** only to occur in areas in which project or non-project related construction will commence in the following 12 months.

b) **Clearing** of remnant or regrowth native vegetation within precincts 1A, 1B, 2A and 2B shown at Annexure A is not permitted unless for the purpose of constructing the roads shown in Annexure A, or for establishing or managing firebreaks and emergency access tracks.

c) **Clearing** for the establishment or management of firebreaks and emergency access tracks within precincts 1A, 1B, 2A and 2B shown at Annexure A may only be undertaken if:

i. the Conservation Management Plan required under condition 6 provides justification and detail for the locations and areas impacted by the firebreaks / emergency access tracks; and

ii. the Conservation Management Plan has been approved by the **Minister**.

Note: Vegetation cleared for the maintenance or establishment of new firebreaks and emergency access tracks is excluded from the 167 hectare limit required under condition 1.

2. The person taking the action must retain and manage precinct 6 for conservation until both of the following requirements have been fulfilled:

a) the successful implementation of rehabilitation requirements under conditions 4 and 5 of this approval; and

b) the referral and approval of any **clearing** activities on precinct 6 under the *Environment Protection and Biodiversity Conservation Act 1999* or subsequent environmental legislation administered by the **Minister**.

3. The person taking the action must conserve in perpetuity all land in precincts 1A, 1B, 2A and 2B shown at Annexure A, with the exception of that land required to construct the roads shown in Annexure A and **clearing** required for the establishment or management of firebreaks and emergency access tracks outlined in condition 1 and condition 6(d)v.

4. The person taking the action must develop and submit a Jandakot Airport Offset Plan which must include but not be limited to:

a) The rehabilitation of precincts 7 and 8 shown at Annexure A must take place in accordance with condition 5 and with the consent of Canning City Council. Evidence of consent from Canning City Council must be provided.

Note: As Canning City Council did not provide consent to condition 4(a) of this approval, condition 4(a), 5 and 6(b) are no longer active conditions. This note has been inserted for clarity during the variation of conditions process, April 2014.

b) If consent cannot be obtained from Canning City Council to rehabilitate precincts 7 and 8 as required under condition 4(a) by 30 June 2010, the person taking the action must provide to **DPaW** the sum of $9.2 million and topsoil from the Jandakot Airport lease site for use in the rehabilitation and conservation of banksia woodland at an alternative site or sites. The areas to be rehabilitated or conserved must be within 45 kilometres of the Jandakot Airport lease site unless the **Minister** agrees to alternative siting. The transportation costs for the topsoil are to be paid for out of the $9.2 million. The funding must be provided prior to the commencement of each clearing stage and in proportion to the area cleared.

c) The acquisition and protection in perpetuity of a minimum of 1600 hectares of land containing Carnaby's Black-cockatoo (*Calyptorhynchus latirostris*) foraging habitat. The person taking the action must demonstrate that the proportion of the 1600 hectares of land that has been secured for protection, is not less than the proportion of the land to be cleared on Jandakot Airport each year, prior to that staged annual clearing occurring.

d) Provide details of the future ownership, funding arrangements and management of the land to be used as the offset.

e) Funding details, including research, on recovery actions for Carnaby's Black-cockatoo (*Calyptorhynchus latirostris),* for a minimum of $150,000 per year, over five years.

The Jandakot Airport Offset Plan must be submitted to and approved by the **Minister** prior to **construction**. The approved Jandakot Airport Offset Plan must be implemented.

5. If Canning City Council agrees to the rehabilitation of precincts 7 and 8, as required under condition 4(a), then the person taking the action must develop and submit a Jandakot Airport Rehabilitation Strategy which must include but not be limited to:

a) The Bushland Rehabilitation Proposal and Success Criteria report, July 2009.

b) Management of precincts 7 and 8 for long term conservation values.

The Jandakot Airport Rehabilitation Strategy must be submitted to the **Minister** after 30 June 2010. The person taking the action cannot clear more than 42 hectares of remnant and regrowth vegetation for the proposed development until the Jandakot Airport Rehabilitation Strategy has been approved by the **Minister**. The Jandakot Airport Rehabilitation Strategy must be implemented.

6. The person taking the action must develop and submit a Conservation Management Plan to the **Minister**. The plan must include measures to manage remnant and regrowth vegetation and native **fauna species** and **flora species** in conservation areas, including but not limited to:

a) Management of remnant and regrowth vegetation and native **fauna species** and **flora species** on the Jandakot Airport lease.

b) If Canning City Council agrees to the rehabilitation of precincts 7 and 8, the management of remnant and regrowth vegetation and native **fauna species** and **flora species** in precincts 7 and 8.

c) If Melville City Council agrees, the management of remnant and regrowth vegetation and native **fauna species** and **flora species** in Ken Hurst Park.

d) Native vegetation management, including but not limited to:

- **i.** Mapping of native vegetation, including type, condition and *Phytophthora cinnamomi* dieback infested areas;
- **ii.** Environmentally significant areas and their protection;
- **iii.** Monitoring regimes and survey methods;
- **iv.** Thresholds for triggering further management intervention in response to condition 6(d)iii outputs;
- **v.** Bushfire management including firebreaks and emergency access tracks;
- **vi.** Weed control;
- **vii.** *Phytophthora cinnamomi* dieback control;
- **viii.** Rehabilitation and revegetation guidelines;

e) Orchid management, including but not limited to:

- **i.** Mapping of individual *Caladenia huegelii* and *Drakaea elastica* plants;
- **ii.** Results of surveys and details of any current and future surveys;

iii. Monitoring regimes and survey methods;

iv. Thresholds for triggering further management intervention in response to condition 6(e)ii and 6(e)iii outputs;

v. Grand Spider-orchid (*Caladenia huegelii*) management and translocation procedures;

vi. Details and funding arrangements for 'The Jandakot Rare Orchid Research Program: Integrated Conservation and Translocation of *Caladenia huegelii* – Key Concepts in the Development of an Integrated Conservation Program for Western Australian Caladenia' (Dixon and Swarts, undated);

vii. Justification of the road alignment through precinct 1B.

f) Fauna management, including but not limited to:

i. Mapping of Carnaby's Black-cockatoo (*Calyptorhynchus latirostris*), Forest Red-tailed Black-cockatoo (*Calyptorhynchus banksii naso*), Quenda (*Isoodon obesulus fusciventer*) and Western Brush Wallaby (*Macropus irma*) habitat and occurrence;

ii. Monitoring regimes and survey methods for Carnaby's Black-cockatoo (*Calyptorhynchus latirostris*), Forest Red-tailed Black-cockatoo (*Calyptorhynchus banksii naso*), Quenda (Isoodon obesulus fusciventer) and Western Brush Wallaby (*Macropus irma*);

iii. Thresholds for triggering further management intervention in response to condition 6(f)i and 6(f)ii outputs;

iv. Feral animal control measures for the protection of Quenda (*Isoodon obesulus fusciventer*) and Western Brush Wallaby (*Macropus irma*);

v. A fauna road crossing strategy to facilitate terrestrial fauna movement;

vi. A fencing strategy to facilitate terrestrial fauna movement;

vii. Management options for EPBC Act listed or WA priority fauna and flora species found on Jandakot Airport in the future which have not been identified as occurring on site.

g) A strategy for public consultation and public participation in the management of the areas mentioned in condition 6(b) and 6(c).

The Conservation Management Plan must include a provision to provide an annual Compliance report to the **department** detailing progress against objectives and targets outlined in the Conservation Management Plan and in the Jandakot Airport Environment Strategy.

The Conservation Management Plan must be submitted and approved by the **Minister** before **construction** commences. The approved Conservation Management Plan must be implemented.

7. The person taking the action must develop and submit a Jandakot Groundwater Mound Management Plan which must include but not be limited to:

a) Groundwater monitoring and reporting;

b) Provision of groundwater monitoring reports to the Western Australian Department of Water and Water Corporation;

c) Address all relevant measures included in the **Local Water Management Strategy**;

d) Schedules for the independent audit of groundwater monitoring results and reports;

e) Spill avoidance, management and rehabilitation measures and procedures;

f) The introduction of a sewerage system;

The Jandakot Groundwater Mound Management Plan must be submitted within four (4) months of the date of this approval. **Construction** must not commence within precinct 5 until the Jandakot Groundwater Mound Management Plan has been approved by the **Minister**. The approved Jandakot Groundwater Mound Management Plan must be implemented.

8. The person taking the action must develop and submit a Construction Environment Management Plan (CEMP) to the **Minister** for approval. The plan must include but not be limited to:

a) Establishment and maintenance of fences and signage of "**no go areas**" in areas of priority and threatened species habitat;

b) A landscaping vegetation schedule identifying plant species to be planted. Flora species to be planted must consist of Carnaby's Black-cockatoo (*Calyptorhynchus latirostris*) foraging plant species;

c) Identification and implementation of erosion and sedimentation control measures during and following **clearing**;

d) Identification and implementation of dust control measures during and following **clearing**;

e) Identification and implementation of appropriate weed and dieback hygiene measures;

f) Induct clearing and construction workers and contractors about requirements to protect priority and threatened species in accordance with relevant legislation;

g) Measures to reduce impacts on listed threatened species; and

h) Indicative environmental management checklists to assist with monitoring the implementation of environmental management obligations during **construction** works.

Unless otherwise specified, the person taking the action must submit a report of performance against the requirements of the CEMP annually until final **construction** is completed.

The CEMP must be approved by the **Minister** before **construction** commences. The approved CEMP must be implemented.

9. The person taking the action must ensure that all Major Development Plan proposals are consistent with this *Environment Protection and Biodiversity Conservation Act 1999* approval.

10. The person taking the action must ensure that all Jandakot Airport Master Plan documents and all Jandakot Airport Environment Strategy documents are consistent with this *Environment Protection and Biodiversity Conservation Act 1999* approval.

11. If the **Minister** believes that it is necessary or desirable for the better protection of the environment, the **Minister** may request that the person taking the action make specified revisions to a plan or strategy approved pursuant to conditions 4, 5, 6, 7 and 8, and submit the revised plan or measure for the **Minister**'s approval. The person taking the action must comply with any such request. If the **Minister** approves a revised plan or measure pursuant to this condition, the person taking the action must implement that plan or measure instead of the plan or measure as originally approved.

12. If the person taking the action wishes to carry out any activity other than in accordance with a plan or strategy approved pursuant to conditions 4, 5, 6, 7 and 8 the person taking the action must submit for the **Minister**'s approval a request for revision of the plan. If the **Minister** approves the revised plan or measure so submitted, the person taking the action must implement that plan or measure instead of the plan or measure as originally approved.

13. If, at any time after 5 years from the date of this approval, the **Minister** notifies the person taking the action in writing that the **Minister** is not satisfied that there has been **substantial commencement** of the development, the development must not thereafter be commenced.

14. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement

the management plans and strategies required by this approval and report upon management measures undertaken, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department**'s website. The results of audits may also be publicised through the general media.

15. Upon the direction of the **Minister**, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

16. By 28 October of each year, commencing 2014, the person taking the action must publish an annual report on their website addressing the compliance with each of the conditions of this approval, including implementation of management plans required under the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be reported to the **Department** at the same time as the compliance report is published.

17. Unless otherwise agreed to in writing by the **Minister**, the person taking the action must publish all management plans and strategies required under conditions 4, 5, 6, 7 and 8 on their website. Each management plan must be published on the website within 1 month of being approved by the **Minister**. These online publications must remain on the website for the duration of the approval or until otherwise accepted in writing by the **Minister**.

Definitions:

Revised:

Construction – Any **clearing** or building works undertaken within precincts 1B, 3, 4 and 5, with the exception of the following:

- Removal or translocation of listed threatened orchids as outlined in 'The Jandakot Rare Orchid Research Program: Integrated Conservation and Translocation of *Caladenia huegelii* – Key Concepts in the Development of an Integrated Conservation Program for Western Australian Caladenia' (Dixon and Swarts, undated)'; and
- Activities associated with the development of required linear infrastructure (such as powerlines and sewage but excluding roads); and
- Other minor works approved by the **Minister**.

Fauna Species – Carnaby's Black-cockatoo (*Calyptorhynchus latirostris*), Forest Red-tailed Black-cockatoo (*Calyptorhynchus banksii naso*), Quenda (*Isoodon obesulus fusciventer*) and Western Brush Wallaby (*Macropus irma*).

New:

Clearing - The cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of native vegetation.

Department - The Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

DPaW – The Western Australian Government's Department of Parks and Wildlife (or equivalent agency).

Local Water Management Strategy – The document titled *Local Water Management Strategy* (VDM Environmental, 2009. Issue No. 2, October 2009), or a later version of the document that has been revised due to requirements of relevant regulatory agencies.

Existing:

Fragmentation - The breaking up of a large intact area of a single vegetation or habitat type into smaller intact units.

Minister - The Minister responsible for the administration of the Environment Protection and Biodiversity Conservation Act 1999 and includes a delegate of the Minister.

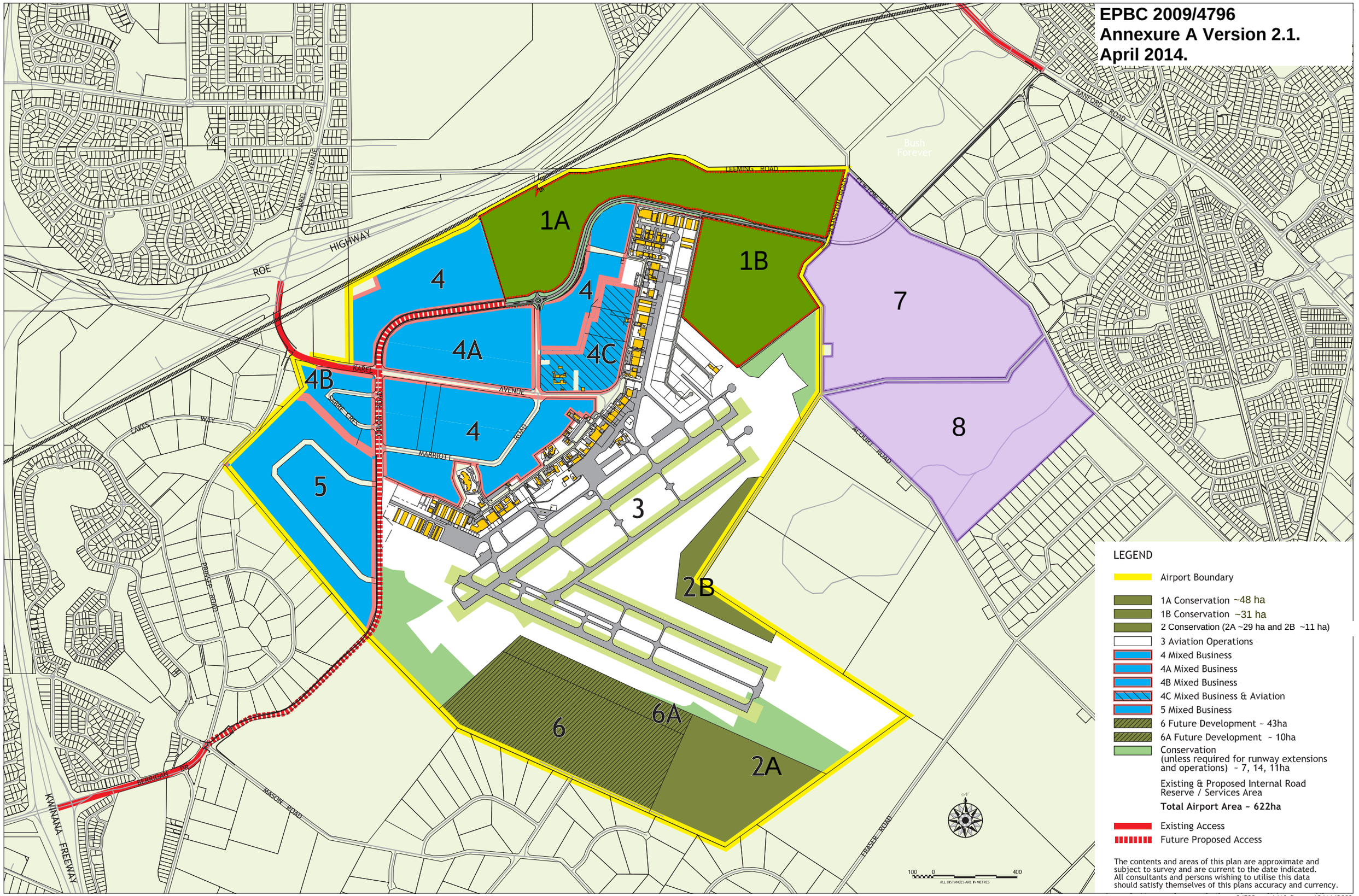
No Go Areas – Areas identified within the Jandakot Airport Lease which requires protection from construction and temporary impacts including: the movement of construction vehicles and machinery, stockpiling and any actions that will degrade or damage grassland species.

Substantial commencement – The construction of any infrastructure, excluding fences and signage, associated with the proposed action.

Flora Species – Grand Spider-orchid (*Caladenia huegelii*) and Glossy-leaved Hammer-orchid (*Drakaea elastica*).

JANDAKOT AIRPORT

EPBC 2009/4796
Annexure A Version 2.1.
April 2014.



LEGEND

- Airport Boundary
- 1A Conservation ~48 ha
- 1B Conservation ~31 ha
- 2 Conservation (2A ~29 ha and 2B ~11 ha)
- 3 Aviation Operations
- 4 Mixed Business
- 4A Mixed Business
- 4B Mixed Business
- 4C Mixed Business & Aviation
- 5 Mixed Business
- 6 Future Development ~ 43ha
- 6A Future Development ~ 10ha
- Conservation (unless required for runway extensions and operations) ~ 7, 14, 11ha
- Existing & Proposed Internal Road Reserve / Services Area
- **Total Airport Area ~ 622ha**
- Existing Access
- Future Proposed Access

The contents and areas of this plan are approximate and subject to survey and are current to the date indicated. All consultants and persons wishing to utilise this data should satisfy themselves of this plans accuracy and currency.

94522sam-141f Date:- 18/11/2009

6.2 Appendix B EPBC 2013/7032 Approval and Conditions

Australian Government
Department of the Environment

Approval

Jandakot Airport Precinct 6 and 6A (EPBC 2013/7032).

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted	Jandakot Airport Holdings Pty Ltd
proponent's ACN (if applicable)	ABN: 57 081 643 156
proposed action	Clearing of 51 hectares of native vegetation within Jandakot Airport Precinct 6 and 6A [See EPBC Act referral 2013/7032].

Approval decision

Controlling Provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approved
Commonwealth land (sections 26 & 27A)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 30 June 2097.

Decision-maker

name and position	Dr. Simon Banks Assistant Secretary West Assessment Branch
signature	Simon Banks
date of decision	09 July 2014

Conditions attached to the approval

1. The person taking the action must not **clear** more than 51 hectares (ha) of native vegetation that provides **foraging habitat** for Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) from the **proposal site** ("Precincts 6 and 6A" within the Map at Schedule 1 and 2). This clearing may only be undertaken if the **management plans** required under conditions 2 and 3 have both been approved by the **Minister**.

2. To mitigate impacts to the environment from an action on Commonwealth land, in particular the **Jandakot Groundwater Mound**, the person taking the action must prepare and submit a revised **Groundwater Management Plan** to the **Minister** for approval. The revised plan must be submitted at least 3 months prior to **commencement of the action**.

   The revised plan must include, but not be limited to:

   a) the introduction of a sewerage system;

   b) provision of groundwater monitoring reports to the Western Australian Department of Water and Water Corporation;

   c) a water management strategy, specifically designed for Precincts 6 and 6A;

   d) schedules for the independent audit of groundwater monitoring results and reports;

   e) spill avoidance, management and rehabilitation measures and procedures;

   f) groundwater monitoring; and

   g) acceptable development types.

   If the **Minister** approves the revised plan the approved revised plan must be implemented.

3. To mitigate impacts to the environment on Commonwealth land and Carnaby's Black Cockatoo, prior to the **commencement of the action**, the person taking the action must prepare and submit a Construction Environmental Management Plan (CEMP) to the **Minister** for approval. The CEMP must be submitted at least 3 months prior to **commencement of the action**.

   The CEMP must include, but not be limited to:

   a) avoidance and mitigation measures to prevent impacts to Carnaby's Black Cockatoos following the **commencement of the action**;

   b) measures to physically delineate areas that are within **Conservation Precinct** 2A (as illustrated within the map at Schedule 1);

   c) management measures to control weeds, *Phytophthora* dieback, erosion, sedimentation, dust and construction noise;

   d) details of monitoring, reporting and contingency measures if performance indicators are not met;

   e) timeframes for the implementation of the above measures; and

f) descriptions of the roles and responsibilities of personnel associated with implementing each of the above measures.

If the **Minister** approves the CEMP the approved CEMP must be implemented.

4. To offset the loss of Carnaby's Black Cockatoo **foraging habitat**, the person taking the action must:

   a) Prior to **commencement of the action**, provide the **Department** with written evidence that funds have been provided to the Western Australian Department of Parks and Wildlife (**DPaW**) for the acquisition of at least a 600 ha **offset property** in the vicinity of Gingin, Western Australia.

   b) Provide a textual description and map clearly defining the location and boundaries of the **offset property** and be accompanied with the **offset attributes** and **shapefiles**.

5. Within 30 days after the **commencement of the action**, the person taking the action must advise the **Department** in writing of the actual date of commencement.

6. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the **management plans** required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.

7. If the person taking the action wishes to carry out any activity otherwise than in accordance with the **management plans** as specified in the conditions, the person taking the action must submit to the **Department** for the **Minister's** written approval a revised version of the **management plans**. The varied activity shall not commence until the **Minister** has approved the varied **management plans** in writing. The **Minister** will not approve the varied **management plans** unless the revised **management plans** would result in an equivalent or improved environmental outcome over time. If the **Minister** approves the revised **management plans**, the **management plans** must be implemented in place of the **management plans** originally approved.

8. If the **Minister** believes that it is necessary or convenient for the better protection of listed threatened species and communities to do so, the **Minister** may request that the person taking the action make specified revisions to the **management plans** specified in the conditions and submit the revised **management plans** for the **Minister's** written approval. The person taking the action must comply with any such request. The revised approved **management plans** must be implemented. Unless the **Minister** has approved the revised **management plans**, then the person taking the action must continue to implement the **management plans** originally approved, as specified in the conditions.

9. Unless otherwise agreed to in writing by the **Minister**, the person taking the action must publish the **management plans** referred to in these conditions of approval on their website. The **management plans** must be published on the website within one (1) month of being approved. The **management plans** must remain on the website for the duration of the action.

Definitions

Clear/Clearing is defined as the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of native vegetation.

Commencement of the action, means any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures, tunnel enhancement works and the use of heavy duty equipment for demolition or other purposes relating to the action, including the breaking of ground.

Conservation Precincts, means precincts 1A, 1B, 2A and 2B (as illustrated in the Map at Schedule 1).

Department, the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

DPaW means the Western Australian Department of Parks and Wildlife or any successor agency.

EPBC Act is the *Environment Protection and Biodiversity Conservation Act 1999*.

Foraging habitat as defined in the former Department of Sustainability, Environment, Water, Population & Communities, *EPBC Act Referral Guidelines for three species of Western Australian black cockatoos: Carnaby's black cockatoo (Endangered) (Calyptorhynchus latirostris), Baudin's black cockatoo (Vulnerable) (Calyptorhynchus baudinii), Forest red-tailed black cockatoo (Calyptorhynchus banksii naso)* (October 2012).

Groundwater Management Plan is the plan named Ground Water Management plan and dated August 2011, approved by a delegate of the Minister on 19 August 2011 under condition 7 of the approved conditions for EPBC 2009/4796.

Jandakot Groundwater Mound is a shallow sand aquifer that covers an approximate area of 760 km^2 from the Swan River in the north to the Serpentine River in the south.

Management Plans means the Groundwater Management Plan (GMP) and the Construction Environmental Management Plan (CEMP)

Minister is the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

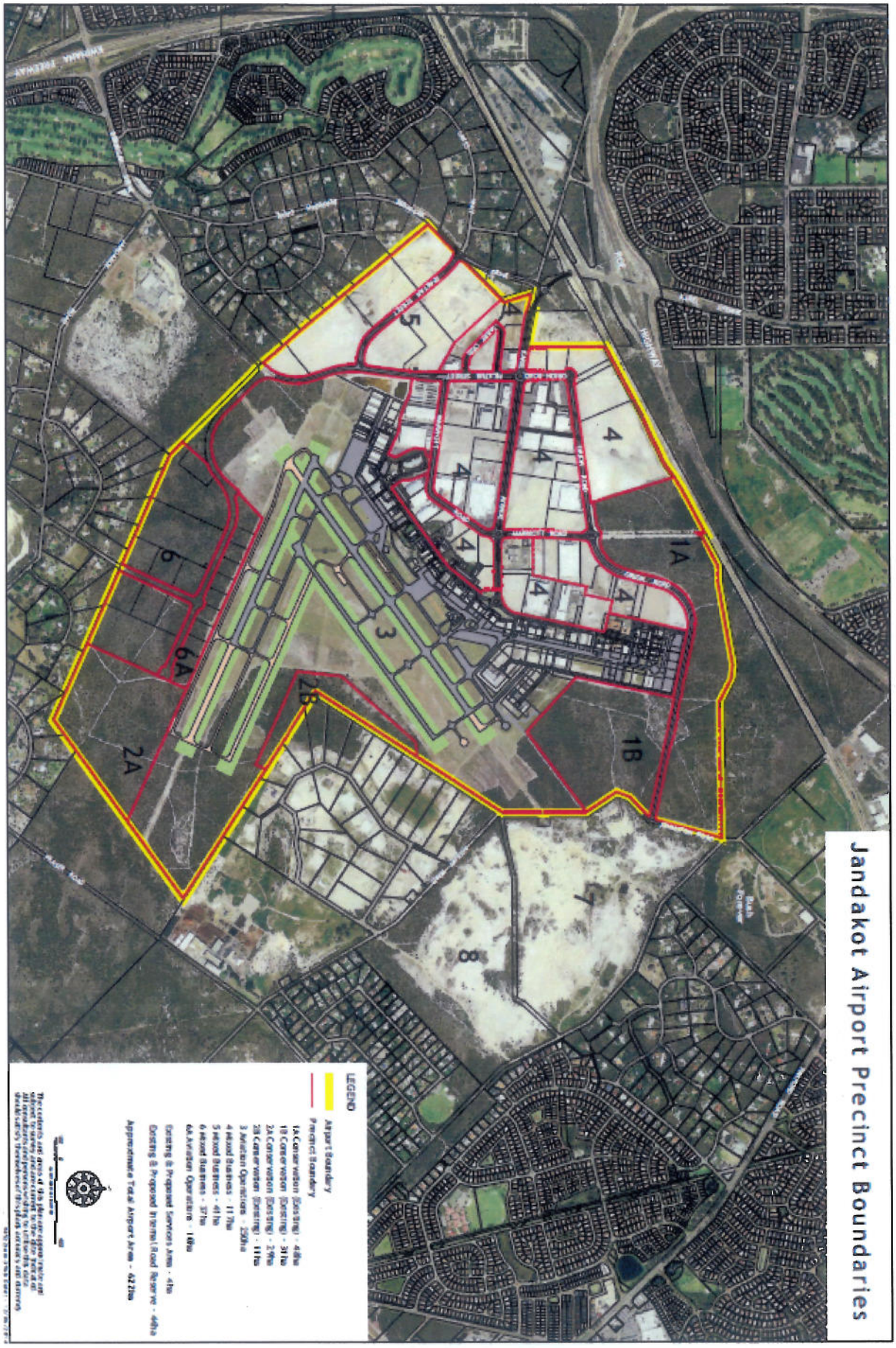
Offset attributes means an '.xls' file capturing relevant attributes of the Offset Area, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.

Offset property means the acquisition of a 600 ha offset property in the vicinity of Gingin, that contains at least 600 ha of Carnaby's Black Cockatoo **foraging habitat**.

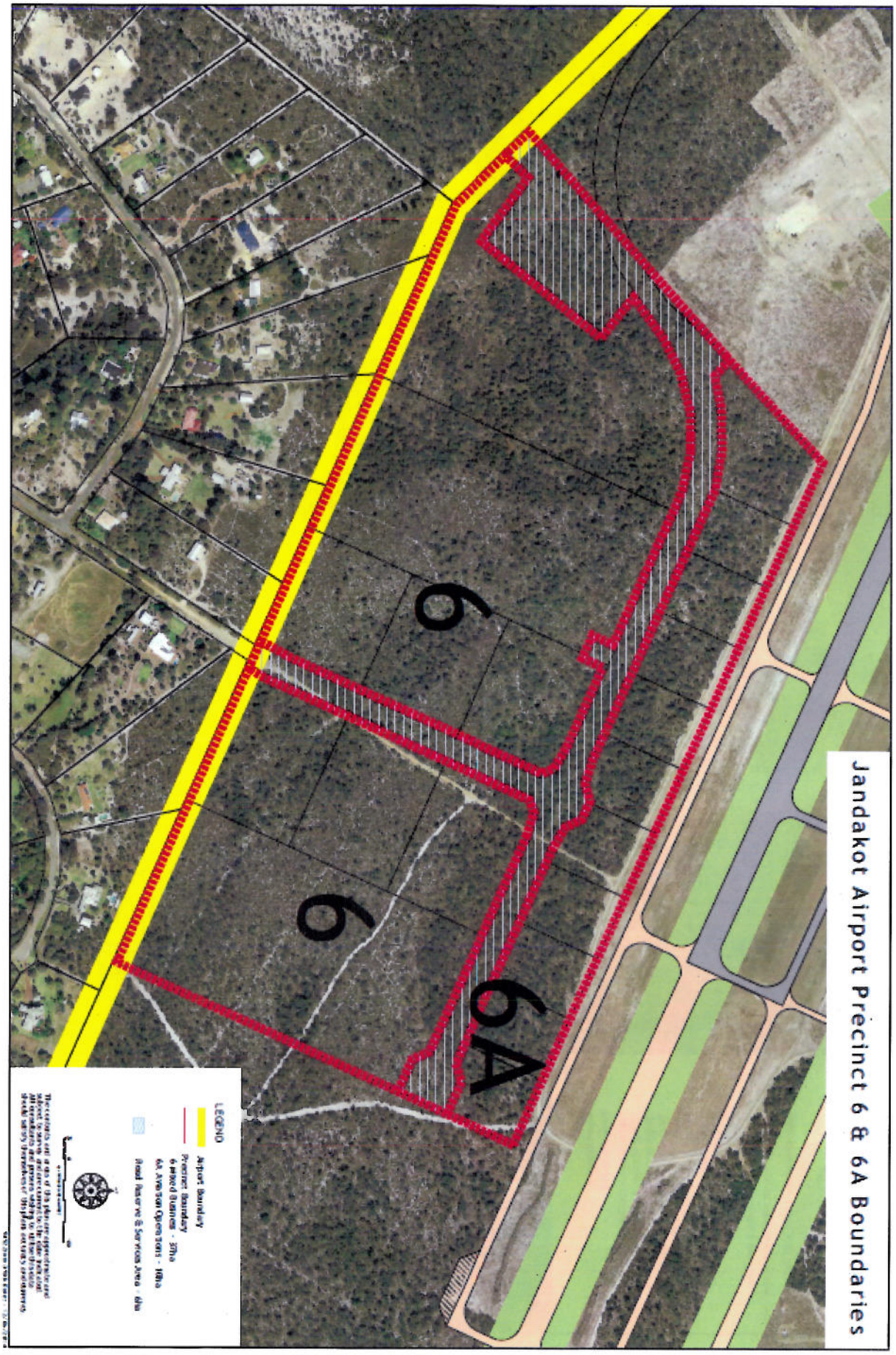
Proposal site means Precincts 6 and 6A as illustrated in Schedule 2.

Shapefiles means an ESRI Shapefile containing '.shp', '.shx' and '.dbf' files and other files capturing attributes of the Offset Area, including the shape, EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format and in accordance with Departmental Requirements.

Schedule 1


Jandakot Airport Precinct Boundaries
LEGEND
Airport Boundary
Precinct Boundary
1A Conservation (Existing) - 48ha
1B Conservation (Existing) - 31ha
2A Conservation (Existing) - 29ha
2B Conservation (Existing) - 11ha
3 Aviation Operations - 220ha
4 Mixed Business - 117ha
5 Mixed Business - 41ha
6 Mixed Business - 37ha
6A Aviation Operations - 18ha
Existing & Proposed Services Area - 4ha
Existing & Proposed Intermodal Reserve - 46ha
Approximate Total Airport Area - 622ha
1A
1B
2A
2B
3
4
5
6
6A
7
8

Schedule 2


Jandakot Airport Precinct 6 & 6A Boundaries
6
6
6A
LEGEND
Airport Boundary
Precinct Boundary
6 Wood Business - 10ha
6A Aviation Operations - 10ha
Road Reserve & Services Area - 4ha

6.3 Appendix C CEMP Requirements and Definitions

Requirements of EPBC 2009/4796 and EPBC 2013/7032 addressed in this CEMP		
Requirement	EPBC Requirement	Relevant section of CEMP
Establishment and maintenance of fences and signage of "**no go areas**" in areas of priority and threatened species habitat	EPBC 2009/4796 Condition 8a	Section 5.8
A landscaping vegetation schedule identifying plant species to be planted. Flora species to be planted must consist of Carnaby's Black-cockatoo (*Calyptorhynchus latirostris*) foraging plant species	EPBC 2009/4796 Condition 8b	Section 5.8 (ref CMP also Appendix D Bushland Rehabilitation and Revegetation Guidelines and JAH Landscape Design Guidelines)
Identification and implementation of erosion and sedimentation control measures during and following **clearing**	EPBC 2009/4796 Condition 8c	Section 5.4
Identification and implementation of dust control measures during and following **clearing**	EPBC 2009/4796 Condition 8d	Section 5.3
Identification and implementation of appropriate weed and dieback hygiene measures	EPBC 2009/4796 Condition 8e	Section 5.8 Section 5.9
Induct clearing and construction workers and contractors about requirements to protect priority and threatened species in accordance with relevant legislation	EPBC 2009/4796 Condition 8f	Section 5.1
Measures to reduce impacts on listed threatened species	EPBC 2009/4796 Condition 8g	Section 5.8
Indicative environmental management checklists to assist with monitoring the implementation of environmental management obligations during **construction** works	EPBC 2009/4796 Condition 8h	Section 6.6 Appendix F
Unless otherwise specified, the person taking the action must submit a report of performance against the requirements of the CEMP when key milestones are achieved and when final construction is completed	EPBC 2009/4796 Condition 8	Section 3.4
Avoidance and mitigation measures to prevent impacts on Carnaby's Black Cockatoos following the **commencement of the action**	EPBC 2013/7032 Condition 3a	Section 5.8
Measures to physically delineate areas that are within Conservation Precinct 2A	EPBC 2013/7032 Condition 3b	Section 5.8
Management Measures to control weeds, Phytophthora dieback, erosion, sedimentation, dust and construction noise	EPBC 2013/7032 Condition 3c	Section 5.9 (dieback) Section 5.8 (weeds) Section 5.4 (erosion and sedimentation) Section 5.3 (dust) Section 5.2 (noise)
Details of monitoring, reporting and contingency measures if performance indicators are not met	EPBC 2013/7032 Condition 3d	Section 5.1 - 5.11
Timeframes for the implementation of conditions EPBC 2013/7032 3a-3d	EPBC 2013/7032 Condition 3e	Section 5.1 - 5.11
Descriptions of the roles and responsibilities of personnel associated with implementing each of the above measures (i.e. EPBC 2013/7032 Conditions 3a-3e)	EPBC 2013/7032 Condition 3f	Section 2.1 Appendix D

Definitions to be applied to actions within the CEMP		
Term	**Definition**	**EPBC Reference**
Clear/Clearing	The cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of native vegetation.	EPBC 2009/4796 EPBC 2013/7032
Construction	Any clearing or building works undertaken within precincts 1B, 3, 4 and 5, with the exception of the following: Removal or translocation of listed threatened orchids as outlined in 'The Jandakot Rare Orchid Research Program'; and Activities associated with the development of required linear infrastructure (such as powerlines and sewage but excluding roads); and Other minor works approved by the Minister.	EPBC 2009/4796
No Go Areas	Areas identified within the Jandakot Airport Lease which require protection from construction and temporary impacts including: the movement of construction vehicles and machinery, stockpiling and any actions that will degrade or damage grassland species.	EPBC 2009/4796
Flora species	Grand Spider-orchid (*Caladenia huegelii*) and Glossy-leaved Hammer-orchid (*Drakaea elastica*).	EPBC 2009/4796
Fauna species	Carnaby's Black-cockatoo (*Calyptorhynchus latirostris*), Forest Red-tailed Black-cockatoo (*Calyptorhynchus banksii naso*), Quenda (*Isoodon obesulus fusciventer*), and Western Brush Wallaby (*Macropus irma*).	EPBC 2009/4796
Department	The Australian Government Department administering the EPBC Act	EPBC 2009/4796 EPBC 2013/7032
DPaW	The West Australian Department of Parks and Wildlife or any successor/equivalent agency).	EPBC 2009/4796 EPBC 2013/7032
Minister	The Minister responsible for the administration of the EPBC Act and includes a delegate of the Minister	EPBC 2009/4796 EPBC 2013/7032
Commencement of the action	Any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures, tunnel enhancement works and the use of heavy duty equipment for demolition or other purposes relating to the action, including the breaking of ground.	EPBC 2013/7032
Conservation Precincts	Precincts 1A, 1B, 2A and 2B as detailed in Schedule 1	EPBC 2013/7032
EPBC Act	The Environment Protection and Biodiversity Conservation Act 1999	EPBC 2013/7032

6.4 Appendix D CEMP Contractor Details

This document is required to be completed by each primary contractor engaged by JAH on clearing and civil works associated with EPBC 2009/4796 and EPBC 2013/7032. The purpose of this document is to provide additional contract (and site specific) details that could not be incorporated into the CEMP prior to Department of Environment approval.

This completed document (along with attachments) is to be submitted to JAH and DIRD and must be assessed and endorsed by the JAH EM and DIRD AEO prior to works commencing.

Contractor Company Name:
Scope of Works Summary relating to CEMP:
Timing and Scheduling: *Start Date*: *Estimated Completion Date*: *Work Hours/Days (e.g. Monday to Saturday 7am -7pm)*:

Contractor Environmental Management Roles and Responsibilities			
Name and Role	**Responsibility**	**Contact - Phone**	**Contact - Email**
	Overall responsibility for implementation of CEMP during works.		

Deliverable	**Attached**
Site Map(s) and/or plans, showing (if applicable) the following: • Site Office • Worker amenities and toilets • Muster Points • First aid location(s) • Fire protection equipment • Chemical storage • Designated refuelling areas • Spill Kits	Yes☐ No☐ N/A☐

Deliverable	Attached
• Parking areas • Lay down areas • Non-smoking areas and or designated smoking areas • Emergency/evacuation areas and muster points • Worksite boundaries • Points of access and internal roads/tracks • Proposed location(s) of stockpiles • Proposed location(s) of physical dust barriers • Proposed location(s) of wheel wash/washdown points • Sensitive Receptors and no-go areas (e.g. neighbouring Conservation Precincts, neighbouring residents/tenants, Jandakot Underground Water Pollution Control Area Boundary, airside, dieback infestations).	
A Site Induction applicable to contractor's staff (including sub-contractors) and site visitors that addresses all relevant aspects of the CEMP.	Yes☐ No☐ N/A☐
Emergency Response Management Plan or Procedure(s).	Yes☐ No☐ N/A☐
Spill Management Plan (select N/A if spill management is adequately addressed within the ERMP relative to fuels and chemicals stored and used during construction).	Yes☐ No☐ N/A☐

Dieback Management	
Does the area of works include dieback infested areas? (Contact the JAH Environment Manager if you are unsure of dieback infestation boundaries).	Yes☐ No☐
Acid Sulfate Soils	
Triggers for an Acid Sulfate Soil (ASS) investigation include: • Soil or sediment disturbance of 100m3 or in areas depicted in an ASS risk map as Class 1; • Soil or sediment disturbance of 100m3 or more with excavation from below the natural water table in an area depicted on an ASS risk map as Class 2; • Lowering of the water table (i.e. dewatering) in areas depicted in an ASS risk map as Class 1 or Class 2. Does the scope of works trigger an ASS Investigation? (If yes, then the Building permit will be conditioned to require an ASS Investigation be completed prior to undertaking and triggering action consistent with Master Plan 2014. If the ASS Investigation confirms the presence of ASS, then an ASS Management Plan must be developed and implemented).	Yes☐ No☐ Unknown☐

6.5 Appendix E JAH Environmental Incident Report Form

JAH Environmental Incident Report Form

1. Tenant Details

Tenant/Company Name:		**Location (address, or Site number etc)**
Reported By (person completing this form):	**Phone number:**	**Email address:**

2. Incident Type

Incident Type (Check one)

- ☐ Incident – Spill
- ☐ Incident - Other
- ☐ Internal Complaint
- ☐ External Complaint
- ☐ Monitoring Result
- ☐ Internal Audit
- ☐ External Audit
- ☐ Near Miss/Potential Incident

3. Incident/Non-Conformance Details (describe the incident in as much detail as possible).

Location of Incident:	
Date of Incident:	
Time of Incident:	
Person Initially Reporting Incident:	

Incident Details: (Note – for spills, please provide details of the product/chemical name, volume spilled etc).

4. Immediate Actions Taken (describe any immediate actions taken).

5. Investigation Details and Cause of Incident/Non-Conformance.

6. Corrective Actions/Improvements (to avoid a repeat incident/non-conformance).

Proposed Action:	**Person Responsible**	**Date to be Completed.**
Action1.		
Action 2.		

Insert more rows if required for additional actions

7. Approval and Submission (To be signed by Tenant)

Signature	**Printed Name**	**Position**	**Date**

Submit Report (tick method of submission):

- ☐ Email to environmental@jandakotairport.com.au
- ☐ Fax to (08) 9417 3777
- ☐ Mail/Deliver to: Environment Manager, Jandakot Airport Holdings, 16 Eagle Drive, JANDAKOT WA 6164.

JAH internal Use Only	*SMS Report #:*	
Received by:	*Date:*	
Entered into SMS by:	*Date:*	
Incident Closed by:	*Date:*	*Signature:*

6.6 Construction Checklists

Note that additional items may be added to the checklist at the request of JAH or the AEO during each Works/Building permit application. Consistent with Conditions 8 and 12 of EPBC 2009/4796 and Conditions 2 and 7 of EPBC 2013/7032, items may not be removed from the checklists.

6.6.1 Pre-construction checklist

Revision CEMP: V8.2 July 2015

Date		**Completed by**	
Date range covered by this checklist		**Contractor Site Manager**	
Required frequency for submission to JAH	Prior to Site Works commencing (excludes mobilising to site).	**Date submitted to JAH Environment Manager**	

Note: For ease of reporting, control measures that apply to multiple issues have not been duplicated within the below table.

Pre-construction control measures	**Conformance**			**Details of issue / action taken**
	YES	**NO**	**N/A**	
Staff Awareness				
Develop Site Induction and submit to JAH for review.				
Create a Site Induction Register				
Induct all contractor personnel to CEMP and record on Induction Register.				
Assess new staff for training requirements relevant to requirements of CEMP.				
Undertake/provide training, as identified on the training register, and create a record of training completed.				
Update training register to identify required training and completed training.				
All contractor personnel demonstrate awareness of their environmental responsibilities.				
Site Planning (General)				
Complete and submit Appendix D as part of the Works/Building Application Process to DIRD and JAH.				
Copy of issued Works/Building Permit issued by ABC obtained.				
Identify and demarcate designated areas for work with an appropriate barrier.				
Establish extent of Jandakot Underground Water Pollution Control Area (protection area) and demarcate.				
Locate underground and above-ground services and demarcate.				
Plan order of work to minimise period of exposure of disturbed, exposed or un-stabilised ground.				
Establish a Register for Incidents and Complaints				
Written notification of works and contact details for queries provided to neighbouring residents.				
Access and Traffic Management				
Develop traffic control plan and provide to JAH.				
Designate tracks and access roads and demarcate.				

Pre-construction control measures	Conformance			Details of issue / action taken
	YES	NO	N/A	
Establish parking arrangements for construction plant and employee vehicles in accordance with traffic control plan.				
Noise and Vibration Control				
Identify location of nearest sensitive receptors to construction area.				
Identify structures that require dilapidation surveys.				
Silencing devices or noise reducing barriers installed on appropriate equipment.				
Air Quality and Dust				
Identify location of nearest potential sensitive receptors to air quality impacts				
Erosion and sedimentation control				
Identify areas requiring erosion/sediment control devices.				
Water Quality Management				
Identify locations of groundwater abstraction and monitoring infrastructure and prevent damage during construction with the use of fencing or barriers.				
Identify approved sources of non-potable water (e.g. groundwater abstraction bores) for use during construction.				
Waste Management and Disposal				
Identify different waste streams that will be generated by construction.				
Demarcate waste storage areas with approval of JAH EM.				
Hazardous Substances				
Provide a Spill Control Plan to JAH EM				
Establish a register of hazardous materials or dangerous goods.				
Compile current MSDS of items listed within the hazardous materials or dangerous goods register.				
Demarcate hazardous materials or dangerous goods storage areas with approval of JAH EM.				
Establish secure, bunded storage for fuel, oil or other chemicals on site.				
Demarcate refuelling areas with approval of JAH EM.				
Identify the type of spill kit appropriate for identified hazardous materials and dangerous goods required for use in construction.				
Equip mobile refuelling plant with fully stocked spill kits, appropriate for identified hazardous materials and dangerous goods required for use in construction.				
Flora and Fauna				
Verify with JAH EM locations of rare flora awaiting salvage and protect with exclusion fencing until advised by JAH.				

Pre-construction control measures	Conformance			Details of issue / action taken
	YES	NO	N/A	
Confirm the total area of vegetation to be cleared is within the limit approved under EPBC conditions of approval.				
Demarcate designated areas for work with an appropriate barrier.				
Demarcate adjacent Conservation Precinct boundaries via survey pegs and an appropriate barrier.				
Plan clearing in a manner that encourages fauna to move into adjacent Conservation Precincts.				
Liaise with JAH to confirm any pre-clearing fauna location requirements have been completed.				
Dieback				
Verify locations of dieback-affected vegetation with JAH EM.				
Define boundary of dieback infested areas within the worksite.				
Plan works in dieback infested areas for dry weather wherever possible.				

6.6.2 Construction checklist

Revision CEMP: V8.2 July 2015

Date		**Completed by**	
Date range covered by this checklist		**Contractor site Manager**	
Required frequency for submission to JAH	*Monthly	**Date submitted to JAH Environment Manager**	

*If contract period is less than one month, frequency of submission will be determined during the Works Application process in consultation with DIRD AEO and JAH EM.

Note: For ease of reporting, control measures that apply to multiple issues have not been duplicated within the below table.

Construction control measures	**Conformance**			**Details of issue / action taken**
	YES	**NO**	**N/A**	
Staff Awareness				
All contractor personnel are inducted to CEMP and recorded on Induction Register.				
New staff are assessed for training requirements relevant to requirements of CEMP.				
Training has been undertaken/provided, as identified on the training register, and a record created of training completed.				
Training register has been updated to identify required training and completed training.				
All contractor personnel can demonstrate awareness of their environmental responsibilities.				
Site planning				
The work area is demarcated by an appropriate barrier.				
A notice at the site entrance identifying contractor, nominated point of contact and contact details is in place.				
Extent/boundary of Jandakot Underground Water Pollution Control Area is defined.				
Demarcation of relevant underground and above-ground services is maintained.				
Conformance to planned order of work to minimise period of exposure of disturbed, exposed or unstabilised ground.				
Incidents and Complaints				
A register of incidents and complaints is maintained in accordance with this CEMP.				
Recorded incidents and complaints are reported to JAH within 24 hours.				
Liaise with key stakeholders/complainants as directed by JAH.				
Access and Traffic Management				
Traffic control plan is maintained and updated as construction progresses and provide amended plan to JAH.				
Vehicle movement is restricted to designated tracks and access roads consistent with Traffic Management Plan.				

Construction control measures	Conformance			Details of issue / action taken
	YES	NO	N/A	
Traffic controls are maintained in accordance with current traffic control plan.				
Parking arrangements are maintained for construction plant and employee vehicles in designated areas.				
Noise and Vibration Control				
Dilapidation reports undertaken for identified off site structures.				
Construction is during the hours of 7am – 7pm Monday- Saturday.				
Compaction activities utilise mitigation methods (e.g. Static rolling, Oscillating compaction systems, Reduced amplitude settings) as required.				
Plant, equipment and vehicles are regularly serviced/maintained and records held.				
Silencing devices or noise reducing barriers installed on appropriate equipment.				
Air Quality				
Non-potable water is used for dust control.				
Suitable water carts are available on site (or within 1 hour travel time of the site) during activities that have the potential to generate dust.				
Using dust suppression and/or ceasing dust generating activity in excessively windy conditions.				
Stockpiles positioned to minimise impacts on sensitive receptors.				
Large unprotected surfaces (including stockpiles) are stabilised in windy weather.				
Vehicles utilise designated roads and tracks.				
Heavily used tracks are stabilised to minimise dust.				
Road Sweeping used on roads affected by dust/sand.				
Wheel wash at exit points to minimise dust impacts on public roads (If as alternative to regular road sweeping).				
All soil/fill is covered during transport				
Using dust barriers (e.g. wind fence, shade cloth etc.) to minimise impacts on neighbouring sensitive receptors.				
Dust barriers (e.g. wind fence, shade cloth etc.) maintained in good order.				
Areas cleared, levelled and ready for lot level construction are stabilised				
Erosion and Sediment Controls				
Erosion control devices are installed and maintained where risk of sediment-laden runoff being generated is high.				
Catch Drains are installed and maintained where risk of sediment-laden runoff being generated is high.				

Construction control measures	Conformance			Details of issue / action taken
	YES	NO	N/A	
Stockpiles are positioned in locations that minimise impacts on sensitive receptors, taking prevailing winds conditions into consideration.				
Water Quality				
Maintenance of exclusion fencing or barriers around groundwater abstraction monitoring infrastructure.				
Approval obtained from JAH EM to access water from proposed water sources.				
Dewatering or disturbance of Acid Sulfate Soils (ASS) has not occurred unless an ASS Investigation has been completed and (if required) an ASS/Dewatering Management Plan developed and implemented.				
Waste Management and Disposal				
Construction area is tidy				
Each waste stream is stored separately in designated area(s).				
Liquid waste is stored in appropriate containers.				
Domestic or loose waste is stored in lidded bins.				
Waste is securely transported.				
Hazardous waste is transported in appropriate containers with necessary placarding for transport of hazardous materials or dangerous goods.				
Retain evidence of the transport/disposal of controlled wastes				
Disposing of waste containers once full – not exceeding capacity of container/bin.				
Dieback-free topsoil reused in rehabilitation or landscaping works.				
Dieback-free mulch reused in landscaping.				
Hazardous Substances				
Register of all hazardous substances or dangerous goods used on site is maintained.				
Current MSDS for identified hazardous materials or dangerous goods required for construction are kept on site.				
Secure, bunded storage for fuel, oil or other chemicals is on site.				
Hazardous materials and dangerous goods are in storage areas approved by JAH EM.				
Plant and equipment inspected for fuel, oil or hydraulic fluid leaks and leaks repaired.				
Plant and vehicles refueled within designated refuelling area approved by JAH EM.				
Spill kits are fully stocked and located on refuelling trucks and in the vicinity of hazardous materials and dangerous goods storage areas.				
Onsite machinery is restricted to emergency and minor maintenance within designated area.				
Containers holding hazardous substances labelled and stored upright with lids closed on bunds in designated areas when not in use.				

Flora and Fauna				
Exclusion fencing around any rare flora awaiting salvage is maintained until advised by JAH.				
Adjacent Conservation Precinct boundaries are demarcated by an appropriate barrier.				
Conservation Precinct boundaries are fenced at the completion of works.				
Clearing is in a manner that encourages fauna to move into adjacent Conservation Precincts.				
Required fauna relocation has been undertaken by experts.				
Vehicles (including plant/machinery) are cleaned off-site prior to initially accessing the airport for works to prevent introduction of weeds.				
Outbreak of weeds within the Construction Site controlled to prevent impacts on neighbouring Conservation Precincts.				
Landscaping is consistent with Jandakot Airport Landscape Design Guidelines.				
Bushland Rehabilitation is consistent the Jandakot Airport Rehabilitation and Revegetation Guidelines.				
Dieback				
Vehicles (including plant/machinery) are cleaned off-site prior to initially accessing the airport for works.				
Soil/sand/gravel required on site has been obtained from certified dieback-free sources.				
Footwear is free of mud and soil when entering dieback-free bushland.				
The below dieback measures are only applicable to works that encroach on dieback infested areas.				
Works in dieback infested areas are restricted to dry weather wherever possible.				
Defined boundary of dieback infested area is maintained				
Washbay established at exit point of dieback infested area, with drainage contained to infested areas.				
Plant/vehicles/footwear etc. are cleaned at washbay upon exiting dieback areas.				
Access to dieback areas is via designated entry and exit points.				
Cleared vegetation from dieback infested areas is stockpiled within infestation boundary and disposed of in approved manner.				
Excess soil from dieback infested areas is stockpiled within infestation boundary and disposed of in approved manner.				
Fire Prevention				
Complying with fire bans.				
No combustible materials stored within 3m of Dangerous goods storage areas.				
No open fires on site.				

Cultural heritage				
Monitoring of areas subjected to clearing and soil disturbance for items of potential cultural significance is undertaken.				
Items of potential cultural significance located during the reporting period have been immediately reported.				

6.6.3 Post-construction checklist

Revision CEMP: V8.2 July 2015

Date		**Completed by**	
Date range covered by this checklist		**Contractor site Manager**	
Required frequency for submission to JAH	**Within 4 weeks of the completion on construction works.**	**Date submitted to JAH Environment Manager**	

Post Construction control measures	Conformance			Comment/Action
	YES	**NO**	**N/A**	
Waste management				
All waste materials and/or liquids have been removed from site				
Erosion and sedimentation control				
Soil is stabilised and erosion control methods removed.				
Rehabilitation of Site				
Soil has been made stable (especially on slopes).				
Site sheds and amenities removed.				
Site has been revegetated in accordance with Landscape Plan (or specific rehabilitation plan to be prepared where unauthorised disturbance of protected conservation areas occur).				
Site inspected by JAH EM.				

7 FIGURES

Figure 1. Jandakot Airport Master Plan 2009

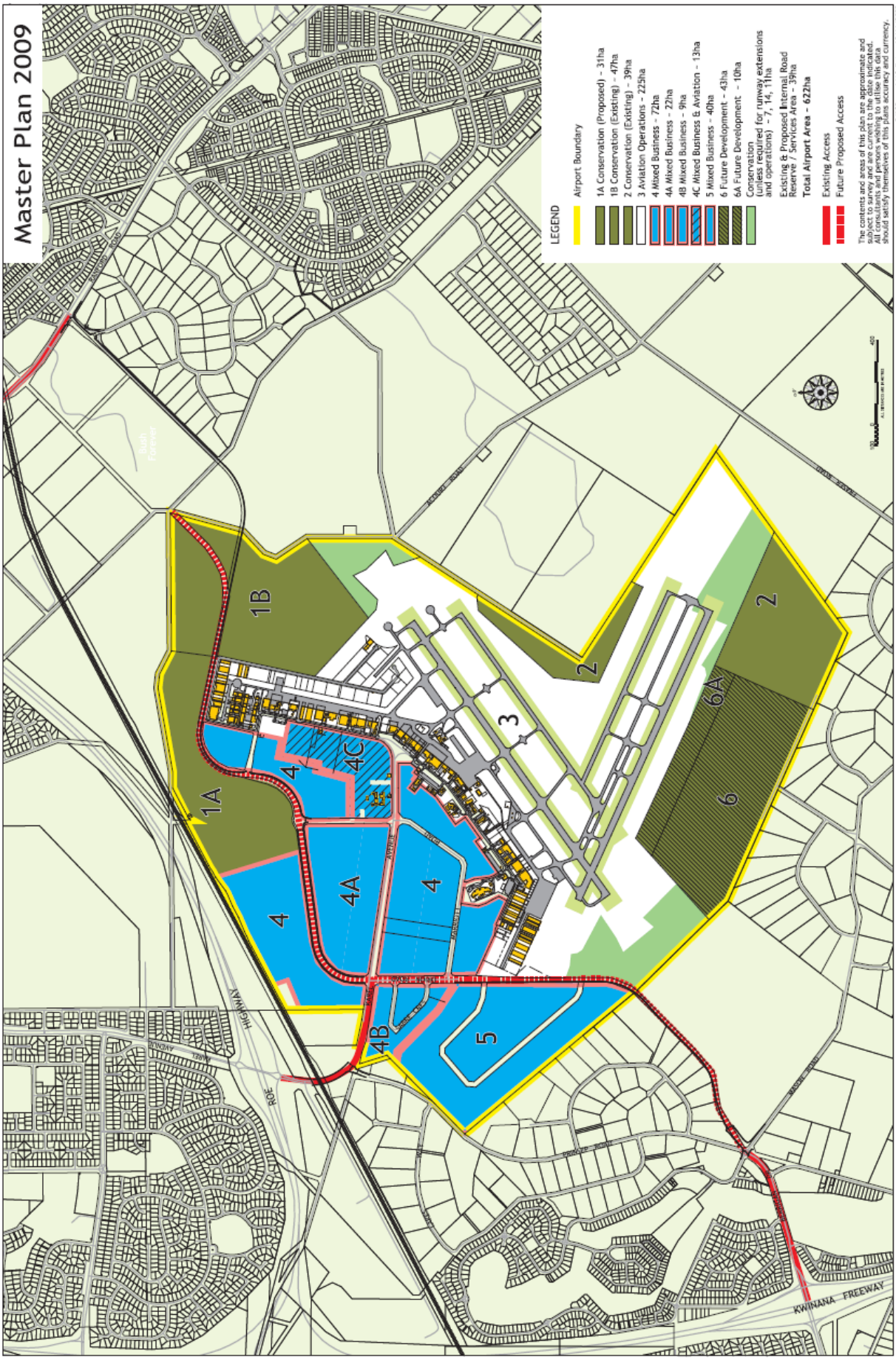


Figure 2. Jandakot Airport Master Plan 2014 Precinct Plan

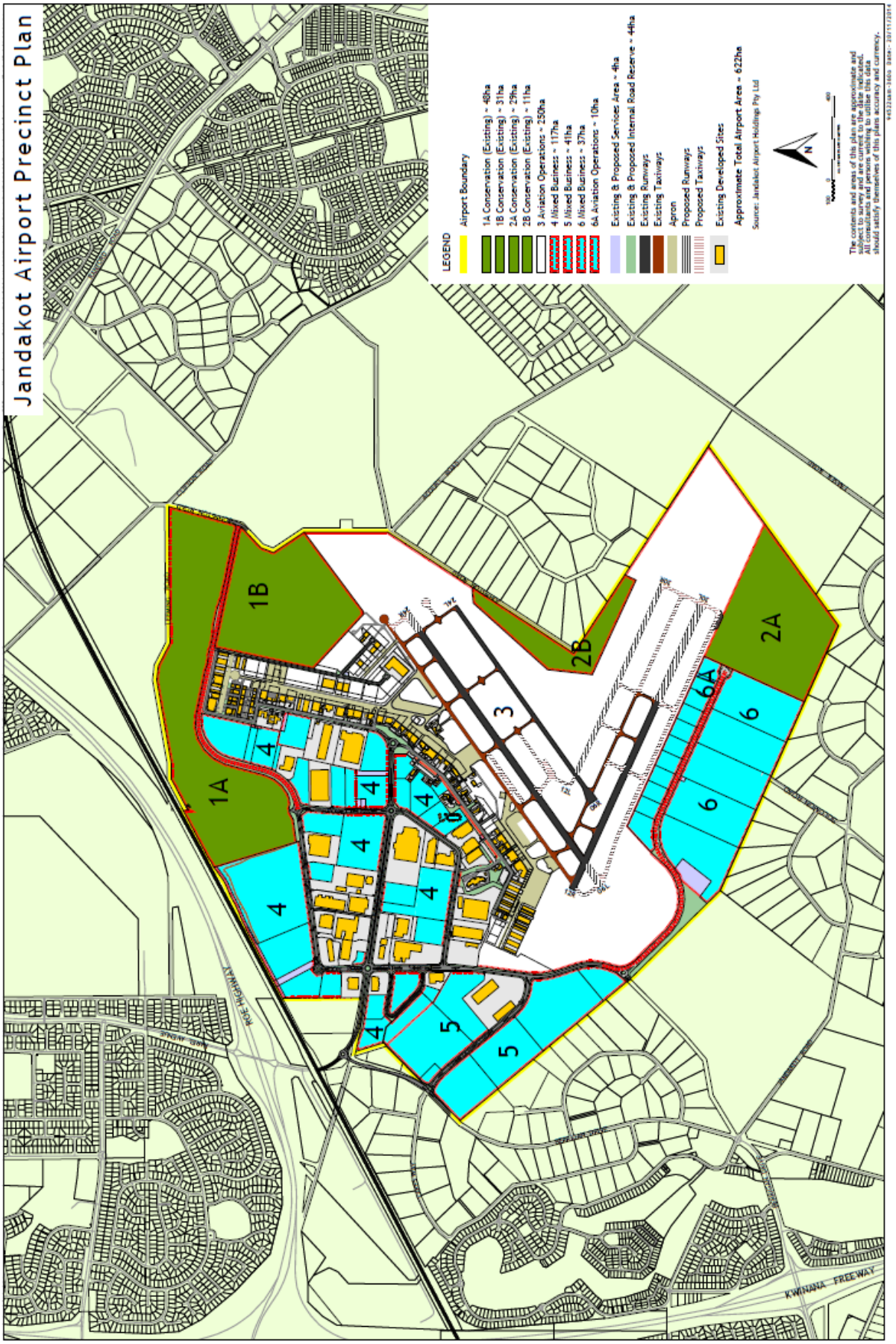


Figure 3. Jandakot Airport Staged Clearing EPBC 2009/4796

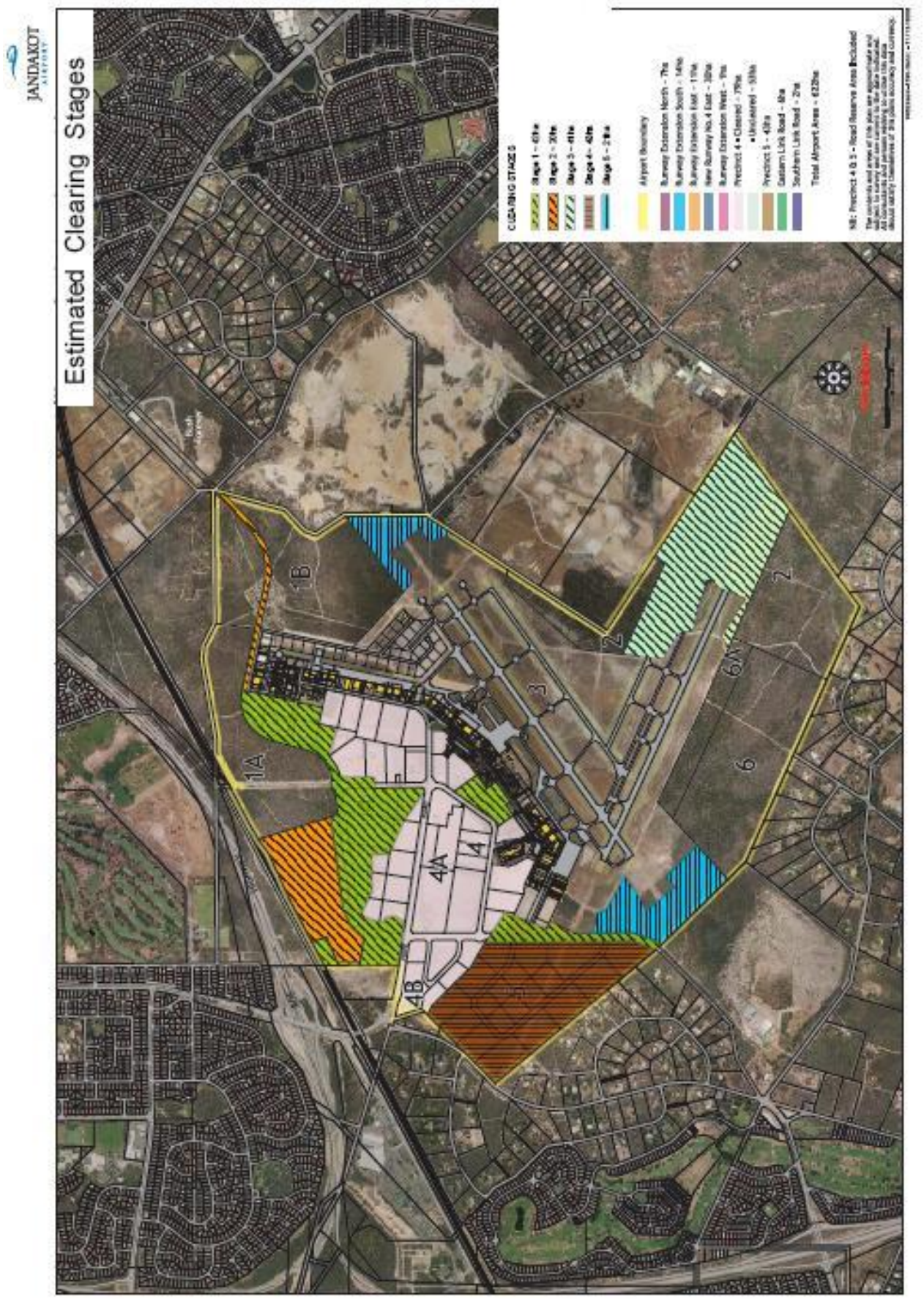


Figure 4. Jandakot Underground Water Pollution Control Area

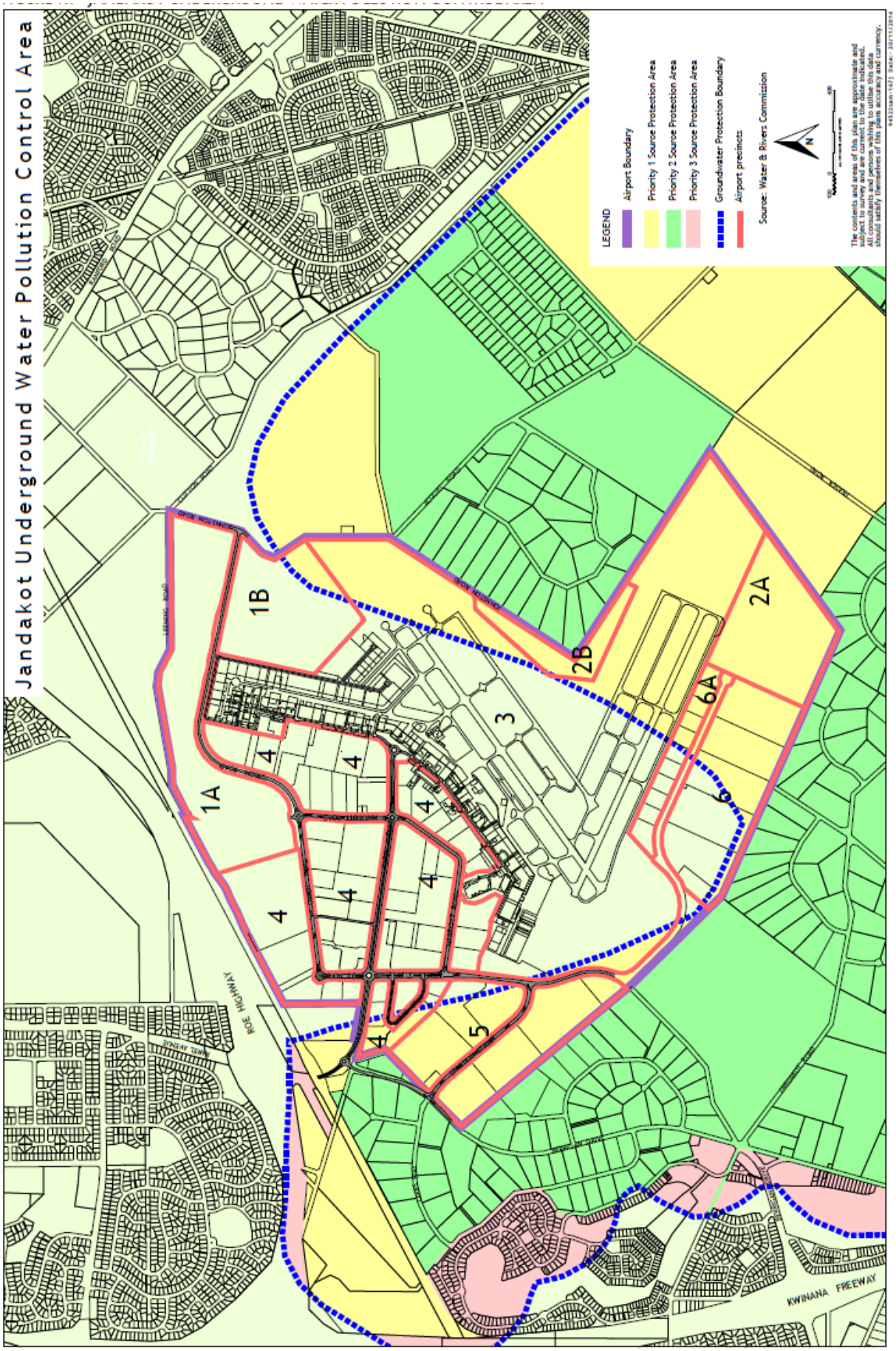


Figure 5. Jandakot Airport Dieback Occurrence Map 2014