



# **Western Sydney Airport**

**Visual and Landscape**

**Construction Environmental Management Plan**

**March 2024**



**Western  
Sydney  
Airport**

## Document Control

File Name	Document Name	Revision
WSA00-WSA-00400-EN-PLN-000010	WSA Visual and Landscape CEMP	5D

### Revision History

Revision	Date	Description	Author	Reviewer
0	24/09/2018	Approved for early earthworks		
1	14/12/2018	Revision update to include the Experience Centre and Site Office phase and Material Importation phase	WSA	S Reynolds
2	18/12/2019	Approved for bulk earthworks	WSA	S Reynolds
3	26/10/2021	Approved for Terminal Works and SM, M12 and utilities works on WSA land.	WSA	L Laughton
4	27/07/2022	Updated to reflect Commonwealth and stakeholder comments. Approve for Use	WSA	L Laughton
5D	28/03/2024	Updated to include Stage 1 Cargo Works, Standalone facilities and Testing and Commissioning.	WSA	L. Laughton

### Plan Authorisation

Position	Name	Signature	Date
Environment Manager	L Laughton		28/03/2024

## Terms and Definitions

Item	Definition
<b>ABC</b>	Airport Building Controller
<b>ABC Regulations</b>	<i>Airports (Building Control) Regulations 1996 (Cth)</i>
<b>ACP</b>	Airside Civil and Pavements
<b>AEO</b>	Airport Environment Officer (person appointed under the AEPR 2.01)
<b>AEPR</b>	<i>Airports (Environment Protection) Regulations 1997 (Cth)</i>
<b>AGL</b>	Aeronautical Ground Lighting
<b>AHD</b>	Australian Height Datum
<b>Airport</b>	Western Sydney International (Nancy-Bird Walton) Airport (WSI). NB: The Airport is referred to in the Airports Act as Sydney West Airport and is also commonly known as Western Sydney Airport
<b>Airport Lease</b>	A lease for the Airport granted under section 13 of the Airports Act
<b>Airport Plan</b>	Means the Airport Plan for the Airport Site as determined by the Infrastructure Minister under section 96B of the Airports Act. The latest Airport Plan was determined in September 2021 and authorises Rail Development on the Airport Site.
<b>Airport Site</b>	The site for Sydney West Airport as defined by the Airports Act
<b>Airports Act (or 'the Act')</b>	<i>Airports Act 1996 (Cth)</i>
<b>ALC</b>	Airport Lessee Company (the Company granted a lease over the Airport Site)
<b>ALER</b>	Airfield lighting equipment room
<b>Ancillary Development</b>	An 'ancillary development' as set out in section 96L of the Airports Act
<b>Approved Plan</b>	A Plan approved in accordance with the Airport Plan Conditions of Approval
<b>Approver</b>	For Condition 30 of the Airport Plan (Biodiversity Offset Delivery Plan) and any matter relating to the Biodiversity Offset Delivery Plan – the Environment Minister or an SES employee in the Environment Department  For other matters – the Infrastructure Minister or an SES employee in the Infrastructure Department
<b>Apron</b>	The part of an airport used for: <ul style="list-style-type: none"> <li>a. the purposes of enabling passengers to embark/disembark an aircraft;</li> <li>b. loading cargo onto, or unloading cargo from, aircraft; and/or</li> <li>c. refuelling, parking or carrying out maintenance on aircraft</li> </ul>
<b>ARFFS</b>	Aviation Rescue and Firefighting Service
<b>AS/NZS</b>	Australian Standard / New Zealand Standard
<b>Associated Site</b>	An 'associated site for Sydney West Airport' as set out in section 96L of the Airports Act
<b>ATC</b>	Air Traffic Control
<b>ATCT</b>	Air Traffic Control Tower
<b>BEC</b>	Bulk Earthworks Contract
<b>Bulk Earthworks</b>	The large-scale earthworks required to flatten the Stage 1 Airport Development Area in preparation for further construction works as described in section 6 of the Construction Plan
<b>CASA</b>	Civil Aviation Safety Authority
<b>CASR</b>	<i>Civil Aviation Safety Regulations 1998 (Cth)</i>

Item	Definition
<b>CEMF</b>	Contractor Environmental Management Framework
<b>CEMP</b>	Construction Environmental Management Plan (required under Section 3.11.2 of the Airport Plan)
<b>CIP</b>	Cumulative Impacts Plan
<b>CIZ</b>	Construction Impact Zone. The part or parts of the Airport Site or an Associated Site on which Main Construction Works are planned to occur, as detailed in the Construction Plan
<b>Condition</b>	A condition set out in Part 3 of the Airport Plan in accordance with section 96C of the Airports Act
<b>Construction Period</b>	The period from the date of commencement of Main Construction Works in any part of the Airport Site until the date of commencement of Airport Operations
<b>CSEP</b>	Community and Stakeholder Engagement Plan (required under Condition 15 in Section 3.11.2 of the Airport Plan)
<b>CSR</b>	Combined Services Route
<b>D&amp;C</b>	Design and Construct
<b>DAWE</b>	Department of Agriculture, Water and the Environment (Cth)
<b>DCCEEW</b>	Department of Climate Change, Energy, the Environment and Water (formerly part of DPE)
<b>DCJ</b>	Department of Communities and Justice
<b>DCS</b>	Department of Customer Service
<b>DFSI</b>	Department of Finance, Services and Innovation (Cth)
<b>DIPNR</b>	NSW Department of Infrastructure, Planning and Natural Resources (now DPE)
<b>DITRDCA</b>	Department of Infrastructure, Transport Regional Development, Communications and the Arts (Infrastructure Department) (Cth)
<b>DPC</b>	NSW Department of Premier and Cabinet
<b>DPE</b>	NSW Department of Planning and Environment (now split into DCCEEW and DPHI)
<b>DPHI</b>	Department of Planning House and Infrastructure (formerly part of DPE)
<b>DPI</b>	Department of Primary Industries (including Agriculture NSW, Fisheries NSW and NSW Office of Water) (now DPE)
<b>ECM</b>	Environmental Control Map
<b>Ecologically Sustainable Development</b>	Using, conserving and enhancing the community's resources so that the ecological processes on which life depends are maintained and the total quality of life now and in the future, can be increased (Council of Australian Governments, 1992)
<b>ECZ</b>	Environmental Conservation Zone
<b>EES</b>	The Environment, Energy and Science (EES) group within the Department of Planning, Industry and Environment, formerly known as Office of Environment and Heritage
<b>EEW</b>	Early Earthworks
<b>EIS</b>	Environmental Impact Statement prepared for WSI under the EPBC Act
<b>EMS</b>	Environmental Management System
<b>Environment Minister</b>	The Minister responsible for the EPBC Act
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
<b>EPA</b>	NSW Environment Protection Authority
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)

Item	Definition
<b>ESA</b>	Environmentally Sensitive Area
<b>ESCP</b>	Erosion and Sediment Control Plan
<b>ETC</b>	Enterprise Technology Contract
<b>EWMS</b>	Environmental Work Method Statement
<b>FASL</b>	Final Airport Site Layout
<b>GSE</b>	Ground Support Equipment
<b>Ha</b>	Hectares
<b>Infrastructure Department</b>	The Department responsible for administering the Airports Act, currently the Australian Government Department of Infrastructure, Transport Regional Development, Communications and the Arts (DITRDCA)
<b>Infrastructure Minister</b>	The Minister responsible for the Airports Act from time to time
<b>ISO 14001</b>	AS/NZS ISO 14001:2016 Environmental Management Systems
<b>Km</b>	Kilometres
<b>LCB</b>	Landside Civil and Buildings
<b>LDP</b>	Land Disturbance Permit
<b>LEP</b>	Local Environmental Plan
<b>M12 on Airport Works</b>	The physical works and infrastructure, including temporary works and infrastructure which the M12 Authority, its contractors and nominees plan, investigate, design, construct, install, commission, test, accept, complete, maintain, operate or repair within the Airport Site
<b>Main Construction Works (MWC)</b>	Substantial physical works on a particular part of the Airport Site (including large scale vegetation clearance, bulk earthworks and the carrying out of other physical works, and the erection of buildings and structures) described in Part 3 of the Airport Plan, other than TransGrid Relocation Works or Preparatory Activities
<b>MI</b>	Material Importation
<b>MTIP</b>	Major Transport and Infrastructure Projects (Cth) - a Division of DITRDCA
<b>Non-conformance</b>	Failure to conform to the requirements of the Airport Plan including Approved Plans
<b>NSWRA</b>	NSW Reconstruction Authority
<b>POEO Act</b>	<i>Protection of the Environment Operations Act 1997</i> (NSW)
<b>Preparatory Activities</b>	<ul style="list-style-type: none"> <li>a. day to day site and property management activities;</li> <li>b. site investigations, surveys (including dilapidation surveys), monitoring, and related works (e.g. geotechnical or other investigative drilling, excavation, or salvage);</li> <li>c. establishing construction work sites, site offices, plant and equipment, and related site mobilisation activities (including access points, access tracks and other minor access works, and safety and security measures such as fencing but excluding bulk earthworks);</li> <li>d. enabling preparatory activities such as: <ul style="list-style-type: none"> <li>i. demolition or relocation of existing structures (including buildings, services, utilities and roads);</li> <li>ii. the disinterment of human remains located in grave sites identified in the European and other heritage technical report in volume 4 of the EIS; and</li> <li>iii. application of environmental impact mitigation measures; and</li> </ul> </li> <li>e. any other activities which an Approver determines are Preparatory Activities for this definition</li> </ul>
<b>RAP</b>	Remediation Action Plan
<b>SEMF</b>	Site Environmental Management Framework (Construction Plan, Appendix 2)

<b>Item</b>	<b>Definition</b>
<b>SEPP</b>	State Environmental Planning Policy
<b>SES</b>	Senior Executive Service
<b>SES Officer</b>	An SES employee under the <i>Public Service Act 1999</i> (Cth)
<b>Stage 1 Airport Development</b>	The Airport development described in Part 3 of the Airport Plan
<b>Stage 1 Cargo Works</b>	The physical things and works which the Stage 1 Cargo Works Contractor will design, supply, construct, install, produce, or complete for WSA
<b>Standalone Facilities</b>	The physical things and works which include Commonwealth standalone facilities which Contractors will design, supply, construct, install, produce or complete for WSA and any other associated works required by agencies or for the Stage 1 Airport Development
<b>Sustainability Plan</b>	Plan required by Condition 29, Section 3.11.5 of the Airport Plan
<b>Sydney West Airport</b>	The Airport. NB: this is the name used in the Act. The Airport is known as Western Sydney International (Nancy-Bird Walton) Airport, or, more commonly, Western Sydney International
<b>TfNSW</b>	Transport for New South Wales
<b>the Project</b>	Western Sydney Airport – Stage 1 Airport Development
<b>TSS</b>	Terminal and Specialty Services
<b>Visual sensitivity</b>	The character of a setting, the quality of a view and how critically a change to the existing landscape would be viewed from various viewpoints
<b>WSA</b>	WSA Co Limited (ACN 618 989 272), the entity responsible for constructing and operating the Airport in accordance with the Airport Plan. For the purposes of the Airports Act, WSA is the “Airport Lessee Company” for WSI.
<b>WSI</b>	Western Sydney International (Nancy Bird Walton) Airport. The Airport. NB: Under the Airports Act, the Airport is referred to as Sydney West Airport



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# 1 Introduction

## 1.1 Background/Context

This WSA Visual and Landscape Construction Environmental Management Plan (Visual and Landscape CEMP) (this Plan) has been prepared to satisfy the requirements of the Visual and Landscape CEMP set out in the Conditions for the Stage 1 Airport Development of the Western Sydney International (Nancy-Bird Walton) (WSI) Airport detailed in Section 3.11.2 of the Airport Plan. Specifically, Section 3.11.2 Condition 14(1) of the Airport Plan requires that a WSA Visual and Landscape CEMP be approved under the Airport Plan prior to the commencement of Main Construction Works.

This Visual and Landscape CEMP provides the management approach and requirements (including environmental mitigation measures, controls, monitoring and reporting) for managing visual and landscape related matters during construction of the Stage 1 Airport Development.

This Plan forms one of nine CEMPs which are collectively covered by the WSA Site Environmental Management Framework (SEMF). To ensure the environmental resources, responsibilities and management measures are implemented during the construction activities, the SEMF is contained within the Construction Plan (Appendix 2). The implementation of the Construction Plan and the SEMF are aligned with Project level management plans including the Community and Stakeholder Engagement Plan (CSEP) and the Sustainability Plan Figure 1.

The Construction Plan, including the SEMF and nine CEMPs provide the environmental management approach and requirements and therefore should not be read in isolation to each other due to interconnecting management outcomes and objectives. For the Visual and Landscape CEMP, it is considered that the following management plan linkages can be made:

- Biodiversity CEMP – Management of vegetation on-site and prevention of impacts on adjacent vegetation and fauna habitat will be influential in the management of visual impacts.
- Soil and Water CEMP – Managing the control of runoff and ensuring receiving waters are not impacted by the works is important in minimising visual impacts. Also, the management of surface water flows is considered a key aspect in landscape management. Preventing mud being tracked onto roadways will also be important in minimising visual impacts.
- Air Quality CEMP – Impacts on air quality have the potential to affect the visual amenity and landscape of the receiving environment, particularly with regards to dust generation.
- Waste and Resources CEMP – Effective on-site waste management will be influential in minimising visual impacts resulting from works.
- Community and Stakeholder Engagement Plan (CSEP) – It is anticipated that the surrounding community and stakeholders will be highly receptive to visual impacts, particularly general tidiness of the site and surrounds.
- Sustainability Plan– Management and reduction of greenhouse gas emissions and management of impacts about general health, wellbeing, and quality of life for surrounding communities. This linkage with the WSA Sustainability Plan extends to IS Rating discharge credit Discharge Dis- 5 Light Pollution, Urb-1 – Urban Design and Urb-2 – Implementation, where compliance with this CEMP will ensure the project will meet credit requirements.

Where relevant, linkages to other CEMPs and management objectives have been included in the risk assessment and the environmental control measures (Section 6 and Section 7 respectively).

**Table 1** below highlights relationships and linkages of this Visual and Landscape CEMP with other CEMPs and management plans, including key cross-referencing to the Airport Plan and Environmental Impact Statement (EIS).

**Table 1: Visual and Landscape CEMP Relationship with other Plans**

<b>CEMP or Plan</b>	<b>Airport Plan Condition (3.11.2)</b>	<b>EIS Chapter 28 Table: Management area</b>	<b>EIS Chapter 28 Table: Mitigation measures</b>
Aboriginal Cultural Heritage	11	28-12	28-13
Air Quality	10	28-10	28-11
Biodiversity	7	28-04	28-05
Community and Stakeholder Engagement Plan	15	28-20	28-21
European and other Heritage	12	28-14	28-15
Noise and Vibration	6	28-02	28-03
Soil and Water	8	28-06	28-07
Sustainability	29	28-37	28-38
Traffic and Access	9	28-08	28-09
<b>Visual and Landscape (this Plan)</b>	14	28-18	28-19
Waste and Resources	13	28-16	28-17

<b>Key</b>
Moderate to high relevance to this CEMP
Some relevance to this CEMP

The review and document control process for this Plan are described further in Section 10 of the SEMF.

The context of this Plan in relation to the WSA environmental management system (EMS) is presented in Figure 1.

## 1.2 Document Purpose

The purpose of this Plan is to avoid/mitigate visual and landscape impacts and provide the foundation for the management of visual and landscape impacts for all construction activities as per the approved Construction Plan; in accordance with best practice and legal requirements (including environmental mitigation measures, controls, monitoring and reporting). Objectives, targets and performance criteria are set out in Section 3 of this CEMP.

This Plan details the visual and landscape management requirements that must be satisfied to demonstrate compliance with Condition 14 of Section 3.11.2 of the Airport Plan for the construction of the Stage 1 Airport Development.

Legal and other requirements are identified and maintained in a register within the SEMF (refer SEMF Appendix L). Specific visual and landscape mitigation measures are included within this CEMP (refer Section 7), are derived from the EIS (refer to Section 4.4) and are required to be satisfied as well as assessed through risk assessment processes (refer Section 6.2).

Section 7 outlines how mitigation measures will be implemented and by who and at which phase of construction. Implementation of these measures is ensured through a program of work activities, monitoring, training, competence, inspection, auditing and reporting actions (refer Sections 9 and 10), with the responsibilities for implementation identified in Section 8. Continual improvement processes in relation to compliance with regulatory requirements are detailed in the SEMF Section 9.2.

In summary, this Plan sets out to achieve the following:

Provision of details for the management and mitigation measures to be implemented, including timing and responsibilities;

- Ensuring the commitments of the Conditions (as set out in the Airport Plan) and regulatory requirements are met and satisfied by both WSA and contractors;
- Provision of process for monitoring implementation, reporting, and auditing of visual and landscape impact management and compliance related issues;
- Commitment to meeting the requirements of AS/NZS ISO 14001:2016 Environmental Management Systems including the need for continual improvement;
- Provision of a process to be implemented for the management of complaints, for stakeholder engagement, and for the management of emerging environmental issues as they arise; and
- Provision of a system including procedures, plans and documentation for implementation by WSA personnel and contractors to enable Project completion in accordance with the environmental requirements.

Effective implementation of this Plan will assist WSA and relevant contractors to achieve compliance with necessary environmental regulatory and policy requirements in a systematic manner with an outcome of continual environmental management performance.

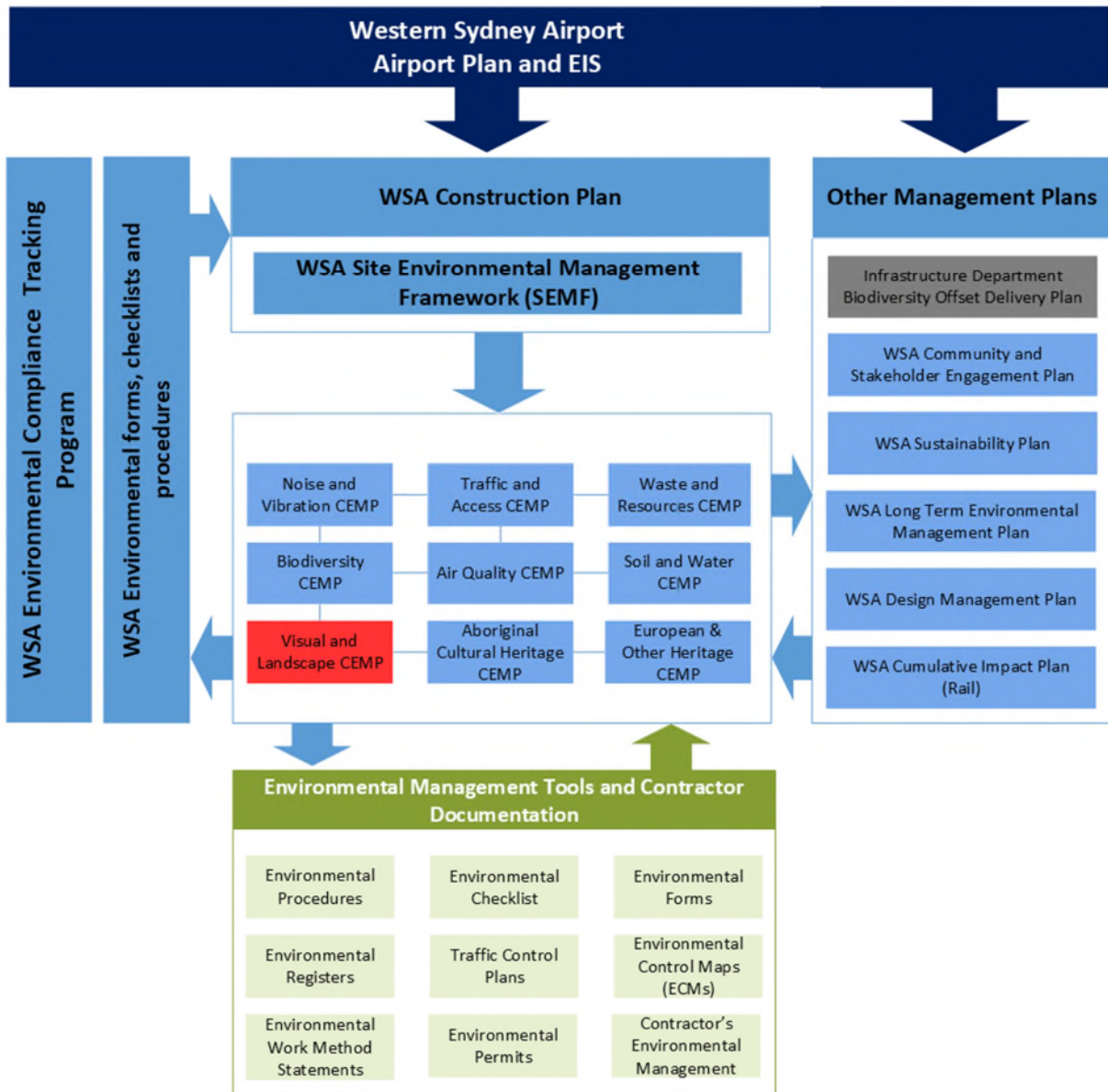
### **1.3 WSA EMS Overview**

WSA operates in general accordance with AS/NZS ISO 14001:2016 – Environmental management systems. A copy of the WSA Environmental Policy is provided in Appendix H of the SEMF.

The Stage 1 Airport Development will be undertaken in accordance with the Construction Plan including the SEMF and the associated CEMPs (including this Plan).

The SEMF forms an appendix to the Construction Plan and is the overarching management plan for implementation of the nine CEMPs. It provides a structured and systematic approach to environmental management and provides an expectation and guidance with regards to environmental management for the construction of the Stage 1 Airport Development.

The structure of the Environmental Management System (EMS) for the Project is shown in Figure 1.



**Figure 1: WSA EMS and CEMP context**

## 1.4 Consultation Requirements of this Document

Airport Plan Condition 35 outlines the consultation requirements during the preparation of this CEMP and requires consultation with any NSW Government agencies as specified by the NSW Department of Premier and Cabinet (DPC), as well as the NSW Department of Planning and Environment (DPE) for specific CEMPs. NSW Government Agencies specified by DPC for consultation for this CEMP include DPE, the Government Architect, and Penrith and Liverpool City Councils.

Airport Plan Condition 14(3) also requires that this Visual and Landscape CEMP consider Table 28-18 of the EIS which states the CEMP should also be prepared in consultation with the NSW DPE and relevant local councils.

Consultation has been completed during the development of this CEMP during the review and update of Revisions 0 and 1 in 2018, Revision 2 in 2019, Revision 3 in 2021, Revision 4 in 2022 and this Revision 5 in 2024. A summary of the stakeholder and government agency consultation undertaken and used to inform the review and finalisation of Revision 5 is presented in **Table 2**.

Consultation will continue with government agencies and other relevant stakeholders throughout the Project where there is a change to a CEMP. The outcomes of this consultation will be documented in subsequent revisions of the relevant CEMPs, with details of such consultation included in the applicable document.

### 1.4.1 Consultation to Inform Revision 5

A Community and Stakeholder Engagement Plan (CSEP) outlining the process for engaging with stakeholders was prepared by the WSA Community and Engagement team. The CSEP and a scoping document outlining the works in the Construction Plan and potential modification of the CEMPs was provided to the stakeholders as required by the Airport Plan Conditions.

Details of the construction phases were described in the correspondence to provide context to stakeholders on the level of impact that would result from the next phase of construction activities. Upcoming commercial and Commonwealth Development phase of construction captured in Revision 5 of the CEMPs include a Cargo facility and standalone facilities. On 04 March 2024, stakeholders were provided with the draft Construction Plan, the nine draft CEMPs and the CSEP to review and were invited to provide comment. A summary of the consultation is provided in **Table 2**.

**Table 2: Visual and Landscape CEMP Consultation**

Activity	Date	Invitees	Summary of issues
<b>Consultation Summary</b>			
Briefing presentation for stakeholders	20 February 2024	<ul style="list-style-type: none"> <li>Aboriginal Affairs NSW</li> <li>Aerotropolis Community Commissioner</li> <li>Department of Infrastructure, Transport, Regional Development, Communications and the Arts</li> <li>NSW Department of Climate Change, Energy, the Environment and Water</li> <li>Commonwealth Department of Climate Change, Energy, the Environment and Water</li> <li>NSW Department of Communities and Justice</li> <li>NSW Department of Customer Service (Building Commission, Fair Trading, SafeWork)</li> </ul>	Stakeholders who joined the meeting were taken through a presentation outlining updates to the Construction Plan, CEMP and CSEP.

Activity	Date	Invitees	Summary of issues
CEMPs provided to stakeholders for comment	04 March 2024	<ul style="list-style-type: none"> <li>• NSW Department of Planning House and Infrastructure (Valuer General, Property, Western Parkland City Authority)</li> <li>• NSW Health (Health Infrastructure, South Western Sydney and Nepean Blue Mountains Local Health Districts)</li> <li>• NSW Reconstruction Authority (NSWRA)</li> <li>• NSW Rural Fire Services</li> <li>• Liverpool City Council</li> <li>• Penrith City Council</li> <li>• Sydney Metro</li> <li>• Transport for NSW</li> <li>• The Cabinet Office (Part of NSW Department of Premier and Cabinet)</li> </ul>	

## 1.5 Certification and Approval

This Visual and Landscape CEMP has been reviewed and approved for issue by the WSA Environment Manager prior to submission to the Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts (Infrastructure Department) for approval, in accordance with EIS requirement 28-18 (refer **Table 8**).

## 1.6 Distribution

All WSA personnel and contractors will have access to this Visual and Landscape CEMP via the project document control management system. Unless otherwise agreed by the Approver, the Approved Plan must be published on WSA Co's website within one month of being approved and be available until the end of the Construction Period. An electronic copy can be found on the Project website - <https://westernsydney.com.au>

This document is uncontrolled when printed. One controlled hard copy will be maintained by the Quality Manager at the Project office.

## 2 Scope of Works

The Construction Plan details the construction staging of the Stage 1 Airport Development.

The delivery of the Stage 1 Airport Development will be through a packaging strategy with a wide variety of package sizes, risk profiles and contracting entities. Each package (scope of work allocated to one contractor) will have different levels of environmental risk and environmental obligations, depending on the scope of works, location of works and sensitivity of the receiving environment and cultural heritage issues and relevant statutory requirements and obligations.

The Stage 1 Airport Development of the Project comprises the following key features as described in the Construction Plan (which is consistent with the Airport Plan and EIS Chapter 5):

- Site preparation
- Utilities
- Ancillary developments
- Terminal
- Airside
- Ground transport
- Other building activities
- Aviation support facilities

Details of the Project construction packages, activities, staging and programming including the phases of works for each package are described in Section 3 and Section 6 of the Construction Plan (WSA00-WSA-00000-CN-PLN-000001) as required by the Airport Plan Condition 1(5).

This Plan applies to all phases of works as described in Section 6 of the Construction Plan.

A variation to this Plan will be submitted before work other than Preparatory Activities is undertaken on any other phases of the Project.



## 3 Objectives and Targets

### 3.1 Objectives

The key objective of this Visual and Landscape CEMP is to ensure that impacts associated with visual and landscape quality are managed to as far as practicable and within best practice standards during the construction phase to reduce associated impacts to acceptable levels for sensitive receivers and neighbours surrounding the Airport Site.

To achieve this objective, the following will be undertaken:

- Ensure appropriate measures are implemented to address the mitigation measures detailed in Table 28-18 and Table 28-19 in Chapter 28 of the EIS;
- Ensure the Airport makes a positive contribution to the changing identity and character of Western Sydney;
- Landscape and visual amenity impacts will be minimised during construction;
- Impacts associated with light spill during construction will be minimised; and
- Appropriate measures will be implemented to comply with all relevant legislation and other requirements as described in Section 4 of this Plan.

### 3.2 Targets and Performance Criteria

Targets and performance criteria have been established for the management of visual and landscape impacts during the project which have been derived from the framework and performance criteria identified in the EIS, Table 28-18, as presented in **Table 3**.

**Table 3: Visual and Landscape Objectives, Targets and Performance Criteria**

Objective	Target	Performance Criteria	Document Reference
Ensure the Airport makes a positive contribution to the changing identity and character of Western Sydney	The airport is appropriately integrated into the surrounding region and land uses, considering the changing nature of Western Sydney.	Compliance with design intent and philosophy (e.g. incorporation of the "Great Australian Light" and WSI Vision of connecting the future social, cultural and economic hub of the Western Parkland City	CSEP Detailed design
Minimise landscape and visual amenity impacts during construction	No non-conformance with the requirements of the CEMP Comply with legislation and other requirements	Appropriate landscape treatments are identified and implemented to reduce visual amenity impacts in accordance with this CEMP and detailed design	Complaints database Weekly environmental inspection reports Monthly reporting Incident and non-conformance reporting Audit reporting Annual Compliance Report
Minimise impacts associated with light spill during construction	No non-conformance with the requirements of the CEMP	All lights where possible to be downward facing and directed away from receivers	Complaints database Weekly environmental inspection reports Monthly reporting Incident and non-conformance reporting

The above performance criteria in **Table 3** have been set to provide a benchmark performance objective to which WSA will endeavour to achieve. Failure to achieve the targets will not be considered a non-conformance, however, will prompt internal review of environmental management and consideration of potential improvement opportunities.

## 4 Environmental Legal and other Requirements

Relevant environmental legislation and other requirements are identified below.

### 4.1 Relevant Legislation and Guidelines

As the Western Sydney Airport is to be developed under the Airport Plan determined under the Commonwealth *Airports Act 1996* (Airports Act), some state laws will not be applicable to the Project (refer s112 Airports Act). Where state law is applicable, this Plan will set out the relevant applicable state legislation and requirements and demonstrate how compliance with those laws including obtaining relevant permits will be achieved. Where state laws are not applicable, there may nonetheless be a requirement to have regard to those laws, for example, through mitigation measures to be incorporated in CEMPs to satisfy conditions under the Airport Plan.

#### 4.1.1 Legislation

Relevant environmental legislation and regulations for this Plan are summarised in **Table 4**. Further legislative details can be found in Section 3.2 of the SEMF and its Appendix L – Legal and other Requirements Register.

**Table 4: Principal Environmental Legislation and Relevance**

Legislation or Regulation	Relevance	CEMP Compliance Provisions
<b>Commonwealth</b>		
Airports Act 1996 (Airports Act)	<p>The Act and AEPRs set out the framework for the regulation and management of activities at airports that could have potential to cause environmental harm.</p> <p>This includes offences related to environmental harm, environmental management standards, monitoring and incident response requirements.</p> <p>The Airport Plan prepared under the Airports Act covers several environmental matters and details specific measures to be carried out for the purposes of preventing, controlling or reducing the environmental impact associated with the airport.</p> <p>Criminal offences may be applicable if these measures are not complied with.</p>	<p>This CEMP forms part of the overall WSA EMS which has as a target of full compliance with the Airport Plan.</p> <p>Relevant mechanisms within this CEMP that will contribute to this include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Section 3.1 – Objectives</li> <li>• Section 4.3 – Airport Plan Conditions</li> <li>• Section 4.4 – EIS requirements</li> <li>• Section 6.2 – Risk Assessment</li> <li>• Section 7 – Environmental Control Measures</li> <li>• Section 8 – Environmental Roles and Responsibilities</li> <li>• Section 9 – Environmental Inspection, Monitoring, Auditing &amp; Reporting</li> <li>• Section 9.6 – Environmental Incidents and complaints management</li> </ul> <p>Section 9.5 – Review of Approved Plans</p>
Airports (Building Control) Regulations 1996	Any conditions imposed on the ABC and ALC on their consents must be satisfied by the Applicant. These conditions are additional to any requirements identified under the CEMPs	This CEMP

Legislation or Regulation	Relevance	CEMP Compliance Provisions
Airports (Environment Protection) Regulations 1997 (AEPR)	Imposes a general duty to prevent or minimise environmental pollution. Promotes improved environmental management practices at airports. Includes provisions setting out acceptable limits as well as environmental monitoring and reporting requirements.	Refer to commentary on the Airports Act above
<b>NSW</b>		
Environmental Planning and Assessment Act 1979 (EPA Act)	Objects of the Act include the encouragement of proper management and conservation of natural and artificial resources and the promotion of the orderly and economic use and development of land in NSW. The EP&A Act also provides for the making of environmental planning instruments including State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs), which include land use controls, such as development standards applicable to the land within the area covered by each instrument.	Section 7 – Environmental Control Measures
Liverpool Local Environmental Plan 2008 (Liverpool LEP)	The Liverpool LEP provides local environmental planning controls and standards for land in the Liverpool Local Government Area (LGA) in accordance with the standard environmental planning instrument under section 3.20 of the EPA Act.	Section 7 – Environmental Control Measures
Penrith Local Environmental Plan 2010 (Penrith LEP)	The Penrith LEP provides local environmental planning controls and standards for land in the Penrith LGA in accordance with the standard environmental planning instrument under section 3.20 of the EPA Act.	Section 7 – Environmental Control Measures
Roads Act 1993	Governs the opening, operation and management, and closure, of public roads in NSW.	Section 7 – Environmental Control Measures
State Environmental Planning Policy (Precincts – Western Parkland City) 2021	Formerly the Aerotropolis SEPP, this SEPP was made in accordance with division 3.3 of the EP&A Act and provides planning controls for development within the Western Sydney Aerotropolis. The SEPP overrides any LEP provisions that apply to that land.	Section 7 – Environmental Control Measures
Work Health and Safety Act 2011 (WHS Act) & Work Health and Safety Regulation 2017 (WHS Regulation)	The WHS Act provides a framework to protect the health, safety and welfare of all workers and others in relation to NSW workplaces and work activities.  The WHS Regulation sets out specific requirements for hazards and risks, such as noise, machinery, and manual handling.	Work Health and Safety (WHS) Plan

#### 4.1.2 Guidelines and Standards

Guidelines and standards that are relevant to visual and landscape management and this Plan are summarised in **Table 5**.

**Table 5: Relevant Guidelines and Standards**

Guidelines and Standards	Relevance to this CEMP
AS4282-2019 Control of the obtrusive effects of outdoor lighting	Section 7 – Environmental Control Measures
Better Placed - An integrated design policy for the built environment of New South Wales (Government Architect)	Section 7 – Environmental Control Measures
Beyond the Pavement: Urban design approach and procedures for road and maritime infrastructure planning, design and construction (RMS, 2020)	Section 7 – Environmental Control Measures
Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW (RMS, 2023)	Section 7 – Environmental Control Measures
Crime Prevention through Environmental Design (CPTED) (Queensland Government, 2021)	Section 7 – Environmental Control Measures
Western Sydney Aerotropolis Development Control Plan 2022 Phase 2	Section 4.1 – Relevant Legislation & Guidelines

## 4.2 Approvals and other Specifications

Approvals relevant to visual and landscape management and this Plan are summarised in **Table 6**.

**Table 6: Approvals Relevant to Visual and Landscape Management**

Approvals	Relevance to this CEMP
Western Sydney Airport Plan	Provides the Conditions of Approval relevant to visual and landscape management during construction.
Western Sydney Airport Environmental Impact Statement	The requirements of visual and landscape management to be considered and addressed during the construction phase of the Stage specifically EIS Table 28-18.

In addition to the above approvals, the following specifications are relevant to visual and landscape management and this Plan:

- Functional Specifications;
- WSA Sustainability Plan;
- WSA CSEP; and
- WSA Construction Plan, including the SEMF.

## 4.3 Airport Plan Conditions

Conditions relevant to visual and landscape management during construction of the Stage 1 Airport Development are documented in Section 3.11.2 of the Airport Plan and summarised in **Table 7**. Compliance with the Airport Plan conditions is a statutory requirement and as such, failure to comply may constitute a criminal offence liable to criminal prosecution under the Airports Act.

**Table 7: Conditions Relevant to Visual and Landscape Management**

Condition No.	Condition	Timing	Responsibility	Document reference
1.4	The Site Occupier must ensure that no CEMP is inconsistent with the approved Construction Plan	Ongoing	WSA	This CEMP Construction Plan
1.5	The approved Construction Plan may provide for Main Construction Works to be carried out in phases that commence at different times for different parts of the Airport Site or an Associated Site. If it does, the Site Occupier may prepare a CEMP in relation to one or more phases, and the criteria for approval of such a CEMP are taken to exclude any matter irrelevant to the phases for which approval is sought. A variation of the CEMP must be submitted for approval in accordance with condition 49 (Variation of Approved Plans) prior to commencement of any new phase.	Ongoing	WSA	This CEMP Construction Plan
5.3	In carrying out a Preparatory Activity for the Airport Stage 1 Development, the Site Occupier must: a) implement any plan approved in accordance with sub condition (1) or (2), except to the extent that the plan is inconsistent with any subsequently approved CEMP or the approved Construction Plan; and b) not act inconsistently with any approved CEMP or the approved Construction Plan.	Ongoing	WSA	The SEMF
14.1	The Site Occupier must not: a) Commence Main Construction Works until a Visual and Landscape CEMP has been prepared and approved in accordance with this condition; or b) Carry out any development described in Part 3 of the Airport Plan inconsistently with the approved Visual and Landscape CEMP.	Construction Works	WSA	This CEMP
14.2	The Site Occupier must: a) Prepare; and b) Submit to an Approver for approval, a Visual and Landscape CEMP in relation to the carrying out of the which are part of the Airport Stage 1 Development.	Prior to Main Construction Works	WSA	This CEMP
14.3	The criteria for approval of the Visual and Landscape CEMP and that an Approver is satisfied that: a) In preparing the Visual and Landscape CEMP, the Site Occupier has considered Table 28-18 in Chapter 28 of the EIS; and b) The Visual and Landscape CEMP complies with Table 28-19 in Chapter 28 of the EIS and is otherwise appropriate.	Prior to Main Construction Works	Approver	This CEMP, Section 4.4: EIS Requirements

Condition No.	Condition	Timing	Responsibility	Document reference
35	<p>An Approver must not approve a plan referred to in Chapter 28 of the EIS unless he or she is satisfied that the Plan Owner:</p> <ul style="list-style-type: none"> <li>a) in preparing the plan, has, consulted with any NSW Government agencies specified by the NSW Department of Premier and Cabinet; and</li> <li>b) in the case of the Biodiversity CEMP, Biodiversity, Land and Safety OEMP, Soil and Water CEMP and Soil and Water OEMP, also consulted the Environment Department and OEH; and</li> <li>c) has provided: <ul style="list-style-type: none"> <li>(i) the Approver; and</li> <li>(ii) each consulted agency,</li> </ul> with an explanation of how any responses have been addressed.</li> </ul>	Prior to Main Construction Works	Approver	This CEMP, Section 1.4.1
42	<p>Cumulative Impacts Plan</p> <p>(1) The Rail Authority must not commence Rail Construction Works until a Cumulative Impacts Plan has been approved in accordance with this condition.</p> <p>(2) The ALC must:</p> <ul style="list-style-type: none"> <li>a) prepare; and</li> <li>b) submit to an Approver for approval;</li> </ul> <p>a Cumulative Impacts Plan in relation to cumulative impacts arising from the concurrent construction of the Airport Stage 1 Development and the Rail Development.</p> <p>(3) The criteria for approval of the Cumulative Impacts Plan are that an Approver is satisfied that the Cumulative Impacts Plan:</p> <ul style="list-style-type: none"> <li>a) sets out: <ul style="list-style-type: none"> <li>(i) co-ordination and consultation requirements between the following stakeholders as relevant to manage the interface of projects under construction at the same time: the ALC, the Rail Authority, Transport for NSW, Western Parkland City Authority, Sydney Water, emergency service providers and utility providers;</li> <li>(ii) the responsibility for management of the impacts set out in the Cumulative Impacts Plan;</li> <li>(iii) the relevant environmental management framework relating to construction of the Airport Stage 1 Development and the Rail Development; and</li> <li>(iv) the process for proactively identifying and managing cumulative impacts;</li> </ul> </li> <li>b) has been prepared in consultation with the Rail Authority; and</li> </ul>	Prior to rail construction works occurring	WSA and the Approver	Cumulative Impacts Plan (Rail) - WSA00-WSA-00400-EN-PLN-000013



Condition No.	Condition	Timing	Responsibility	Document reference
	c) is otherwise appropriate. (4) Each of the Rail Authority and the ALC must not act inconsistently with the approved Cumulative Impacts Plan.			
45 to 50	Set out requirements in relation to informing other parties of conditions, keeping records, publishing reports, independent audits, variation to approved plans and publication of approved plans.	Ongoing	WSA and Approver	This CEMP

#### 4.4 EIS Requirements

The requirements of visual and landscape management to be considered and addressed during the construction phase of the Stage 1 Airport Development are included in the EIS, Table 28-18 and 28-19.

A summary of these requirements and how they have been addressed in this Visual and Landscape CEMP is presented in **Table 8**.

**Table 8: Summary of EIS Visual and Landscape Management Requirements**

EIS Reference	Topic	Summary	Visual and Landscape CEMP Reference
Table 28-18	Objectives and targets	<p>Key management objectives for managing visual and landscape impacts during construction are:</p> <ul style="list-style-type: none"> <li>ensuring the proposed airport makes a positive contribution to the changing identity and character of Western Sydney;</li> <li>minimising the landscape and visual amenity impacts during construction; and</li> <li>minimising impacts associated with light spill during construction.</li> </ul> <p>Performance criteria include:</p> <ul style="list-style-type: none"> <li>compliance with the approved Visual and Landscape CEMP;</li> <li>appropriate landscape treatments are identified and implemented to reduce visual amenity impacts; and</li> <li>the proposed airport is appropriately integrated into the surrounding region and land uses, considering the changing nature of Western Sydney</li> </ul>	Section 3.2 – Targets & Performance Criteria
Table 28-18	Implementation framework	The Visual and Landscape CEMP will be approved prior to commencement of Main Construction Works for the proposed airport. The Visual and Landscape CEMP will collate measures to mitigate and control visual and landscape impacts including cross-references to other environmental management plans where they are relevant. The Visual and Landscape CEMP will as a minimum:	Section 7 – Environmental control measures
		Detail the management and mitigation measures to be implemented, including those outlined in Table 28-19 (of the EIS)	Section 7 – Environmental control measures Section 4.4 - EIS requirements
		Describe the process for managing complaints, stakeholder engagement, and emerging environmental management issues as they arise	Section 9.6 – Environmental Incidents and complaints management
		Specify the process for monitoring implementation, reporting, and auditing	Section 9 – Environmental inspections, monitoring, auditing & reporting Section 9.6 – Environmental Incidents and complaints management
		Identify the party responsible for implementing of the Visual and Landscape CEMP	Section 8 – Environmental Roles and responsibilities

EIS Reference	Topic	Summary	Visual and Landscape CEMP Reference
Table 28-18	Monitoring	Monitoring for visual and landscape impacts will occur as part of the monitoring requirements associated with the complaints process outlined in the Community and Stakeholder Engagement Plan.	Section 9 – Environmental inspection, monitoring, auditing and reporting
Table 28-18	Auditing and reporting	An annual report will be prepared and submitted to the Secretary of the Department of Infrastructure and Regional Development in relation to compliance with the Visual and Landscape CEMP for the period until the airport commences operations.	Section 9.4 – Environmental reporting
Table 28-18	Responsibility	Responsibilities include:	-
		The Visual and Landscape CEMP will be prepared in consultation with the Department of Planning and Environment and relevant local councils	Section 1.4 – Consultation requirements of this Plan
		The Visual and Landscape CEMP will be submitted for approval to the Infrastructure Minister or an SES Officer in the Department of Infrastructure, Transport Regional Development, Communications and the Arts (DITRDCA)	Section 1.5 - Certification and approval
		The design and construct (D&C) contractor will be responsible for implementing site specific environmental procedures and work method statements applicable to the proposed works in accordance with the requirements of the Visual and Landscape CEMP	SEMF Section 4 – Roles and Responsibilities Section 1.2 – Document Purpose
Table 28-19	Urban Design	To facilitate the appropriate integration of the airport into the surrounding region, and to assist in minimising impacts to community identity and landscape character, the following measures will be implemented throughout the detailed design process: <ul style="list-style-type: none"> <li>• Site context analysis to inform the early stages of detailed design</li> <li>• Consultation with NSW Department of Planning, Industry and Environment and relevant local councils, on the detailed design of Stage 1 development</li> </ul>	Section 1.4 – Consultation requirements of this document Section 5.1 - Site context Section 7 – Environmental control measures Sustainability Plan
Table 28-19	Airport Lighting Impacts	Airport lighting impacts will be mitigated using low angle, cut off LED fixtures in the design of airport infrastructure, where practicable.	Section 7 – Environmental control measures
Table 28-19	Visual Disturbance and Clutter from Fencing	Subject to safety and security requirements, perimeter fencing design would have regard to the following considerations: <ul style="list-style-type: none"> <li>• Avoiding long, straight continuous runs for fencing</li> <li>• Avoiding finish and colour that is reflective or brightly coloured</li> <li>• Providing a two metre (minimum) setback from the property boundary to allow for perimeter plantings, and</li> </ul>	Section 7 – Environmental control measures

EIS Reference	Topic	Summary	Visual and Landscape CEMP Reference
		<ul style="list-style-type: none"> <li>Providing a buffer from riparian corridors along the boundary of the Airport Site</li> </ul>	
Table 28-19	Visual Disturbance and Clutter from Construction	<p>Impacts on the visual character of the landscape during construction will be mitigated through the implementation of the following measures:</p> <ul style="list-style-type: none"> <li>Large grade cut and fill transitions will be avoided where practicable, particularly near the Airport Site boundary</li> <li>Construction plant, machinery and vehicle parking areas will be located as far as practicable from sensitive receptors</li> <li>Any night lighting required for construction works will be located as far as practicable from sensitive receptors with appropriate screening as required, and</li> <li>If there is a considerable period between the completion of bulk earthworks and construction of other infrastructure, earthworks areas will be rehabilitated where it is practical to do so.</li> </ul>	Section 7 – Environmental control measures
Table 28-19	Visual Screening	<p>Visual amenity impacts will be mitigated using the following visual screening measures:</p> <ul style="list-style-type: none"> <li>Retaining existing vegetation on the edges of the construction impact zone where practicable to provide visual screening, and</li> <li>Retaining existing vegetation outside of the construction impact zone to provide visual screening</li> </ul> <p>Opportunities for native vegetation screening will be investigated, particularly in relation to the identified moderate-high impact viewpoints. To date there has been limited opportunity for this, except on the southern boundary of the site. The appropriateness and use of vegetation for visual screening will take into consideration bushfire risks, airport safety and security, potential impacts on aviation operations, and opportunities for the reestablishment of endemic native species and ecological communities.</p>	Section 7 – Environmental control measures Section 9.1 - Environmental inspections

## 5 Existing Environment

The following information is summarised from the EIS and refers to the Airport Site and surrounding environment. Refer to the EIS for more details.

The existing environment described herein is considered consistent and acceptable for consideration in the risk assessment process and the identification of suitable environmental mitigation measures and controls - for details with regards to environmental mitigation measures and controls for the management of visual and landscape impacts refer to Section 7.

### 5.1 Site Context

The Airport Site and surrounding areas include ridgelines and rolling hills within the visual context of the Blue Mountains to the west, which provides the backdrop for many views from the east.

The surrounds are typified by gently undulating landform within a highly modified landscape. The overall landscape character is open and rural with expansive views possible from surrounding hill tops and higher elevations to the west. The area's character is also defined by cleared pastureland, and large lot residences (both single and double storey) set back from the road network and punctuated with exotic planting. Patches of remnant vegetation exist within the Airport Site, however outside the Construction Impact Zone, particularly along creek lines.

Immediately north of the site, farm buildings are generally well set back from Elizabeth Drive. The area north of Elizabeth Drive is rural pastureland with scattered remnant vegetation, farm dams and open views of the landscape. North-east of the Airport Site is a landfill, which is set back and highly visible from Elizabeth Drive. Badgerys Creek runs north-south forming the eastern, and part of the southern, site boundary. The remnant vegetation along its edges establishes a natural character which contrasts with the open rural vegetation along its edges and establishes a natural character which contrasts with the open rural character of the rest of the site.

East of the Airport Site there is a more regular pattern of lots, residences and farm buildings, with smaller lot sizes aligned perpendicular to the streets. Roads in the area have been upgraded to allow the flow of traffic to continue.

South of the airport is characterised by large, rural residential lots and farms on undulating topography. Homes are generally set back from the road and characterised by a mix of remnant vegetation, exotic planting, farm dams and open lawn.

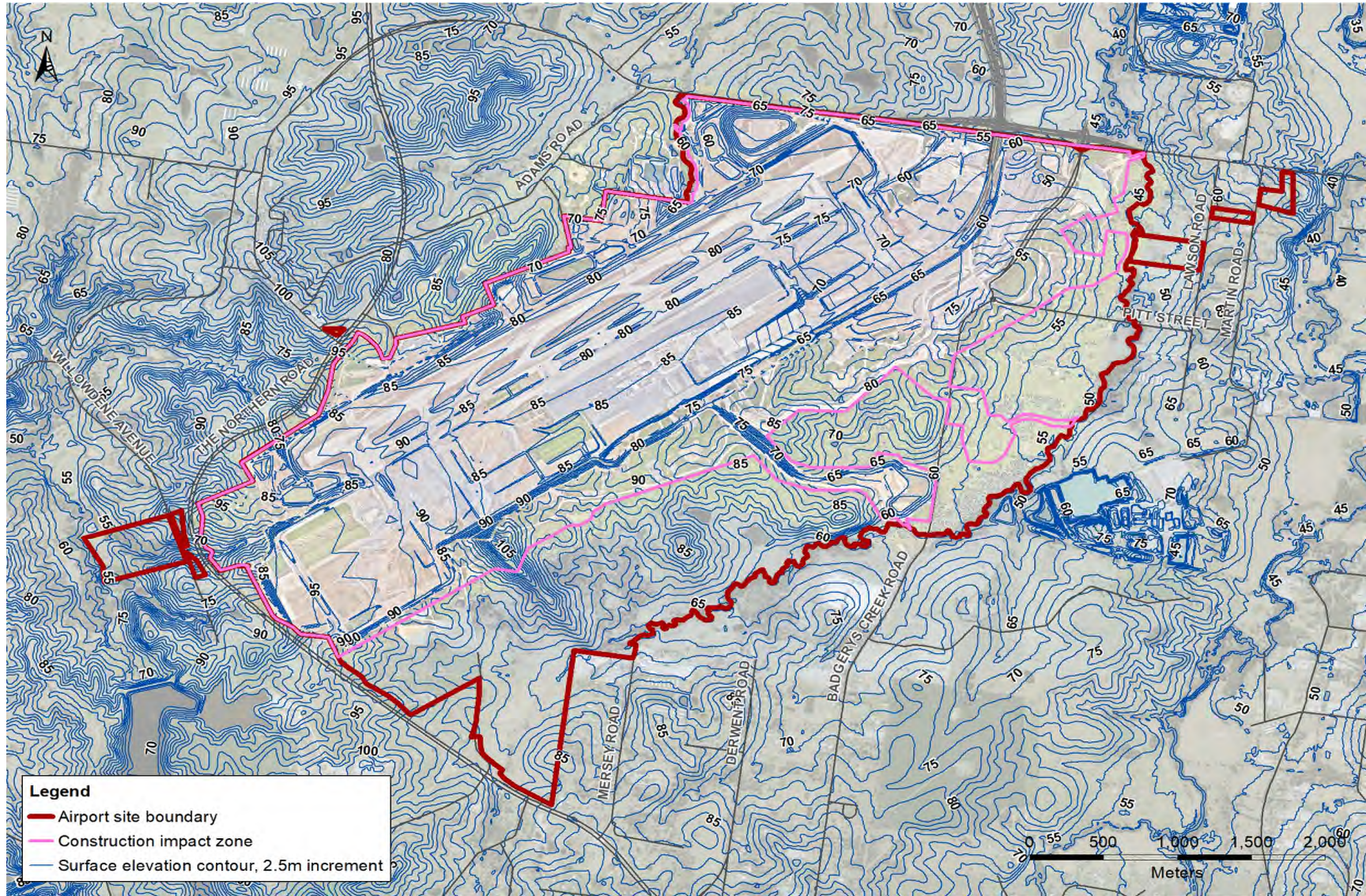
### 5.2 Site Topography

The Airport Site is in an area of elevated ridge systems dividing the Nepean River and South Creek catchments. Prior to construction the site was characterised by rolling landscapes typical of Bringelly Shale. The site featured a prominent ridge in the west, reaching an elevation of about 120 metres Australian Height Datum (mAHD), and smaller ridge lines in the vicinity with elevations of about 100 m AHD. The broad topography of the Airport Site generally sloped away from the ridges in the west, with elevations generally between 40 mAHD and 90 mAHD, with the lower elevations toward Badgerys Creek.

Following bulk earthworks, the majority of the Stage 1 Construction Impact Zone (CIZ) is now generally level (excluding drains and basins) with a surface elevation of around 90 mAHD at the western end of the runway down to 75 mAHD at the eastern end. The area to be occupied by the terminal has an elevation of around 80 mAHD.

Site contours of the Airport Site and the area immediately surrounding the site are provided in Figure 2.





**Figure 2 Site Topography**



### 5.3 Land Use

Pastoral and horticultural land uses remain the primary land uses in the area. Large blocks of agricultural land are found to the north and west, while rural residential and agricultural properties are generally concentrated to the east and south of the site.

A summary of the various land uses immediately surrounding the Airport Site is provided below in **Table 9** and shown in Appendix A - State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 Land Zoning Map.

**Table 9: Surrounding Land Use**

Site	Description	Impact Source	Impact Level
Elizabeth Drive Landfill (EDL)	Land use contains non-putrescible and industrial waste located approximately one kilometre north of the Airport Site.	Potential for minor increase in traffic on Elizabeth drive and potential for plant/machinery to be seen by line of sight.	The EDL is 500m from the Airport Site and is considered a construction site, impact level is low.
Twin Creeks Golf and Country Club (club)	A 200-lot of residential estate and golf course approximately five kilometres north of the Airport Site.	None	Sparse vegetation is located in between the club and the Airport Site. The impact level is low.
PGH Bricks & Pavers	Brick pit and production facility located approximately one kilometre east of the Airport Site.	None	The Environmental Conservation Zone runs in between the site and the BB eliminating any visual aspect disturbance and/or noise impacts. The impact level is low.
Ingham's Multiplication Farm (farm)	A large commercial agricultural use located approximately one kilometre east of the Airport Site.	None	Sparse vegetation is located between the farm and the Airport Site, the impact level is low.
The University of Sydney, Camden, Wolverson and Coates Park Farms (University farms)	A rural farm located approximately four kilometres southwest of the Airport Site.	None	Given the distance and vegetation present between the University farms and the Airport Site the impact level is very low for the initial early earthworks stage of the project.
Bents Basin State Conservation Area (BBSCA)	A recreational area located approximately five kilometres southwest of the Airport Site.	None	Given the distance and vegetation present between the BBSCA and the Airport Site the impact level is very low for the initial Early Earthworks stage of the project.



## 5.4 Visual Catchment and Viewpoints

The visual catchment of a site is the extent of the landscape that can be viewed from the site and the extent of locations from which the site can be seen. Landscape vegetation, land use and landform all play a large role in determining the visual catchment.

The Airport Site would be theoretically visible from various areas based on existing topography and the maximum allowed building heights of key buildings and structures that would be constructed, such as the airport control tower, terminal buildings and other major structures.

A list of key representative visual viewpoints from the Airport Site, including viewpoint type, elevation and distance from site (taken from the proposed traffic control tower) is provided in **Table 10**.

**Table 10: Relative Heights and Offsets of Representative Viewpoints**

Viewpoint No.	Location	Elevation (AHD)	Distance from Site. (km)*	Land Use type
1	Luddenham Village	100-105	3	Commercial and residential
2	Elizabeth Drive, Badgerys Creek	65-90	2	Road
3	Lawson Road, Badgerys Creek	60-95	3	Rural residential and agricultural
4	Badgerys Creek Road, Bringelly	60-75	2	Rural residential and agricultural
5	Dwyer Road, Bringelly	105	5	Rural residential
6	Mount Vernon Road, Mount Vernon	80	7	Rural residential
7	Rossmore Avenue West, Rossmore	90	7	Rural residential
8	Bents Basin State Conservation Area	45	10	Rural residential
9	Silverdale Road, Silverdale	210	13	Rural residential
10	Warragamba Dam and Recreational Area	155	12	Recreational
11	Glenbrook Nepean Lookout	115	13	Recreational
12	Mount Portal Lookout	150	14	Recreational
13	Twin Creeks Gold and Country Club	45-50	6	Recreational and residential

\*Distance calculated from the proposed airport control tower.

## **6 Visual and Landscape Aspects and Impacts**

### **6.1 Construction Activities**

Construction activities with the potential to impact visual and landscape covered by this Plan include:

- Activities necessary for site preparation;
- Works involved in the establishment of aviation infrastructure;
- Erecting security fencing and temporary hoarding (where required);
- Establishing site compounds;
- Bulk earthworks including the importing of materials to stockpile on site;
- Topsoil stripping and stockpiling;
- Construction of access roads and services;
- Construction of road bridges and formation of bridge abutments;
- Construction of aviation infrastructure;
- Erection of tower cranes to facilitate construction of Terminal and Specialty Services works;
- Installation and operation of temporary concrete site batching plant/equipment;
- Operation of plant and equipment including piling rigs, concrete boom pumps, excavators, asphalt paving machines and the like;
- Construction of Terminal structure including associated façade, roof and finishes;
- Temporary erection of scaffold and edge protection;
- Elevated working platforms, scissor lifts, boom lifts, cherry pickers;
- Temporary services, including water tanks, fuel cells, pumps, boosters, lighting towers;
- Installation and operation of Terminal lighting including illuminated signage;
- Construction of airside aprons including Terminal fixed bridges and aerobridges;
- Construction of ancillary Buildings including technical equipment rooms (TERs);
- Construction of Fuel Ring Main and Fuel Farm,
- Landscaping including pedestrian walkways and covered walkways to Terminal forecourt and carpark areas;
- Construction of utility infrastructure and ancillary buildings
- Lighting during nightworks;
- Construction of carparks;
- Construction of landside buildings; and
- Construction and operation of road and carpark lighting.

### **6.2 Testing and Commissioning**

Testing and Commissioning activities with the potential to impact visual and landscape covered by this Plan include:

- High Intensity Approach Lighting
- Runway lighting
- Building lighting
- Street lighting
- Lighting from testing of ground transport at night
- Light from testing alarm systems

## 6.3 Environmental Risk Assessment

A risk assessment has been undertaken as part of the review and development of this CEMP and in accordance with the Environmental Aspects, Impacts and Risk Procedure (Appendix G of the SEMF). The parts of the overall risk assessment relevant to visual and landscape management have been extracted and summarised in **Table 11** and apply to all phases of works that the Construction Plan authorises.

The identification of construction activities and associated impacts that could eventuate during construction of the Project is central to the selection of appropriate environmental safeguards.

The risk management process involved an assessment of all specific Project activities/aspects in or near environmentally sensitive areas and resulted in the development of a list of environmental risks (aspects and impacts) and a corresponding risk mitigation strategy and risk ranking.

The identification of risks included a review of the works, and review of the environmental risks identified by the EIS. The mitigations in the risk assessment align with the EIS mitigation measures, Table 28-18.

**Table 11: Visual and Landscape Risk Assessment**

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
1	Use of site Compound	Light vehicle parking	Visual aesthetic	Visual interruption of landscape due to construction vehicles and plant	Medium (14)	VL_09	Low (10)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction Environmental Control Map (ECM)
2	Use of site Compound	Installation of temporary fencing during compound establishment	Visual aesthetic	Long runs of fencing will visually interrupt landscape	Medium (14)	VL_04	Low (10)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
3	General Construction works	Multiple construction vehicles onsite	Visual aesthetic	Visual interruption of landscape due to construction vehicles and plant	Medium (14)	VL_09	Low (10)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
4	General Construction works	Large spoil stockpiles present onsite	Visual aesthetic	Visual interruption of landscape due to stockpiles	Medium (14)	VL_11 VL_13	Low (10)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
5	General Construction works	Plant movement throughout site	Visual aesthetic	Visual interruption of landscape due to plant parked near boundaries of site	Low (5)	VL_09	Very Low (3)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
6	General Construction works	Out of hours works	Light disturbance	Light disturbance to the nearby community and environmental conservation zone	Medium (14)	VL_09 VL_10	Low (9)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
7	General Construction Works	Installation and use of tower crane	Light disturbance	Light disturbance to the nearby community	Low (8)	VL_10	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
8	General Construction Works	Erection of terminal structure and surrounding scaffold containment	Visual aesthetic	Visual interruption of landscape	Low (8)	VL_9	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
9	General Construction Works	Use of large plant mobile plants such as mobile tower cranes, EWP boom lifts, cherry pickers, scissor lifts	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Low (8)	VL_10	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
10	General Construction Works	The use of Temp services for the project such as tanks, fuel cells, lighting towers, etc	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Low (8)	VL_10	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
11	General Construction Works	Visible landscaping at the site gate and the site entrance	Visual aesthetic	Visual interruption of landscape	Low (8)	VL_06	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
12	Pavement Production (Batch Plant Operations)	Location of Pavement Production Zone	Visual aesthetic	Visual interruption of landscape due to construction vehicles and plant	Medium (14)	VL_04 VL_09	Low (5)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction Environmental Control Map (ECM)
13	Pavement Production (Batch Plant Operations)	Large spoil stockpiles present onsite	Visual aesthetic	Visual interruption of landscape due to stockpiles	Medium (14)	VL_04	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
14	Pavement Production (Batch Plant Operations)	Plant and vehicle storage on site	Visual aesthetic	Visual interruption of landscape due to plant parked near boundaries of site	Medium (14)	VL_09	Very Low (3)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM



Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
15	Pavement Production (Batch Plant Operations)	Out of hours works	Light disturbance	Light disturbance to the nearby community and environmental conservation zone	Medium (14)	VL_10	Very Low (3)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
16	Civil Works	Storage and Operation of Mobile Plant and Equipment	Visual aesthetic & light disturbance	Visual Interruption of landscape	Low (8)	VL_09 VL_12	Low (5)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
17	Civil Works	Stockpiles	Visual aesthetic	Visual Interruption of landscape	Low (8)	VL_11 VL_12	Low (5)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
18	Civil Works	Construction of bridges	Visual aesthetic & light disturbance	Visual Interruption of landscape	Low (8)	VL_12	Low (5)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
19	Building Works	Construction of landside buildings	Visual aesthetic & light disturbance	Visual Interruption of landscape	Low (8)	VL_03 VL_12	Low (5)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
20	Civil Works	Construction and operation of road and carpark lights	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Medium (14)	VL_03	Low (6)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
21	Civil Works	Out of Hours Work	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Medium (14)	VL_10	Low (6)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
22	Site Establishment	Clearing and Grubbing (if required)	Visual aesthetic	Change in visual aspect	Medium (14)	VL_09 VL_11 VL_13	Low (10)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
23	Site Establishment	Installation of construction/permanent fencing (if required)	Visual aesthetic	Long runs of fencing will visually interrupt landscape	Medium (14)	VL_04 VL_09	Low (10)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
24	Site Establishment	Earthworks to construct area for temporary buildings	Visual aesthetic	Change in visual aspect	Medium (14)	VL_11 VL_13	Low (10)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
25	Site Establishment	Installation of temporary buildings for compound, parking and amenities	Visual aesthetic	Change in visual aspect	Medium (14)	VL_04 VL_09	Low (10)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
26	Site Establishment	Operation of compound	Visual aesthetic	Visual interruption of landscape due to construction vehicles and plant	Medium (14)	VL_09	Low (10)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
27	Earthworks and Drainage	Topsoil stripping	Visual aesthetic	Change in visual aspect	Medium (14)	VL_11 VL_13	Low (10)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
28	Earthworks and Drainage	Stockpiling	Visual aesthetic	Visual interruption of landscape due to stockpiles	Medium (14)	VL_04 VL_11	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
29	Bridge Works	Piling, use of large mobile plant	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Low (8)	VL__10	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
30	Bridge Works	Bridge deck installation including installation for form work, structural steel, pre-cast sections	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Low (8)	VL_10	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
31	Bridge Works	Concreting, including trucks and pumps	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Low (8)	VL_10	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
32	Road Construction	Paving, including paving machine, trucks and pumps	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Low (8)	VI_09 VL_10	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
33	Road Construction	Asphalting	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Low (8)	VL_10	Low (5)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
34	Out of Hours Works	Bridge lifts, including road closures	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Medium (14)	VL_10	Low (6)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
35	Out of Hours Works	Concreting and paving, including road closures	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Medium (14)	VL_10	Low (6)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
36	Out of Hours Works	General works, including road closures	Visual aesthetic & light disturbance	Light disturbance to the nearby community	Medium (14)	VL_10	Low (6)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
37	Civil Works	Earthworks, Building and Utility infrastructure construction	Visual aesthetic & light disturbance	Change in visual aspect	Low (8)	VL_09 VL_11	Low (5)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
38	Out of hours works including for commissioning	Earthworks, Building and Utility infrastructure construction	Visual aesthetic & light disturbance	Light disturbance to nearby community	Low (8)	VL_03 VL_12 VL_10	Low (5)	Landscape and Visual CEMP Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
39	Out of hours works	Location of pavement production zone	Visual Aesthetics	Visual interruption of landscape due to construction vehicle and plant	Medium (18)	VL_04, VL_09	Low (10)	Community and Stakeholder Engagement Plan ,Plan, Complaints Procedure
40	Welding of Steel Tanks in open areas that are visible from the public	Structure	Light pollution	Community Disturbance	Medium (18)	VL_14	Low (10)	Community and Stakeholder Engagement Plan ,Plan, Complaints Procedure

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
41	Use of site Compound	Light vehicle parking	Vehicle aesthetic	Visual interruption of landscaping due to construction on vehicles and plant	Medium (14)	VL_09	Low (10)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
42	Construction works	Multiple construction on vehicles onsite	Visual aesthetic	Visual interruption of landscape due to construction on vehicles and plant	Medium (14)	VL_09	Low (10)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
43	Construction works	Large spoil stockpiles present onsite	Visual aesthetic	Visual interruption of landscape due to stockpiles	Medium (14)	VL_11 VL_13	Low (10)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
44	Construction works	Plant movement throughout site	Visual aesthetic	Visual interruption of landscape due to plant parked near boundaries of site	Low (5)	VL_09	Very Low (3)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
45	Pavement Production (Concrete Batch Plant)	Location of Pavement Production Zone	Visual aesthetic	Visual interruption of landscape due to construction on vehicles and plant	Medium (14)	VL_04 VL_09	Low (5)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM



Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
46	Testing and Commissioning	Testing runway, building and street lighting. Lighting from testing ground transport at night and from alarm systems	Visual aesthetic	Visual interruption of landscape due to testing and commissioning of systems	Medium (14)	VL_03	Low (5)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM

## 6.4 Visual and Landscape Impacts

Construction of the Stage 1 Airport Development will have a mixture of temporary and permanent visual impacts for the nearest sensitive receivers in Luddenham and Bringelly.

Temporary visual impacts would be largely due to the visual effect of earthworks and construction activities to facilitate the build and would include the presence of construction plant excavators, piling rigs, equipment, stockpiling areas, concrete batching plants, tower cranes, scaffolding and storage areas.

Permanent visual impacts will evolve as the TSS Works progress, including the construction of the terminal and apron structures, roof, and façade, fixed link bridges, aerobridges, ancillary buildings and final landscaping.

Permanent visual impacts will evolve as the LCB Works progress, including the construction of the main roads into the airport which includes bridges, carparks, road and carpark lighting, landside buildings, connections to public transport, and final landscaping. Operation of the road and carpark lighting will also change the visual outlook.

The ACP Works would result in a temporary visual impact by the presence of concrete and asphalt batch plants, though these facilities would be decommissioned and removed upon completion of the works.

The construction of the Fuel Farm adjacent to Anton Road will involve services, buildings, and fuel tank compounds as permanent visual impacts.

The construction of the Commercial and Commonwealth Developments including Stage 1 Cargo facilities and the associated warehouses will represent a permanent visual impact at the western end of the site, particularly from The Northern Road, however these will be limited due to the elevation differences.

Viewpoints that are further away would have more restricted views of the site and would therefore be less affected. The location of considered viewpoints (and as indicated in **Table 12**) is shown in Figure 3. Potential impacts on landscape visual settings specific to heritage values are dealt with in the European and Other Heritage and Aboriginal Cultural Heritage CEMPs.

During construction, recycled water will be used for dust suppression and to water vegetation and landscaping where required. Management of this water is covered by the Soil and Water CEMP.

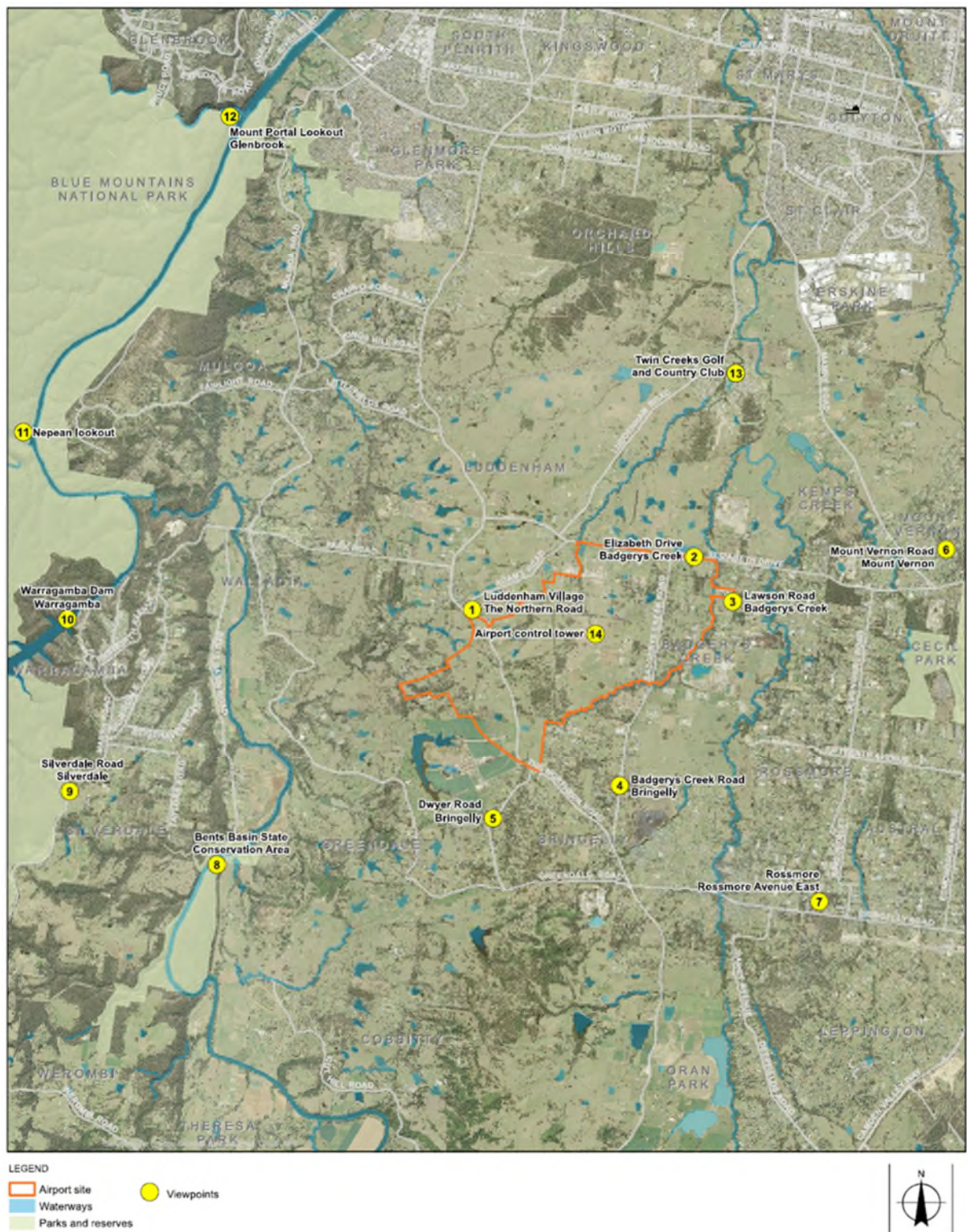
Visual sensitivity is based primarily upon the character, land use and quality of views from the surrounding viewpoints and would be relatively consistent throughout each phase of the proposed development. The visual magnitude or effect of the airport would change based on the scale and visibility of activities undertaken during the construction of the Stage 1 Airport Development. A summary of the likely visual impacts from the nominated viewpoints (as shown in Figure 3) during construction of the Stage 1 Airport Development is provided below in **Table 12**.

**Table 12: Summary of Construction Impacts from Selected Viewpoints**

Viewpoint	Potential Impacts
1 – Luddenham Village	Views of the construction of the airport in the northern areas of Stage 1 are likely from some areas in Luddenham and could include fencing, earthworks, plant and equipment, and day to day operations of the Site Office located off Eaton Road, therefore resulting in a perceived loss of visual amenity.  In the longer term, construction activities will be concentrated in the southern portion of the site and further away from viewers therefore visual impacts would be expected to be less.
2 – Elizabeth Drive, Badgerys Creek	Views of the Stage 1 construction of the airport in the northern areas of Stage 1 are generally possible at close distance as well as views of construction vehicles

Viewpoint	Potential Impacts
	<p>accessing the site from Elizabeth Drive and therefore a perceived loss of visual amenity is expected. It is likely that the stockpile of imported material (refer to Construction Plan Section 6), which will have the dimensions of 250m x 500 m x 5 m high, will be visible from this viewpoint. However, with the implementation of the mitigation measures and controls detailed in Section 7, including surface stabilisation measures, visual impacts are anticipated to be low and are not expected to be significant. Additionally, the stockpile will be temporary, but may be in place for several years.</p> <p>In the longer term, construction areas in the southern portion of the site are further away from the viewer. However, there may be commercial development near Elizabeth Drive therefore similar or potential for slightly lower visual impacts could be expected.</p>
3 – Lawson Road, Badgerys Creek	<p>In Stage 1, views of the construction of the airport in the northern areas including fencing, earthworks, plant and equipment may be possible however could be filtered by existing vegetation.</p> <p>Views of construction areas in the longer term around the eastern and southern edges of the site will be possible from some properties meaning the anticipated visual impacts would likely remain at a similar level as Stage 1.</p>
4 – Badgerys Creek Road, Bringelly	Views of the construction of the airport such as fencing and earthworks in Stage 1 may be possible but are likely to be filtered or blocked by vegetation and / or topography.
5 – Dwyer Road, Bringelly	When longer term development occurs in the southern airport areas, construction activity will be closer to visual receivers and therefore will be expected to have a greater visual impact.
6 – Mount Vernon Road, Mount Vernon	Broad views of the construction of the airport in the northern areas of Stage 1 are likely from some areas in Mount Vernon and could include earthworks, plant and equipment and therefore some loss of visual amenity is expected.
7 – Rossmore Avenue West, Rossmore	Longer term views of the construction of the airport in the southern areas would likely be of a similar extent as Stage 1 due to the extent of the views of the overall airport area.
8 – Bents Basin State Conservation Area	Views of the construction of the airport in either the Stage 1 or longer term are prevented by existing topography and / or vegetation.
9 – Silverdale Road, Silverdale	<p>Broad views of the construction of the airport in the northern areas of Stage 1 are possible but from approximately 10 kilometres and therefore some loss of visual amenity is expected.</p> <p>Longer term views of the construction of the airport in the southern areas would likely be of a similar extent as Stage 1 due to the extent of the views of the overall airport area.</p>
10 – Warragamba Dam and Recreational Area	Views of the construction of the airport in either the Stage 1 or longer term are prevented by existing topography and / or vegetation.
11 – Glenbrook Nepean Lookout	Views of the construction of the airport in either the Stage 1 or longer term are prevented by existing topography and / or vegetation.
12 – Mount Portal Lookout	Views of the construction of the airport in either the Stage 1 or longer term are prevented by existing topography and / or vegetation.
13 – Twin Creeks Gold and Country Club	Views of the construction of the airport in either the Stage 1 or longer term are unlikely as they may be inhibited by existing topography and / or vegetation.





*Note: There have been some minor changes to the Airport Site boundaries and viewpoint locations since the publishing of the above figure in the EIS*

**Figure 3: Selected Representative Viewpoints**

## 7 Environmental Control Measures

Mitigation and management measures that will be implemented during construction to address visual and amenity impacts are detailed in **Table 13** and are consistent with those provided in Tables 28-18 and 28-19 in Chapter 28 of the EIS, as per Condition 14 (Section 3.11.2) of the Airport Plan.

The relevant control measures will be included in the site-specific Environmental Work Method Statement (EWMS) and Environmental Control Map (ECM) – refer to Section 4.3 of the SEMF for further detail.

**Table 13: Environmental Control Measures**

ID	Measure / Requirement	When to implement	How to implement	Responsibility for Implementation	Reference
<b>BEC: Bulk Earthworks Contract MI: Material Importation</b> All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
<b>URBAN DESIGN</b>					
VL_01	Site context analysis to inform the early stages of detailed design	Detailed design Pre-construction	To be incorporated into detailed design.	All Contractors WSA Design team	EIS Table 28-19
VL_02	Consultation with NSW Department of Planning, Industry and Environment and relevant local councils, on the detailed design of Stage 1 development	Detailed design Pre-construction	To be incorporated into detailed design.	WSA Design team	EIS Table 28-19
<b>AIRPORT LIGHTING IMPACTS</b>					
VL_03	Airport lighting impacts will be mitigated using low angle, cut off LED fixtures in the design of airport infrastructure, where practicable.	Detailed design Pre-construction	To be incorporated into detailed design.	All Contractors	EIS Table 28-19
<b>VISUAL DISTURBANCE AND CLUTTER FROM FENCING</b>					
VL_04	Avoiding long, straight continuous runs for fencing	Construction	Incorporate requirement into construction planning	WSA	EIS Table 28-19
VL_05	Avoiding finish and colour that is reflective or brightly coloured	Construction	Incorporate requirement into design planning	WSA Design team	EIS Table 28-19
VL_06	Providing a two metre (minimum) setback from the property boundary to allow for perimeter plantings	Construction	Combine the site layout design with the location of sensitive receivers.	BEC	EIS Table 28-19

ID	Measure / Requirement	When to implement	How to implement	Responsibility for Implementation	Reference
<b>BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA</b>					
VL_07	Providing a buffer from riparian corridors along the boundary of the Airport Site (nominally two metres).	Construction	Ensure Airport Site boundaries are defined during construction.	BEC	EIS Table 28-19
<b>VISUAL DISTURBANCE AND CLUTTER FROM CONSTRUCTION</b>					
VL_08	Large grade cut and fill transitions will be avoided where practicable, particularly near the Airport Site boundary	Construction	Investigate other construction alternatives.	BEC	EIS Table 28-19
VL_09	Construction plant, machinery and vehicle parking areas will be located as far as practicable from sensitive receptors	Construction	Combine the site layout design with the location of sensitive receivers.	All Contractors	EIS Table 28-19
VL_10	Any night lighting required for construction works will be located as far as practicable from sensitive receptors with appropriate screening as required	Construction	Ensure the location of sensitive receivers are considered when positioning lighting.	All Contractors	EIS Table 28-19
VL_11	Earthworks and construction of other infrastructure, earthworks areas will be rehabilitated where it is practical to do so	Construction	Progressively rehabilitate works areas with consideration of the Soil and Water CEMP and urban design requirements.	All Contractors	EIS Table 28-19
<b>VISUAL SCREENING</b>					
VL_12	Retaining existing vegetation on the edges of the construction impact zone where practicable and outside of the construction impact zone to provide visual screening	Construction	ECM to include requirement to minimise vegetation removal and progressively clear areas. Inform all personnel during induction and reinforce through ongoing training.	BEC	EIS Table 28-19
VL_13	Opportunities for native vegetation screening will be investigated, particularly in relation to the identified moderate-high impact viewpoints. The appropriateness and use of vegetation for visual screening will take into consideration bushfire risks, airport safety and security, potential impacts on aviation operations, and opportunities for the reestablishment of endemic native species and ecological communities.	Pre-Construction Construction	Combine the site layout design with the location of sensitive receivers to assess opportunities.	BEC	EIS Table 28-19



ID	Measure / Requirement	When to implement	How to implement	Responsibility for Implementation	Reference
<b>BEC: Bulk Earthworks Contract MI: Material Importation</b> All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
<b>WELDING</b>					
VL_14	Visual screening using fire resistant screens that are used to shield light generated from welding activities where practicable.	Construction	EWMS to document welding screen as a risk control	Fuel Farm and Fuel Ring Main Contractors, LCB, Utilities	Good practice, from experience

## **8 Environmental Roles and Responsibilities**

The key environmental management roles and responsibilities for the construction phase of the work are detailed in Section 4.4 of the SEMF.

WSA will ensure enough resources are allocated on an ongoing basis to ensure effective implementation by both WSA and the responsible contractors.

The Airport Environment Officer (AEO) will be responsible for day-to-day regulatory oversight of the AEPR compliance at WSI after an Airport Lease is granted.

## **9 Environmental Inspection, Monitoring, Auditing and Reporting**

Monitoring, inspection, auditing and reporting will be undertaken to measure the effectiveness and outcomes of the implementation of this Plan and to facilitate continuous improvement of visual amenity and landscape management.

General environmental monitoring, inspection, auditing and reporting requirements are summarised in Section 8 of the SEMF.

A summary of the environmental inspection, monitoring, auditing and reporting requirements is provided below, with details of how they apply to visual amenity and landscape management where applicable.

### **9.1 Environmental Inspections**

#### **9.1.1 WSA Environmental Inspections**

Environmental site inspections at active work sites will be undertaken by the WSA Environment Manager (or delegate) on a weekly basis to evaluate the effectiveness of environmental controls implemented by the contractor.

The site inspection is to include a visual check of general construction activities and any visual amenity and landscape mitigation measures and or controls, including but not limited to the following:

- Observation of general site cleanliness and housekeeping, ensuring the site is of a reasonable state with consideration given the current stage of work and level of construction activity;
- Observation and inspection of visual screening devices / structures and ensuring they remain effective and fit for purpose; and
- Inspection of any sterile cover crops planted on temporary stockpiles to assess their ongoing effectiveness as not only a stabilisation control, but also as a visual screening measure.

The findings of the WSA site environmental inspection will be recorded on a WSA Site Environmental Inspection Checklist with an accompanying photographic style inspection report.

Refer to Appendix K of the SEMF for further details with regards to completing the Site Environmental Inspection Checklist.

#### **9.1.2 Contractor Environmental Inspections**

Weekly site inspections will be undertaken to monitor compliance with this Plan at active work sites. Inspection results will be recorded, and the inspection log made available to the Infrastructure Department upon request. Any non-conformance or improvement opportunities will be documented in the monthly report and discussed at the Environmental Coordination meeting.

The Contractor's Environmental Manager and/or Environmental Coordinators will undertake inspections in accordance with the Contractor Environmental Management Framework. The Contractor's Environmental Coordinators will record inspection findings on an inspection checklist form.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on the checklist form. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority.

### 9.1.3 Pre-start Inspection

Prior to the commencement of works on each shift, an informal inspection will be carried out by the relevant contractor and will include a check of relevant environmental controls and resources required to ensure effective operation and maintenance. This is to include an inspection of relevant visual amenity and landscape management mitigation measures and controls where applicable. Works are not to commence unless inspections are found to be satisfactory.

The Foreman will undertake the pre-work inspections and record the findings.

## 9.2 Visual and Landscape Monitoring

General environmental monitoring requirements are set out in the AEPR which include the following:

- Monitoring must take place under the direction of an appropriately qualified person; and
- The results of the monitoring must be kept in a written record.

Specific visual and landscape monitoring requirements, including timing and responsibilities, are included in **Table 14**.

**Table 14: Visual and Landscape Monitoring Requirements**

Reference	Requirement	Timing	Responsibility
VL_M_01	Environmental site inspection to monitor for visual and landscape impacts, particularly in response to any complaints (as per the Community and Stakeholder Engagement Plan).	Construction	All Contractors

Where a non-conformance or an improvement opportunity is identified, the non-conformance and improvement opportunity process described in the SEMF Section 8 will be implemented.

## 9.3 Environmental Auditing

Refer to Section 8.2 of the SEMF for environmental auditing requirements, including internal audits, independent audits and audits to be undertaken by contractors.

Auditing and subsequent reporting will be undertaken annually to ensure compliance with this Waste and Resources CEMP and Airport Plan Conditions of Approval, as identified in Section 4 of this CEMP.

## 9.4 Environmental Reporting

General environmental reporting requirements are detailed in Section 8.3 the SEMF.

In addition, a summary of reporting requirements required under this Visual and Landscape CEMP (including environmental reporting requirements under the Airport Plan specific to this Visual and Landscape CEMP) is provided in **Table 15**.

**Table 15: Visual and Landscape Reporting**

Action	Scope	Timing / Frequency	Responsibility
Annual reporting	Unless otherwise agreed in writing by an Approver, an annual report will be prepared in relation to compliance with the Visual and Landscape CEMP (Condition 47). Unless otherwise agreed in writing by an Approver, WSA will publish each of the annual reports on its website within three months of the	Annually	WSA Environment Manager

Action	Scope	Timing / Frequency	Responsibility
	end of the period in respect of which the report was prepared, with evidence providing proof of the date of publication to the Infrastructure Department with a copy to the Environment Department. The report must remain on the website for a period of at least 12 months (Condition 47).		
Complaints reporting	Recording of complaints and stakeholder interactions	As required	WSA Environment Manager WSA Community and Stakeholder All Contractors
General environmental inspection	Inspection of environmental management controls on site and sighting of site documentation as required by the contractor's CEMP.	Weekly	WSA
General environmental inspection	Inspection of environmental management controls and site documentation for contractor works (as required by the contractor's CEMP).	As per Contractor environmental management system (at least weekly)	All Contractors
Monthly compliance reporting	Provide WSA with a monthly summary of the weekly inspection outcomes with regards to the management and compliance with the relevant visual amenity and landscape management mitigation measures and controls.	Monthly	All Contractors
Reporting of non-conformances and improvement opportunities	The management and reporting requirements of environmental non-conformances and improvement opportunities will be in accordance with Section 8 of the SEMF.	As required	WSA All Contractors

## 9.5 Review of Approved Plans

As per the WSA EMS, review of all Approved Plans will be undertaken annually to ensure they continue to meet conditions set out in Section 3.11.2 of the Airport Plan (refer Condition 47). If the review identifies areas where the plan does not continue to meet the approval criteria for that Plan, a variation to the Approved Plan will be prepared and submitted for approval.

Under Condition 49 (4) of the Airport Plan, WSA is also required to review each Approved Plan at least every five years (from the date of approval). Findings of this review will be included in the Annual Report (refer Section 8.3 of the SEMF) and if needed, a variation to the Approved Plan will be prepared and submitted for approval.

Additionally, WSA may initiate reviews of Approved Plans at other times in response to improvement opportunities, non-conformances, and changes to scope of work or construction methodology or alterations to legal or contractual requirements.

Any changes identified and implemented through the variation and review process identified above will be communicated to relevant contractors through re-issue of the revised WSA Approved Plan and subsequent training and awareness (refer Section 4 of the SEMF).

## 9.6 Environmental Incidents and Complaints Management

The management and reporting of environmental incidents shall be undertaken by the appropriate person as detailed in Section 6 of the SEMF.



All communications and complaints management will be implemented and managed in accordance with Section 7 of the SEMF and the CSEP.



## **10 Competence, Training and Awareness**

To ensure this Visual and Landscape CEMP is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements within. The WSA Environment Manager will coordinate the necessary and relevant environmental training in conjunction with other training and development activities.

All employees, contractors and utility staff conducting work activities on site shall be required to undertake a site induction (or visitors induction) that includes construction visual and landscaping risks and mitigation measures. The induction training should include: requirements of this CEMP, lighting impacts, location of sensitive receptors, complaints management etc.

All competence, training and awareness requirements will be implemented as detailed in Section 5 of the SEMF.

## 11 References

AS/NZS ISO 14001: 2016 Environmental management systems – Requirements with guidance for use

Bannerman and Hazelton (1990). *Soil Conservation Service of NSW, Sydney, Soil Landscapes of the Penrith Area 1:100,000 Sheet*

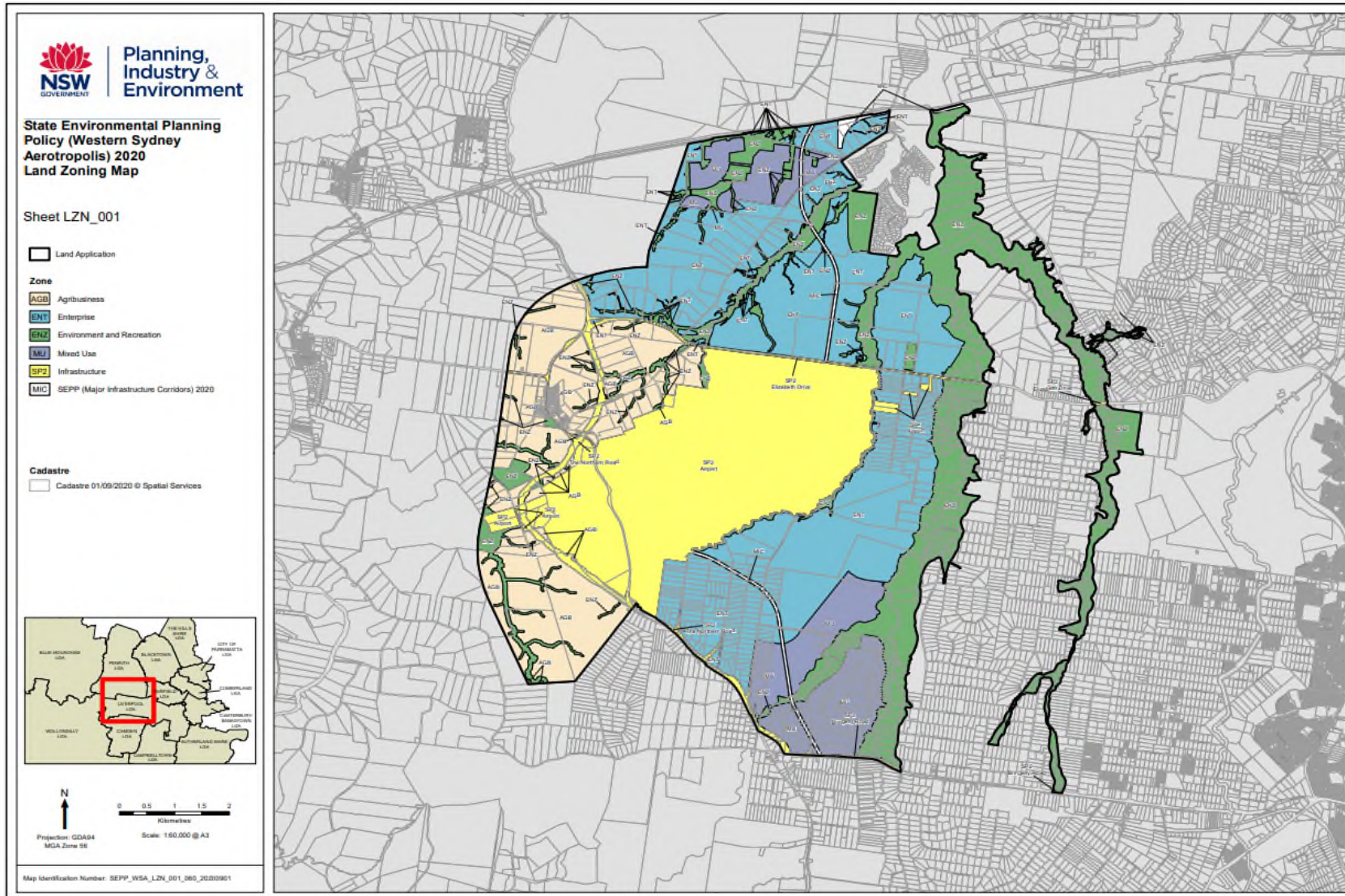
Commonwealth Department of Infrastructure and Regional Development, 2016. *Airport Plan (December 2016)*

Commonwealth Department of Infrastructure and Regional Development, 2016. *Airport Plan Western Sydney Airport Variation 2 (September 2021)*

Commonwealth Department of Infrastructure and Regional Development, 2016. *Western Sydney Airport Environmental Impact Statement, 2016*

Appendix A State  
Environmental Planning Policy (Precincts - Western Sydney  
Parkland City) 2021 Land Zoning Map

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# Appendix B

## Beaufort Wind Scale

### Beaufort Wind Scale

**Please note:** Beaufort scale numbers and descriptive terms such as 'near gale', 'strong gale' and 'violent storm' are not normally used in Bureau of Meteorology communications or forecasts.

Beaufort scale number	Descriptive term	Units in km/h	Units in knots	Description on Land	Description at Sea
0	Calm	0	0	Smoke rises vertically	Sea like a mirror.
1-3	Light winds	19 km/h or less	10 knots or less	Wind felt on face; leaves rustle; ordinary vanes moved by wind.	Small wavelets, ripples formed but do not break: A glassy appearance maintained.
4	Moderate winds	20 - 29 km/h	11-16 knots	Raises dust and loose paper; small branches are moved.	Small waves - becoming longer; fairly frequent white horses.
5	Fresh winds	30 - 39 km/h	17-21 knots	Small trees in leaf begin to sway; crested wavelets form on inland waters	Moderate waves, taking a more pronounced long form; many white horses are formed - a chance of some spray
6	Strong winds	40 - 50 km/h	22-27 knots	Large branches in motion; whistling heard in telephone wires; umbrellas used with difficulty.	Large waves begin to form; the white foam crests are more extensive with probably some spray
7	Near gale	51 - 62 km/h	28-33 knots	Whole trees in motion; inconvenience felt when walking against wind.	Sea heaps up and white foam from breaking waves begins to be blown in streaks along direction of wind.
8	Gale	63 - 75 km/h	34-40 knots	Twigs break off trees; progress generally impeded.	Moderately high waves of greater length; edges of crests begin to break into spindrift; foam is blown in well-marked streaks along the direction of the wind.
9	Strong gale	76 - 87 km/h	41-47 knots	Slight structural damage occurs -roofing dislodged; larger branches break off.	High waves; dense streaks of foam; crests of waves begin to topple, tumble and roll over; spray may affect visibility.
10	Storm	88 - 102 km/h	48-55 knots	Seldom experienced inland; trees uprooted; considerable structural damage.	Very high waves with long overhanging crests; the resulting foam in great patches is blown in dense white streaks; the surface of the sea takes on a white appearance; the tumbling of the sea becomes heavy with visibility affected.
11	Violent storm	103 -117 km/h	56-63 knots	Very rarely experienced - widespread damage	Exceptionally high waves; small and medium sized ships occasionally lost from view behind waves; the sea is completely covered with long white patches of foam; the edges of wave crests are blown into froth.
12+	Hurricane	118 km/h or more	64 knots or more	Very rarely experienced - widespread damage	The air is filled with foam and spray. Sea completely white with driving spray; visibility very seriously affected