



# **Western Sydney Airport**

## **Visual and Landscape Construction Environmental Management Plan**

December 2018



**Western  
Sydney  
Airport**

## Document Control

File Name	Document Name	Revision
WSA00-BECHTEL-00400-EN-PLN-000010	WSA Co Visual and Landscape CEMP	1

## Revision History

Revision	Date	Description	Author	Reviewer
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0.1	09/11/2018	Draft updated to include the Visitor Centre and Site Accommodation phase and Material Importation phase	WSA Co	S Reynolds
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0.4	12/12/2018	For approval	WSA Co	S Reynolds
1	14/12/2018	Revision update to include the Visitor Centre and Site Accommodation phase and Material Importation phase	WSA Co	S Reynolds

## Plan Authorisation

Position	Name	Signature	Date
Environment Manager	S Reynolds		12/12/2018

## Glossary and Definitions

Item	Definition
The Act	<i>Airports Act 1996 (Cth) (Airports Act)</i>
Airport	The airport located at the Airport Site. Note: the Airport is referred to in the Act as Sydney West Airport and also commonly known as Western Sydney Airport
AEPR	<i>Airports (Environment Protection) Regulations 1997</i>
Airport Lease	An airport lease for the Airport granted under section 13 of the Act
Airport Plan	Means the airport plan for the Airport Site as determined by the Infrastructure Minister under section 96B of the Airports Act in December 2016 as varied from time to time in accordance with the Airports Act
Airport Site	The site for Sydney West Airport as defined by the Airports Act.
Ancillary Developments	An 'ancillary development' as set out in section 96L of the Act
BoM	Bureau of Meteorology
CEMP	Construction Environmental Management Plan
Condition	A condition set out in Part 3 of the Airport Plan in accordance with section 96C of the Act
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 approved in accordance with Condition 1.
CSEP	Community and Stakeholder Engagement Plan
DoEE	Australian Government Department of the Environment and Energy
DPI	Department of Primary Industries (including Agriculture NSW, Fisheries NSW and NSW Office of Water)
Ecological sustainable development	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)
EEW	The Phase of the Stage 1 Development that involves early earthworks as described in section 6 of the Construction Plan.
Environment Minister	The Minister responsible for the EPBC Act
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
ESA	Environmentally Sensitive Area
EWMS	Environmental Work Method Statement
Infrastructure Department	The department responsible for administering the Airports Act, currently the Australian Government Department of Infrastructure, Regional Development and Cities
Infrastructure Minister	The Minister responsible for the Act from time to time
ISO 14001	AS/NZS ISO 14001:2015 Environmental Management Systems

Item	Definition
LDP	Land Disturbance Permit
Main Construction Works	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
Non-conformance	Failure to conform to the requirements of the Airport Plan (including the SEMF)
OEH	Office of Environment and Heritage (NSW)
Preparatory Activities	Preparatory Activities mean the following: <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>
the Project	Western Sydney Airport – Stage 1 development
Stage 1 Development	The Developments described in Part 3 of the Airport Plan
SES Officer	An SES employee under the <i>Public Service Act 1999</i> (Cth)
Sydney West Airport	The Airport. Note: this is the name used in the Act. The Airport is also commonly known as Western Sydney Airport
Visual impact	Determined by considering both the sensitivity of the receivers and the magnitude of impact. The combination of visual sensitivity and visual magnitude results in specific levels of impacts for each receiver
Visual magnitude	(or visual effect) of a development is the degree of contrast between the development and the pre-existing landscape
Visual sensitivity	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
Western Sydney Airport (WSA)	The Airport. Note: Under the Act the Airport is referred to as Sydney West Airport

## Acronyms and abbreviations

Item	Definition
ALC	Airport Lessee Company
ALER	Airfield lighting equipment room
ARFFS	Aviation Rescue and Firefighting Services
ATC	Air traffic control
ATCT	Air traffic control tower
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998
CO	Carbon monoxide
CEMP	Construction Environmental Management Plan
DIPNR	NSW Department of Infrastructure, Planning and Natural Resources (now Department of Planning and Environment)
EIS	Environmental Impact Statement
EPA	NSW Environmental Protection Authority
GSE	Ground support equipment
ha	Hectares
HAL	High intensity approach lighting
ISO 14001	AS/NZS ISO 14001:2015 – Environmental Management Systems
km	kilometres
m, m <sup>2</sup> and m <sup>3</sup>	Metres, square metres and cubic metres
ML and ML/d	Megalitres and megalitres per day
OEH	NSW Office of Environment and Heritage
OU	Odour unit
POEO Act	<i>NSW Protection of the Environment Operations Act 1997</i>
RMS	NSW Roads and Maritime Services
SES	Senior Executive Service
SEMF	Site Environmental Management Framework
TSP	Total suspended particulate matter

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# 1 Introduction

## 1.1 Background

In April 2014 the Australian Government announced that the Commonwealth-owned land at Badgerys Creek will be the site for a second Sydney Airport. The Badgerys Creek Airport Site was selected following extensive studies completed over a number of decades.

In December 2016, the Minister for Urban Infrastructure determined the Airport Plan which sets the environmental and planning authorisation for the development of Stage 1 of the Western Sydney Airport (WSA Stage 1). Part 3 of the Airport Plan outlines the conditions for the design, construction and operation of the Stage 1 development of the airport that must be complied with, regardless of who is delivering the works. These include strict environmental standards and implementation of mitigation measures identified in the Environmental Impact Statement (EIS).

The EIS was prepared in accordance with the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the EIS was finalised under the EPBC Act in September 2016, following a public exhibition period during which almost 5,000 submissions were received. The EIS considered potential impacts during construction and operation of the Stage 1 and long-term development of the proposed airport. In determining the Airport Plan, the Minister for Urban Infrastructure accepted environmental conditions proposed by the Environment Minister, taking into account the EIS.

In May 2017, the Government announced that it would establish WSA Co, to develop and operate the airport. WSA Co is responsible for constructing and operating Western Sydney Airport in accordance with the Airport Plan.

The Western Sydney Airport is expected to be developed in stages to match demand and include planning for services and amenities that are easily expandable over time, providing scalable capacity for aircraft, passengers, cargo and vehicle movements.

Stage 1 will include major site preparation, removing or relocating infrastructure from the site and earthworks to prepare the Airport Site, establishing the Airport with a single 3,700 metre runway located in the north-western portion of the Airport Site, a terminal and other support facilities to provide an operational anticipated capacity of approximately 10 million regional, domestic and international passengers per year, as well as freight traffic (the Stage 1 development).

The scope of works for the Stage 1 Development is defined in the Airport Plan and will generally include the investigation, design, construction and commissioning of:

- Bulk earthworks to move and redistribute approximately 24 million cubic metres of material on the Airport Site
- A single 3.7-kilometre runway
- Aprons, taxiways and other airside pavements
- A multi-user terminal
- Appropriate airport and aviation support facilities
- Drainage and utilities infrastructure
- Car parking, on-site roads and other appropriate landside facilities

Further details with regards to site activities specific to this Visual and Landscape CEMP is provided in Section 2.

## 1.2 Document context and scope

This WSA Co 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 development of the Western Sydney Airport detailed in Section 3.10.2 of the Airport Plan. Specifically, Section 3.10.2 Condition 14 (1) of the Airport Plan requires that a WSA Co 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 Development. This Plan forms one of nine CEMPs which are collectively covered by the WSA Co 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 and the Sustainability Plan as illustrated in 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. Specifically, 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 in particular 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** – 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 (once approved)** – Management and reduction of greenhouse gas emissions and management of impacts with regard to general health, wellbeing, and quality of life for surrounding communities.

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

This Plan is to be read in conjunction with the WSA Co Construction Plan and any relevant CEMP documents as indicated in Table 1 below which highlights relationships and linkages of this Visual and Landscape CEMP with other CEMPs within the environmental management framework, including key cross-referencing to the Airport Plan and EIS.

**Table 1 Visual and Landscape CEMP relationship with other CEMP documentation**

CEMP or plan	Airport Plan Condition (3.10.2)	EIS Chapter 28 Table: Management area	EIS Chapter 28 Table: Mitigation measures
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

**Key**

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 9 of the SEMF.

The context of this Plan in relation to the WSA Co environmental management system is presented below in Figure 1.

### 1.3 Document purpose

The purpose of this Plan is to provide the foundation for the management of visual and landscape impacts in accordance with best practice and legal requirements (including environmental mitigation measures, controls, monitoring and reporting) during the construction phase of the Stage 1 development based on the assessment undertaken as part of the EIS.

This Plan details the visual and landscape management requirements that must be satisfied in order to demonstrate compliance with Condition 14 of Section 3.10.2 of the Airport Plan for the construction of the Stage 1 development of the Western Sydney Airport.

Legal and other requirements are identified and maintained in a register within the SEMF (refer SEMF Appendix C). Mitigation measures (specific to visual and landscape impacts) required to satisfy these requirements are derived from the EIS and through risk assessment processes (refer Section 6) and included within this CEMP (refer Section 7).

Implementation of these measures is ensured through monitoring, training, competence, inspection, audit and reporting actions detailed in 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 Section 13.

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 Co 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 ISO 14001 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 Co personnel and contractors to enable Project completion in accordance with the environmental requirements.

Effective implementation of this Plan will assist WSA Co 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.

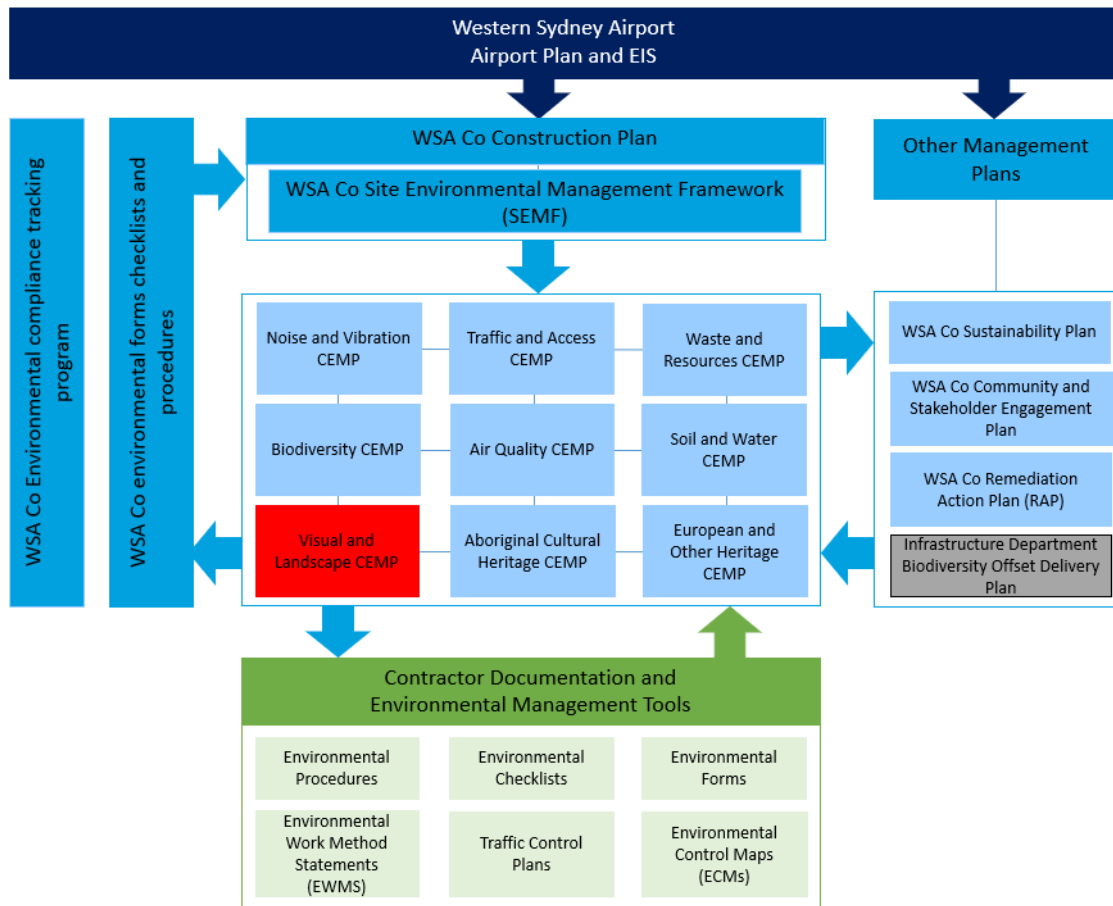
## **1.4 WSA Co environmental management system overview**

WSA Co operates in general accordance with AS/NZS ISO 14001 – *Environmental management systems*. A copy of the WSA Co environmental policy is provided in Appendix E of the SEMF.

The Stage 1 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 environmental plan for the 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 overall construction of the Stage 1 Development.

The structure of the environmental management system for the Project is shown in Figure 1.



**Figure 1 WSA Co Environmental Management System and CEMP context**

## 1.5 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. NSW Government agencies specified by Department of Premier and Cabinet for consultation about this Visual and Landscape CEMP, include NSW Department of Planning and Environment, the Government Architect, Liverpool City Council and Penrith City Council. Further, Airport Plan Condition 14(3) requires that this Visual and Landscape CEMP take into account Table 28-18 of the EIS which states the CEMP should also be prepared in consultation with the NSW Department of Planning and Environment and relevant local councils.

A summary of the stakeholder and government authority consultation completed to date which has informed the preparation of the Visual and Landscape CEMP is presented in Table 2. Details of consultation is included in Appendix A.

Consultation will continue with agencies, councils 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. To satisfy the above requirement this CEMP (Revision 0) has been provided to the relevant stakeholders for feedback on the Visitor Centre and Site Accommodation phase and Material Importation phase. Stakeholders were invited to attend a workshop on 13 November 2018 where an overview of the Visitor Centre and Site Accommodation phase and Material Importation phase was presented and feedback requested. A summary of the consultation is provided in Table 2 and details included in Appendix A.

**Table 2 Visual and Landscape CEMP consultation summary**

Government authority / stakeholder	Date	Summary
<b>Consultation prior to Rev 0 approval</b>		
NSW Department of Planning and Environment	July 2018	<p><b>Table 1:</b> Query if Greater Sydney Commission should now be included separately (although construction visual and landscaping likely not a key priority). Suggest including local community or affected sensitive receivers/businesses. Consider including RMS – given the early earthworks include roadworks and bridge structures, the agency has an interest in achieving good urban design, landscaping and amenity.</p> <p><b>Table 2:</b> Additional guidelines may include the following: <i>AS4282-1997 Control of the obtrusive effects of outdoor lighting</i> <i>Technical guideline for Urban Green Cover in NSW</i> <i>Crime Prevention through Environmental Design (CPTED)</i> (Queensland Government, 2007) <i>Better Placed - An integrated design policy for the built environment of New South Wales</i> (Government Architect) <i>Sydney Green Grid</i> (Government Architect) RMS has also published urban design guidelines for road design, which may be relevant for the EEW: <i>Beyond the Pavement: urban design policy, procedures and design principles</i> (RMS, 2014) <i>Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW</i> (RMS, 2012).</p>
The Government Architect	July 2018	<p>Note - initial comments are provided without knowing the detail of how the works relate to initial works or master planning.</p> <p>Ensure the Plans have understanding and consideration of other existing neighbourhoods, existing green infrastructure networks and any areas of public domain and potential impact to these</p> <p>Ensure design and location of early infrastructure works: Supports the provision of network of open space, walking and cycling opportunities as a key part of the transport and access plan for the wider site and surrounding area master plan Does not provide visual or other impacts to surrounding areas including neighbourhoods or local centres</p> <p>Support agreed road and transport hierarchy for the wider area</p> <p>Consideration of the detailed evaluation criteria, measures and methodology being undertaken to assess and mitigate impacts, either visual or physical – whether temporary impacts for life of construction, or beyond.</p> <p>Opportunities - consideration of opportunities to embed green infrastructure from the beginning of the project in accordance with the principles of GANSW Greener Places Policy</p>

Government authority / stakeholder	Date	Summary
The Government Architect (continued)	July 2018	<p>A key issue is Context Aware Development which includes the following considerations from a green infrastructure perspective:</p> <ul style="list-style-type: none"> <li>Protection of primary natural water systems</li> <li>Consideration and protection of secondary natural water system</li> <li>Protection of remnant vegetation which includes riparian corridors, nature reserves and conservation areas</li> <li>Protection of ecological lands</li> <li>Enabling linkages and networks of remnant vegetation</li> <li>Draw on the indigenous meaning of place</li> <li>Ensure that works are consistent with the vision for the Western Parkland City concept</li> <li>Ensure that stormwater treatment, urban canopy cover, biodiversity and other environmental system are considered at a precinct level</li> <li>Ensure that bridges are designed in such a way that they contribute to the legibility of the public open space</li> <li>Consideration of planting at the outset ie that early earthworks facilitate diverse planting structure</li> <li>Consideration of consolidated precinct wide stormwater treatment strategy</li> </ul>
Liverpool City Council	July 2018	No comment provided on visual and landscape related matters.
Penrith City Council	July 2018	The visual and landscape section of the strategy has no reference to Penrith City Council's Local Environmental Plan 2010 and Penrith Development Control Plan 2014. There are scenic landscape value considerations and landscape character objectives that are relevant considerations for the proposal and any works within the Penrith Local Government Area, or immediately adjoining the Penrith Local Government Area, should have specific regard to these standards and objectives.
<b>Consultation prior to Rev 1 approval</b>		
NSW Department of Planning and Environment	Nov 2018	No comment provided on visual and landscape related matters.
The Government Architect	Nov 2018	No comment provided on visual and landscape related matters.
Liverpool City Council	Nov 2018	No comment provided on visual and landscape related matters.
Penrith City Council	Nov 2018	No comment provided on visual and landscape related matters.
Stakeholder information workshop	13 November 2018	<p>Workshop held on 13 Nov 2018. Attendees presented with a summary of the proposed works. Topics included:</p> <ul style="list-style-type: none"> <li>• Airport plan condition requirement for consultation</li> <li>• Land-use plan</li> <li>• Site location of works</li> <li>• Visitor Centre and Site Accommodation scope, including images of the concept design</li> <li>• Material importation, including location, distance to closest receiver and site access</li> </ul>



Government authority / stakeholder	Date	Summary	
		No comments received at the workshop	
		<b>Invitees:</b> Liverpool City Council Western Area Health Penrith City Council NSW Department of Premier and Cabinet Roads and Maritime Services NSW Health NSW Department of Education NSW Aboriginal Affairs NSW Department of Planning and Environment Transport for NSW	<b>Attendee:</b> NSW Aboriginal Affairs Liverpool City Council Western Area Health

## 1.6 Certification and approval

This Visual and Landscape CEMP has been reviewed and approved for issue by the WSA Co Environment Manager prior to submission to Western Sydney Unit, Australian Government Department Infrastructure, Regional Development and Cities (the Infrastructure Department).

## 1.7 Distribution

All WSA Co 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 -

<http://wsaco.com.au/Project/index.aspx>

This document is uncontrolled when printed. One controlled hard copy will be maintained by the quality manager at the project office.

## 2 Project details and scope of works

### 2.1 Project general features

The Project will be delivered through a packaging strategy with a wide variety of package sizes, risk profiles and contracting entities. Each package 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 relevant statutory requirements and obligations. Key features of the Project include:

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

Further details of the overall Project construction activities, programming and methodologies are included in the Construction Plan. Further detail of the specific works associated with this CEMP, is included in Section 2.4.

### 2.2 Project site location and layout

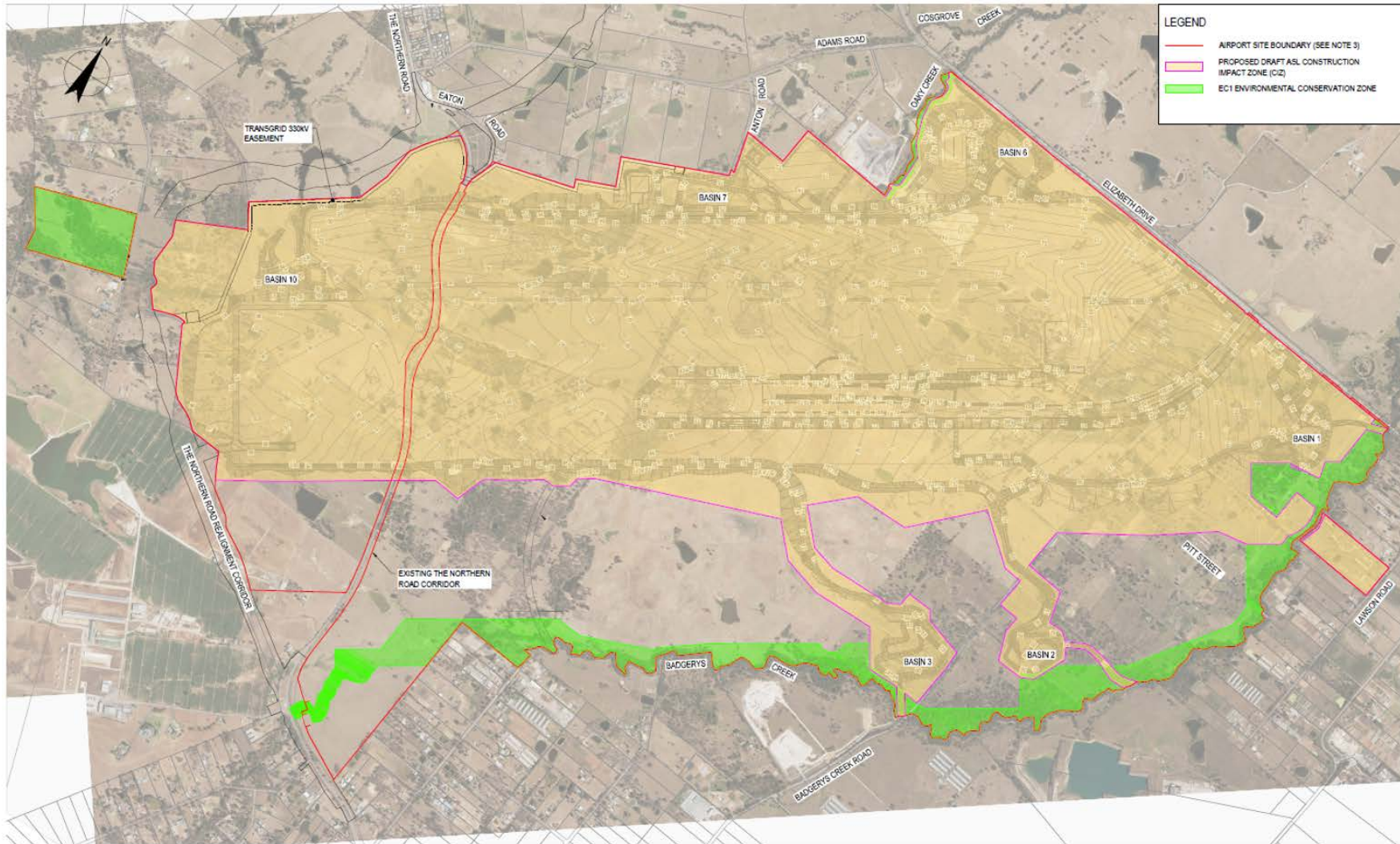
The Western Sydney Airport will be developed on around 1,800 hectares of Commonwealth-owned land at Badgerys Creek in Western Sydney (Airport Site). The Airport Site is approximately 50 kilometres from Sydney's central business district.

The Airport Site is bounded by Elizabeth Drive to the north, Willowdene Avenue to the south, Luddenham and Adams Road to the west and Badgerys Creek to the east. The existing terrain is made up of undulating topography, and substantial earthworks are required to create a level surface to allow construction of the runway, taxiways and support services. The Airport Site location is provided in Figure 2 and the Construction Impact Zone is provided in 3.

An Environmental Conservation Zone (ECZ), referred to as EC1 in Figure 3 is located within the Airport Site, mostly to the south and south east along with a smaller portion to the west. This is a protected land use due to the occurrence of natural habitats and water flows, including Badgerys Creek. The ECZ also provides for an environmental preservation corridor which has a number of specific objectives and permissible uses in this land use zone as identified in the Airport Plan. Any construction work within the ECZ must be managed appropriately and is to be carried out only with prior approval from the WSA Co Environmental Manger.



**Figure 2 Western Sydney Airport Site location**



**Figure 3 Stage 1 development construction impact zone**



## 2.3 Project staging and environmental management approach

Section 2 of the Construction Plan provides an overview of the total Project activities to be undertaken. As permitted by Condition 1(5), the Construction Plan identifies that the Stage 1 Development will be undertaken in the following phases:

- Preparatory Activities
- Early Earthworks (EEW)
- Visitor Centre and Site Accommodation
- Material Importation
- Bulk Earthworks and Drainage (P1-A)
- Bulk Earthworks and Drainage (P1-B)
- Runway Pavement / Airside Civil (P1-C)
- Passenger Terminal Complex (P2)
- Landside Civil and Buildings (P3)

At the time of preparing this Visual and Landscape CEMP, the current work phases, and therefore the phases covered by this Visual and Landscape CEMP are included below in Table 3.

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

**Table 3 Works covered by this Visual and Landscape CEMP**

Works covered	Reference
Preparatory activities	Refer to Sections 2.4.2
Early Earthworks	Refer to Section 2.4.3
Visitor Centre and Site Accommodation	Refer to Section 2.4.4
Material importation	Refer to Section 2.4.5

As the Project develops, this table will be updated accordingly with further detail to be provided as required in the subsequent sections. Any preparatory other construction activities will not be undertaken inconsistently with this CEMP.

Section 2 of the SEMF provides a general overview of the total Project activities to be undertaken, with further specific detail targeting the current works (as indicated in Table 3) provided below in Section 2.4.

## 2.4 Scope of works

### 2.4.1 Preparatory activities (General)

Preparatory activities will be ongoing across the Airport Site throughout the Stage 1 Development. The works will be managed in accordance with the Overarching Preparatory Activities Plan which is prepared by the relevant Contractor and approved by WSA Co Environment Manager. The activities must be consistent with the Airport Plan definition for Preparatory Activities, refer to SEMF Section 3.9. Refer to Table 4 for details of proposed activities and indicative timing.

If an Approver determines an activity is a Preparatory Activity for paragraph (e) of the definition of 'Preparatory Activities' as per the Airport Plan and requires that a plan be prepared and submitted, WSA Co

will prepare the necessary plan for consideration and approval in accordance with Condition 5 (2) of the Airport Plan. Any Preparatory Activities must not be carried out inconsistently with the approved CEMPs

**Table 4 Construction staging – Preparatory Activities**

Construction staging	Indicative Timing
Preparatory Works	
<ul style="list-style-type: none"> <li>• Spatial Survey</li> <li>• Service Investigations</li> <li>• Pre-condition Surveys</li> <li>• Traffic Counting</li> <li>• Biological Pre-Clearance Surveys</li> <li>• Contamination Pre-Clearance Surveys</li> <li>• Aboriginal and European Cultural Heritage Survey and Salvage Works including Topsoil Protocol implementation</li> <li>• Site Security including fencing</li> <li>• Removal of redundant infrastructure including farm fences, power poles, footings/slabs and rubbish</li> <li>• Site compound establishment and roundabout construction</li> <li>• Remediation works including establishment of stockpiles</li> <li>• Construction of temporary sediment basins and installation of erosion and sediment controls</li> <li>• Other activities which an Approver determines are Preparatory Activities.</li> </ul>	<p>Aug 2018 – 2026</p>

## 2.4.2 Early Earthworks package

A breakdown of EEW construction activities are outlined below and are consistent with the activities described in the Airport Plan. The WSA EEW site comprises of 120 ha of the overall site and is bounded by Elizabeth Drive to the north and Badgerys Creek to the east.

The EEW will involve:

- Topsoil Protocol implementation
- Management of contamination in the Early Earthworks area
- Bulk earthworks
- Construction of a section of the new realigned Badgerys Creek Road within the Site
- Construction of a new intersection at Elizabeth Drive
- Utility relocations

In accordance with the Construction Plan Section 6, the early earthworks construction activities will be delivered in several stages. Table 5 outlines each stage and indicative timing for the proposed works and illustrated in Figure 4. This CEMP identifies the aspects and impacts for each key activity and required appropriate mitigation measures based on a risk assessment.

**Table 5 Construction staging – Early Earthworks**

Construction staging	Associated works	Indicative timing*
<b>Stage 1</b>		
	<p>Involves construction of permanent open drainage, swales and diversions into existing creeks and tributaries. This prevents clean water from outside the site, entering the construction site. Activities include:</p> <p>Excavate northern end of the bypass channel from the existing Badgerys Creek Road culvert to the existing creek outfall on the north east of the Bio Retention Pond 1;</p> <p>Construct a temporary channel crossing/culvert to suit the temporary side-track;</p> <p>Divert overland flows to the partially constructed bypass channel;</p> <p>Undertake cut to fill operation to develop import stockpile area west of Badgerys Creek road in parallel with stages 1-6;</p> <p>Demolition of existing house; and</p> <p>Implementation of the RAP</p>	November 2018 – January 2019
<b>Stage 2</b>		
	Excavate Bio Retention Pond 1 for use as temporary erosion and sediment control	January 2019
<b>Stage 3</b>		
	<p>Commencement of the cut to fill operation with a focus on getting the earthworks underlying Badgerys Creek Road completed. This enables the construction of new utilities routes, bridge construction and storm water drainage underneath Badgerys Creek road. Activities include:</p> <p>Earthworks cut and fill to construct Badgerys Creek Road from the south tie-in to the new bridge location as well as fill required for the temporary side-track;</p> <p>Construct a culvert beneath the temporary side-track to manage runoff from the main fill area;</p> <p>Earthworks will include the water bypass channel between Badgerys Creek Road and the new bridge;</p> <p>Drainage and roadworks to permanent and temporary alignments;</p> <p>Construct bridge over stormwater channel; and</p> <p>Endeavour Energy utility removal.</p>	October 2018 – April 2019
<b>Stage 4</b>		
	Completion of drainage diversions and connections to the existing creek network will be undertaken after stabilisation of the new water channels and surrounding surface area to maintain water quality standards.	November 2018 – December 2018
<b>Stage 5</b>		
	<p>Completing the final portion of earthworks on the western side of Badgerys Creek Road and taking it across the road into the main fill. It is expected that Badgerys Creek Road re-alignment has reached the finishing works at this stage. Activities include:</p> <p>Complete Main earthworks;</p> <p>Complete south west leg of the bypass channel;</p> <p>Complete Badgerys Creek Road north of the bridge;</p> <p>Sydney water utility relocation and removal; and</p> <p>Telstra relocation and removal.</p>	November 2018 – September 2019
<b>Stage 6</b>		
	<p>Following RMS approval of the Works Authorisation Deed (WAD), works inside the Elizabeth Drive road corridor can commence to construct the new intersection of Elizabeth Drive and Badgerys Creek Road. Activities include:</p> <p>Undertake Elizabeth Drive intersection works.</p> <p>Divert traffic onto the full Badgerys Creek Road alignment;</p> <p>Endeavour Energy Elizabeth drive works; and</p>	April 2019 – December 2019



Construction staging	Associated works	Indicative timing*
	Elizabeth Drive Upgrade works	

### 2.4.3 Visitor Centre and Site Accommodation

WSA Co will engage a Contractor to complete the enabling works prior to the construction of the visitor centre and office accommodation (refer to Table 6). The site for the visitor centre is located in the north west section of the site at the intersection of The Northern Road and Eaton Road Luddenham. Refer to Figure 4.

The scope of the activities proposed to be undertaken in accordance with this CEMP are outlined in Table 6 and are consistent with the activities described in the Airport Plan.

**Table 6 Construction staging – Visitor Centre and Site Accommodation**

Construction staging	Indicative Timing
<b>Stage 1</b>	
<b>Site access and preparation works</b> <ul style="list-style-type: none"> <li>Removal of redundant infrastructure including farm fences, power poles, footings/slabs and rubbish;</li> <li>Site compound establishment;</li> <li>Site Security;</li> <li>Construction of temporary sediment basins and installation of erosion and sediment controls; and</li> <li>Implementation of the RAP.</li> </ul>	Nov 2018 – Dec 2018
<b>Earthworks to level the site</b> <ul style="list-style-type: none"> <li>Earthworks – Cut and Fill (carting and disposal off-site); and</li> <li>Site Grading and Benching.</li> </ul>	Dec 2018 – Jan 2019
<b>External roadworks*</b> (Eaton Road – North and South from VC Entrance) <ul style="list-style-type: none"> <li>Earthworks – Cut and Fill (carting and disposal off-site);</li> <li>Road pavement installation;</li> <li>Permanent open drainage (swales formed as part of cut);</li> <li>Line marking;</li> <li>Utilities Diversion – relocation of existing light poles (4 each); and Signage – “No Right Turn” signs (2 each).</li> </ul>	Dec 2018 – May 2019
<b>Utilities* (Power, Water and Telecommunications)</b> <ul style="list-style-type: none"> <li>Substation and connection to HV along The Northern Road;</li> <li>Connection of water to Sydney Water Main; and</li> <li>Conduit and pits for telecommunications lead-in cable.</li> </ul>	Dec 2018 – May 2019
<b>Stage 2</b>	
<b>Foundation Works and In-Ground Services</b> <ul style="list-style-type: none"> <li>Slab on ground for the Visitor Centre; and</li> <li>Screw Piles for the Site Accommodation.</li> </ul>	Jan 2019 – Feb 2019
<b>Structure</b> <ul style="list-style-type: none"> <li>VC structure shall be a combination of Laminated Veneer Lumber (LVL) columns and roof beams and Cross-Laminated Timber (CLT) ceiling panels solution; and</li> <li>SA - modular timber framed panels lined with plasterboard internally and cladding externally.</li> </ul>	Feb 2019 – Mar 2019
<b>Finished and Internal Services</b> <ul style="list-style-type: none"> <li>Utilities – provision and coordination of connections to external utilities such as potable water, electrical and telecommunications;</li> <li>Services: <ul style="list-style-type: none"> <li>Fire-water and wastewater treatment systems; and</li> <li>Heating, Ventilation, and Air-Conditioning (HVAC)</li> </ul> </li> </ul>	Feb 2019 – May 2019

Construction staging	Indicative Timing
<ul style="list-style-type: none"> <li>• ITS (Information Technology Services)</li> <li>• Technical exhibition display and exhibition content</li> <li>• Furniture, Fit-out and Equipment for both VC and SA buildings.</li> </ul>	
<b>Testing and Commissioning</b> <ul style="list-style-type: none"> <li>• Comprehensive and systematic testing and commissioning of all utilities (below and above ground), internal services and systems: <ul style="list-style-type: none"> <li>• Dry / Dead Testing</li> <li>• Wet / Live Testing</li> </ul> </li> <li>• Integrated Testing &amp; Commissioning</li> </ul>	Mar 2019 to May 2019
<b>Internal road, car parks and Landscaping</b> <ul style="list-style-type: none"> <li>• Landscaping;</li> <li>• Security Swipes / Cameras</li> <li>• Fencing / Gates to perimeter boundary and site interior;</li> <li>• Roadworks and carparking, including line marking, road furniture, and site lighting;</li> </ul>	Jan 2019 – Mar 2019

\*Note: may require approval from NSW government agencies and utility providers.

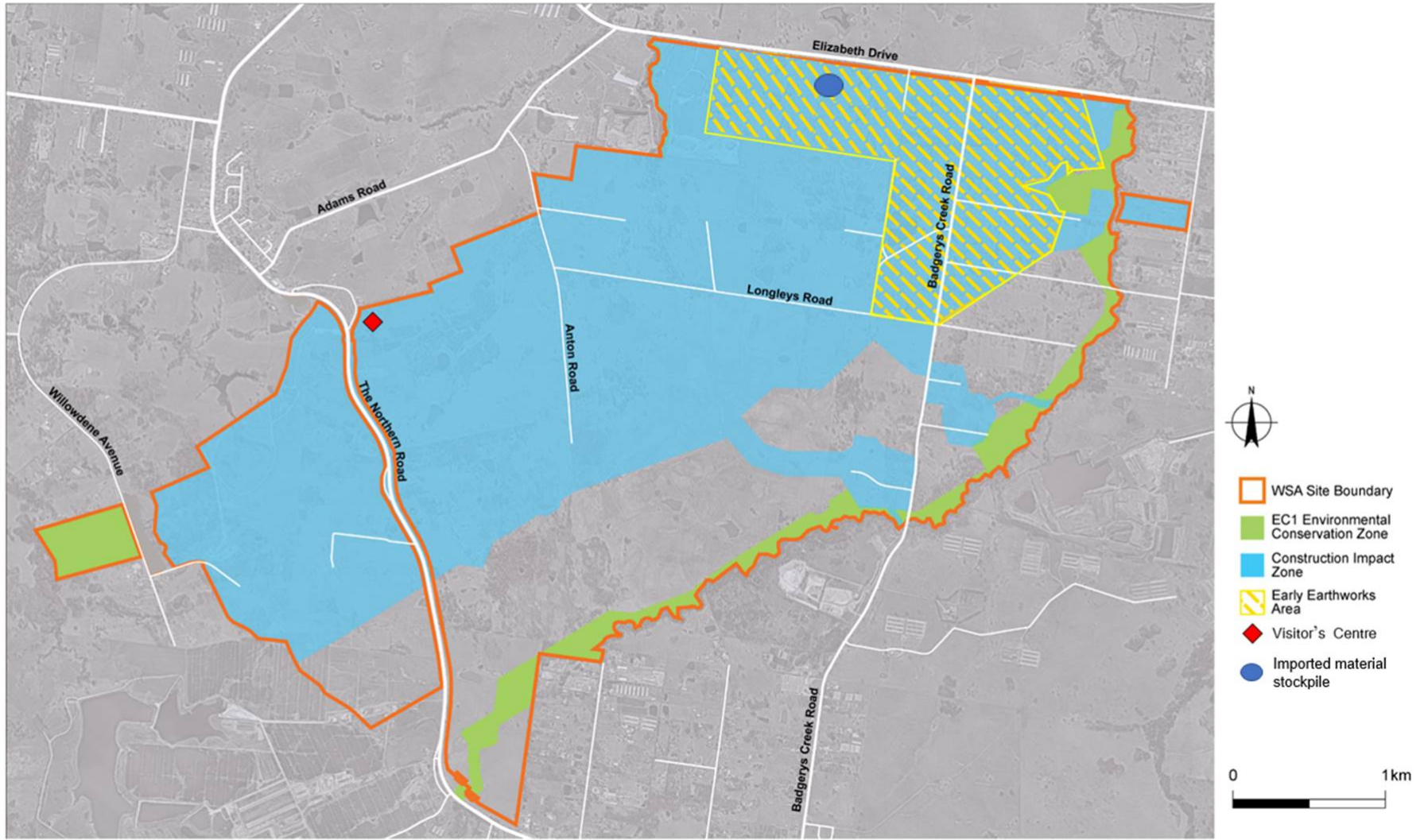
#### 2.4.4 Material Importation

Material will be imported to the site from other Sydney infrastructure sites as contemplated by the EIS starting in April 2019, this will ensure that valuable Sydney sandstone will be re-used in pavement construction potentially saving millions of tonnes of quarry won materials while diverting material from landfill sites in the Sydney area. The approximate stockpile location is shown in Figure 2. Initially 1.0 Million tonnes of sandstone material will be imported with the bulk being imported from April 2019 through to December 2020. It is expected that the stockpiled material will be used during pavement construction starting in mid 2022 and completing by December 2023.

To make the most of opportunities to obtain suitable material generated from other major infrastructure projects in Sydney, import will need to occur both during standard hours and also outside standard construction hours. As such, the processes outlined in the Noise and Vibration CEMP and the Traffic and Access CEMP for the ongoing assessment and environmental management of these works will be applied prior to commencement.

**Table 7 Construction staging – Material importation**

Construction staging – Material importation	Indicative Timing
<ul style="list-style-type: none"> <li>• Haulage of sub-base and capping material to site</li> </ul>	April 2019 – Dec 2020



**Figure 4 Site Location plan**

## 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 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 Sections 4 and 7 of this Plan.

### 3.2 Performance criteria

Performance criteria specific to visual and landscape matters have been established for the management of impacts on the visual and landscape quality during the construction phase of the works, as presented in Table 8, which have been, in part, derived from the performance criteria identified in the EIS, Table 28-18.

**Table 8 Visual and landscape quality targets**

Objective	Target	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, taking into account the changing nature of Western Sydney.	Community and stakeholder Engagement Plan Detailed design
Landscape and visual amenity impacts minimised during construction	Appropriate landscape treatments are identified and implemented to reduce visual amenity impacts in accordance with this CEMP and detailed design	Complaints database
Impacts associated with light spill during construction will be minimised	All lights where possible to be downward facing and directed away from receivers	Environmental inspection checklist
Comply with legislation and other requirements	No non-conformance with the requirements of the CEMP	CEMP Audit report

The above targets in Table 8 have been set to provide a benchmark performance objective to which WSA Co 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 assessment of potential improvement opportunities.

## 4 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 Airports Act, some state laws will not be applicable to the Project (s112 of this 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 Legislation and regulations for this Plan are summarised in Table 9.

**Table 9 Principal legislation and relevance**

Legislation or regulation	Relevance	CEMP compliance provisions
<b>Commonwealth</b>		
<i>Airports Act 1996 (Cth) (Airports Act)</i>	<p>The Airports Act and regulations made under the Airports Act set out the framework for the regulation and management of activities at airports that could have potential to cause environmental harm. 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 a number of environmental matters and, in particular, details specific measures to be carried out for the purposes of preventing, controlling or reducing the environmental impact associated with the airport. Criminal offences are applicable if these measures are not complied with.</p>	<p>This CEMP forms part of the overall WSA Co environmental management system which has as a target, 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> <p>Section 3.1 – Objectives Section 4.3 – Airport Plan Conditions Section 4.3.1 – Environmental Impact Statement Requirements Section 6.2 – Risk Assessment Section 7 – Environmental Control Measures Section 8 – Roles and Responsibilities Section 9 – Environmental Inspection, Monitoring and Auditing Section 12 – Environmental Incidents, Non-conformance and improvement opportunities Section 13 – Review and improvement</p>
<i>Airports (Environment Protection) Regulations 1997 (AEPR)</i>	<p>Imposes various duties including 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.</p>	<p>Refer to commentary on Airport Plan above</p>
<b>NSW</b>		
<p><b><i>As the Airport is to be developed under the Airport Plan determined under the Airports Act, 1996 (Cth), some state laws will not be applicable to the project (see for example S 112 of that Act). Where state laws are not</i></b></p>		



Legislation or regulation	Relevance	CEMP compliance provisions
<i>applicable, it is still intended to have regard to relevant laws for example through inclusion of mitigation measures incorporated into this CEMP. These laws are identified below.</i>		
<i>Environmental Planning and Assessment Act 1979 (EP&amp;A Act)</i>	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
<i>Roads Act 1993</i>	Governs the opening, operation and management, and closure, of public roads in NSW.	Section 7 – Environmental Control Measures

#### 4.1.2 Guidelines and standards

Guidelines and standards that are relevant to visual and landscape management and this Plan are summarised in Table 10.

**Table 10 Relevant guidelines and standards**

Guidelines and standards
• Creating Places for People – an urban design protocol for Australian Cities (Infrastructure Australia, 2011)
• Liverpool Local Environmental Plan 2008
• Liverpool Development Control Plan 2008
• Penrith Local Environmental Plan 2010
• Penrith Development Control Plan 2014
• Western City District Plan (Greater Sydney Commission 2016)
• ISO 14001 – Environmental Management Systems
• AS4282-1997 Control of the obtrusive effects of outdoor lighting
• Technical guideline for Urban Green Cover in NSW (NSW Office of Environment and Heritage 2015)
• Crime Prevention through Environmental Design (CPTED) (Queensland Government, 2007)
• Better Placed - An integrated design policy for the built environment of New South Wales (Government Architect)
• Sydney Green Grid (Government Architect)
• Beyond the Pavement: urban design policy, procedures and design principles (RMS, 2014)
• Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW (RMS, 2012)

## 4.2 Approvals and other specifications

### Functional Specifications

- EPBC Act 1999 Part 13 Permit E2017-0138 (included as Attachment A of the Biodiversity CEMP);
- Western Sydney Airport Plan (2016);
- Western Sydney Airport Environmental Impact Statement;
- WSA Co Sustainability Plan when approved;
- WSA Co Community and Stakeholder Engagement Plan; and
- WSA Co Construction Plan.

## 4.3 Airport Plan Conditions

Construction conditions relevant to visual and landscape management during construction of the Stage 1 development are provided in Section 3.10.2 of the Airport Plan and summarised in Table 11 below. 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 relevant legislation.

**Table 11 Airport Plan Conditions relevant to visual and landscape management**

Condition No.	Condition	Timing	Responsibility
1.4	The Site Occupier must ensure that no CEMP is inconsistent with the approved Construction Plan	Ongoing	WSA Co
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 41 (Variation of Approved Plans) prior to commencement of any new phase.	Ongoing	WSA Co
5.3	In carrying out a Preparatory Activity, the Site Occupier must not act inconsistently with any approved CEMP or the approved Construction Plan.	Ongoing	WSA Co



Condition No.	Condition	Timing	Responsibility
14.1	The Site Occupier must not: Commence Main Construction Works until a Visual and Landscape CEMP has been prepared and approved in accordance with this condition; or Carry out any development described in Part 3 of the Airport Plan inconsistently with the approved Visual and Landscape CEMP.	Construction Works	WSA Co
14.2	The Site Occupier must: Prepare; and Submit to an Approver for approval, a Visual and Landscape CEMP in relation to the carrying out of the developments described in Part 3 of the Airport Plan.	Prior to Main Construction Works	WSA Co
14.3	The criteria for approval of the Visual and Landscape CEMP are that an Approver is satisfied that:  In preparing the Visual and Landscape CEMP, the Site Occupier has taken into account Table 28-18 in Chapter 28 of the EIS; and  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
35	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:  (a) in preparing the plan, has consulted with any NSW Government agencies specified by the NSW Department of Premier and Cabinet; and  (b) has provided: (i) the Approver; and (ii) each consulted agency, with an explanation of how any responses have been addressed.	Ongoing	WSA Co
37 to 42	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 Co and Approver

### 4.3.1 Environmental Impact Statement requirements

The requirements of visual and landscape management to be considered and addressed during the construction phase of the Stage 1 development are included in the EIS, specifically 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 12.

**Table 12 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, taking into account the changing nature of Western Sydney</li> </ul>	Section 3.1 – 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:	Visual and Landscape CEMP
		Detail the management and mitigation measures to be implemented, including those outlined in Table 28-19 (of the EIS)	Section 7 – Visual and Landscape management environmental control measures
		Describe the process for managing complaints, stakeholder engagement, and emerging environmental management issues as they arise	Section 11 – Communication and complaints management
		Specify the process for monitoring implementation, reporting, and auditing	Section 9 – Environmental inspection, monitoring and auditing
		Identify the party responsible for implementing of the Visual and Landscape CEMP	Section 8 – Roles and compliance management
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 and auditing

EIS Reference	Topic	Summary	Visual and Landscape CEMP Reference
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:	Note
		The Visual and Landscape CEMP will be prepared in consultation with the Department of Planning and Environment and relevant local councils	Section 1.5 – 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 and Regional Development	Note
		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	Section 8.3 – Construction contractor (Roles and Responsibilities)

## **5 Existing environment**

The following information is summarised from the EIS. 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 site and 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, particularly along creek lines, road edges and near farm dams.

Immediately north of the site, farm buildings are generally well set back from Elizabeth Drive. The area north of Elizabeth Drive is rural pasture land 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 screened from Elizabeth Drive and therefore has only a minor visual presence. 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 undefined edges and contribute to the overall rural character.

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 topography of the Airport Site and surrounding area is typical of the Cumberland Plains, consisting of gently rolling foot hills with local relief of 10-30 metres. Slopes are generally 5 percent but sometimes 10 percent and occasionally up to 10 – 20 percent. Crests and ridges are broad (200-600 metres) and rounded with convex upper slopes grading into concave lower slopes (Bannerman and Hazelton, 1990).

A ridge line with a high point of 118 metres above the Australian height datum (AHD) occurs in the western portion of the site near The Northern Road. It offers views over the immediate area and the much wider landscape. Areas in the western half of the Airport Site are generally at a higher elevation whereas they are lower and flatter along Badgerys Creek with the lowest point being 43 metres in the northeast corner of the site near Elizabeth Drive. Elevations more typically range between 60 and 90 metres throughout the central areas of the Airport Site.

Site contours of the Airport Site and the area immediately surrounding the site are provided in Figure 5.

### 5.3 Land use

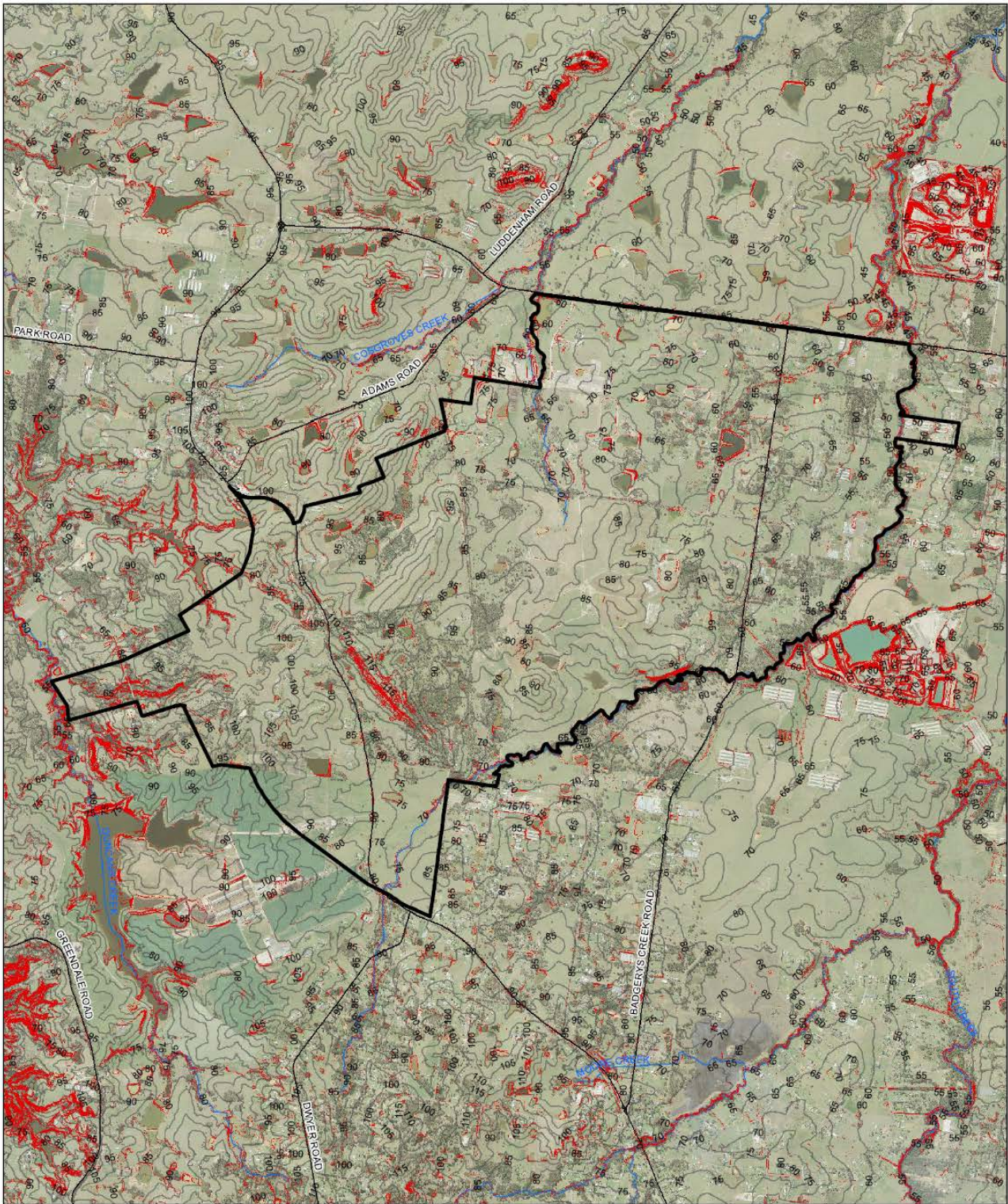
Pastoral and horticultural land uses remain the primary land uses in the area. Large blocks of agricultural land are found to the north and west, while rural residential and agricultural properties are generally concentrated to the east and south of the site.





A summary of the various land uses immediately surrounding the Airport Site is provided below in Table 11 and shown in Figure 6.

**Table 13 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 in its own right, impact level is considered to be low.
Twin Creeks Golf and Country Club (club)	A 200-lot 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 considered to be low.
Boral Brickworks (BB)	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 considered to be 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 considered to be low.
The University of Sydney, Camden, Wolverton 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 considered to be 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 considered to be very low for the initial Early Earthworks stage of the project.



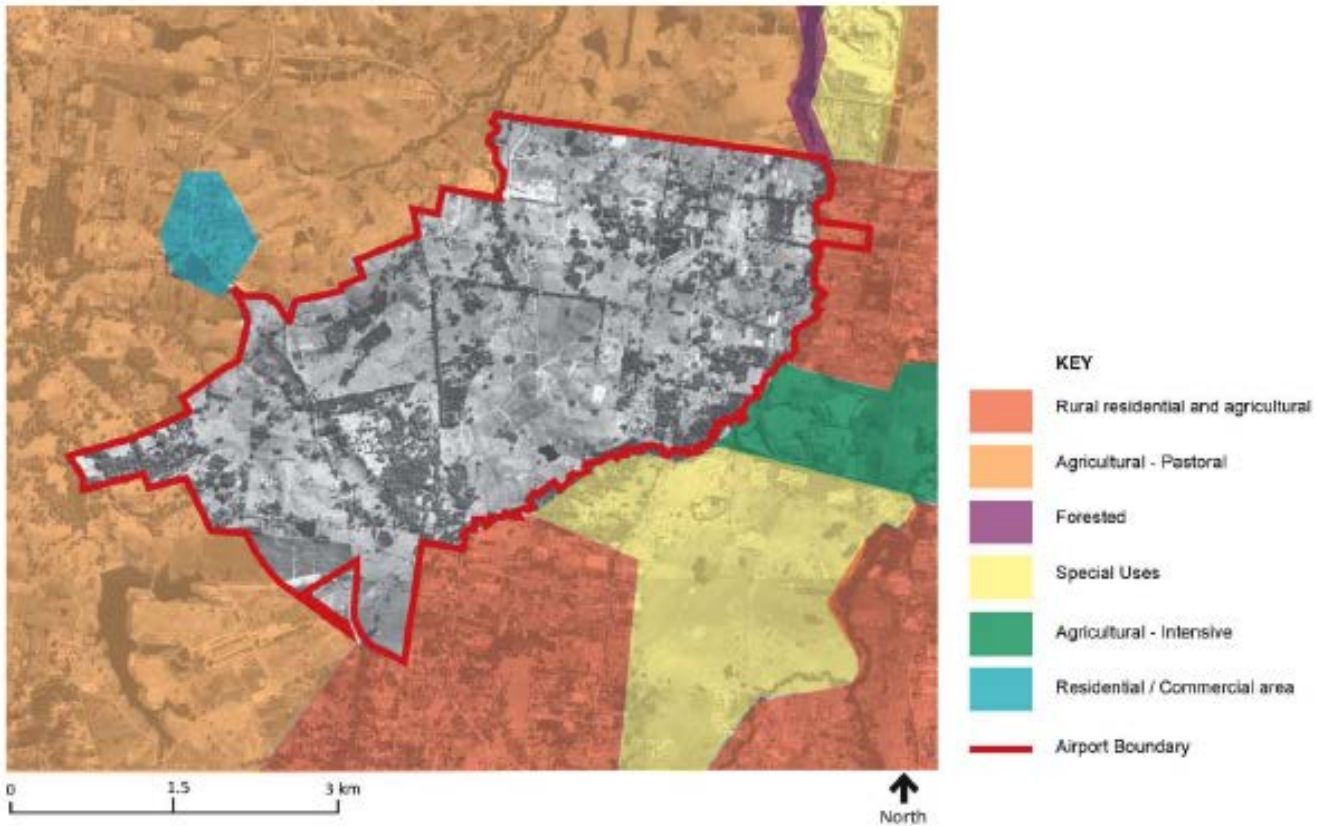


- LEGEND**
-  Airport site
  -  Existing contours
  - Slope (percent)
  -  0 - 20
  -  Above 20

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

**Figure 5 Site topography**





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

**Figure 6 Surrounding land use**

## 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 view point type, elevation and distance from site (taken from the proposed traffic control tower) is provided in Table 14.

**Table 14 Relative heights and offsets of representative viewpoints**

Viewpoint No.	Location	Height (approx. AHD)	Approx. distance (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



Viewpoint No.	Location	Height (approx. AHD)	Approx. distance (km)*	Land use type
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;
- Establishing site compounds including the Visitor Centre and site accommodation;
- Bulk earthworks including the importing of materials to stockpile on site;
- Topsoil stripping and stockpiling;
- Construction of access roads and services; and
- Construction of aviation infrastructure.

The risk assessment and management process for the Project is detailed in Section 3.3 of the SEMF. The following information has been used in the initial risk assessment. Risks will be reviewed, and the risk register updated periodically.

### **6.2 Risk assessment**

A preliminary risk assessment has been undertaken as part of the CEMP. The parts of the overall risk assessment relevant to landscape and visual amenity have been extracted and summarised in Table 18.

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 (effects and impacts) and a corresponding risk mitigation strategy and risk ranking. Each environmental risk was categorised, based on the following:

- The environmental aspect;
- Relative scale of the potential impact;
- Type of potential impact; and
- Likelihood of occurrence.

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 are in line with the EIS mitigation measures in Section 7.

The following risk assessment process has been implemented, together with a review of proposed activities and known risks based on past project experience.

#### **6.2.1 Risk Assessment Process**

The following tables outline the risk assessment process using 3 steps to identify the appropriate management measures required.

Table 15 is used to determine the likelihood that the aspect will have an impact on the environment.

Table 16 is used to determine the potential consequence rating of the risk identified.

From these two tables, a risk rating can then be assigned by using Figure 7 to determine how severe the potential impact may be.

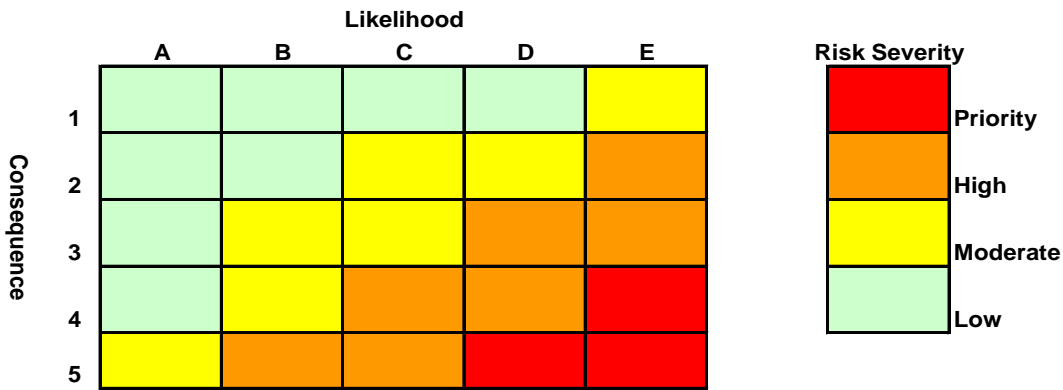
Table 17 is then used to assess what level of management each type of risk will require.

**Table 15 Likelihood descriptor**

	Likelihood	Description
A	Rare / improbable	The event may only occur in exceptional circumstances.
B	Unlikely / remote	The event may occur at some time (about once every five years).
C	Possible	The event is likely to occur at some time (about once every year).
D	Likely	The event will probably occur in most circumstances (at least once every six months).
E	Almost certain	The event is expected to occur in most circumstances (at least once every month).

**Table 16 Consequence descriptor**

	Likelihood	Description
1	Insignificant/negligible	<ul style="list-style-type: none"> <li>Short-term disturbance with minor environmental release or damage that is non-reportable.</li> <li>No impact outside site boundary.</li> <li>No community complaints or media reports.</li> </ul>
2	Minor/low	<ul style="list-style-type: none"> <li>Minor violation of regulation or guideline with minimal damage to the environment and small clean-up.</li> <li>Immediately contained on site.</li> <li>Minor community complaints.</li> <li>Potential or actual breach of legislation.</li> </ul>
3	Moderate	<ul style="list-style-type: none"> <li>Violation of regulation or guideline with moderate temporary damage to the environment and significant clean-up costs.</li> <li>Release of pollution off site.</li> <li>Detrimental media reports, community concerns and complaints.</li> </ul>
4	Major	<ul style="list-style-type: none"> <li>Major environmental damage with potentially permanent.</li> <li>Release of pollution off site. Significant loss of environmental resources.</li> <li>Detrimental media reports in the national or state media, organised community concern.</li> <li>High likelihood of fine or court action.</li> </ul>
5	Catastrophic	<ul style="list-style-type: none"> <li>Long-term environmental harm.</li> <li>Permanent irreparable damage to the environment.</li> <li>Sustained detrimental state and national media reports. Sustained community outrage.</li> <li>Penalty Infringement Notice/court action.</li> </ul>



**Figure 7 Risk Severity Ranking**

**Table 17 Risk severity and management response**

Risk severity	Management response
Priority	Immediate and detailed management action required. (e.g. stop or change activity)
High	Priority management action warranted
Moderate	Management action warranted
Low	Management action should be considered, particularly for low-level impacts that nevertheless occur on a continual basis

**Table 18 Landscape and visual risk assessment**

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level <sup>2</sup> pre-mitigation	Mitigation measure <sup>1</sup>	Risk level <sup>2</sup> post-mitigation	Management tools
1	Use of site Compound	Light vehicle parking	Visual aesthetic	Visual interruption of landscape due to construction vehicles and plant	D3 (High)	VL09	C2 (Mod)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction Environmental Control Map (ECM)
2		Installation of temporary fencing during compound establishment	Visual aesthetic	Long runs of fencing will visually interrupt landscape	D3 (High)	VL04	C2 (Mod)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM
4	Construction works	Multiple construction vehicles onsite	Visual aesthetic	Visual interruption of landscape due to construction vehicles and plant	D3 (High)	VL09	B2 (Low)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
5		Large spoil stockpiles present onsite	Visual aesthetic	Visual interruption of landscape due to stockpiles	E3 (High)	VL11 VL13	D2 (Mod)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level <sup>2</sup> pre-mitigation	Mitigation measure <sup>1</sup>	Risk level <sup>2</sup> post-mitigation	Management tools
6		Plant movement throughout site	Visual aesthetic	Visual interruption of landscape due to plant parked near boundaries of site	C2 (High)	VL09	B2 (Low)	Community and Stakeholder Engagement Plan Traffic and Access CEMP Traffic Control Plans Complaints Procedure Induction ECM
		Out of hours works	Light disturbance	Light disturbance to the nearby community and environmental conservation zone	C2 (High)	VL09 VL10	B2 (Low)	Community and Stakeholder Engagement Plan Complaints Procedure Induction ECM



## 6.3 Visual and landscape impact

Construction of the Stage 1 Development is likely to have temporary visual impacts for the nearest sensitive receivers in Luddenham and Bringelly. This would be largely due to the visual effect of earthworks and the presence of construction plant, equipment, stockpiling areas and storage areas. 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 19) is shown in Figure 8. Potential impacts on landscape visual settings specific to heritage values are dealt with in the European and Other Heritage and Aboriginal Cultural Heritage CEMPs.

Recycled water will be used to water landscaping. Management of this water is covered by the Soil and Water CEMP.

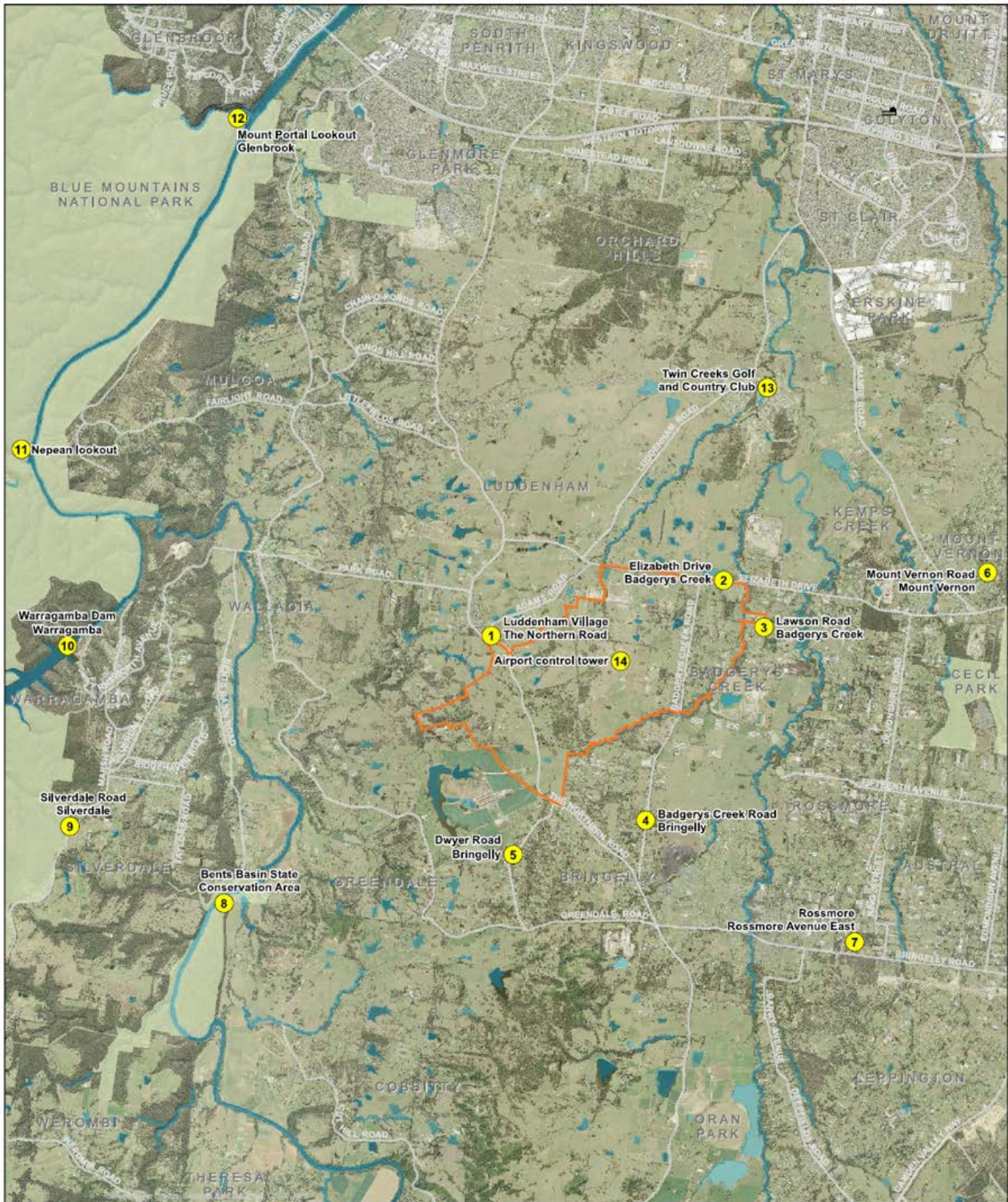
Visual sensitivity is based primarily upon the character, land use and quality of views from the surrounding view points and would be relatively consistent throughout each phase of the proposed development. The visual magnitude or effect of the airport would change based on the scale and visibility of activities undertaken during the construction of the Stage 1 development. A summary of the likely visual impacts from the nominated viewpoints (as shown in Figure 8) during construction of the Stage 1 development is provided below in Table 19.

**Table 19 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 building construction for the Visitor Centre and Site Accommodation works 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 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 Section 2.4.4), 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 a number of years.  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.
3 – Lawson Road, Badgerys Creek	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.  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.
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.

Viewpoint	Potential impacts
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	Broad views of the construction of the airport in the northern areas of Stage 1 are possible but from a distance of approximately 10 kilometres and therefore some loss of visual amenity is expected.  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.
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.





LEGEND

- Airport site
- Waterways
- Parks and reserves
- Roads
- Viewpoints



*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 8 Selected representative viewpoints**

## 7 Environmental control measures

A range of environmental requirements and control measures are identified in the various environmental documents, including the EIS, Submission Report and the Conditions. Specific measures and requirements to address impacts on visual and landscape are outlined in Table 20.

**Table 20 Visual and Landscape Management and Mitigation Measures**

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
URBAN DESIGN					
VL01	Site context analysis to inform the early stages of detailed design	Detailed design Pre-construction	To be incorporated into detailed design.	Design Manager Environmental Manager	EIS Table 28-19
VL02	Consultation with NSW Department of Planning and Environment and relevant local councils, on the detailed design of Stage 1 development	Detailed design Pre-construction	To be incorporated into detailed design.	Design Manager Environmental Manager	EIS Table 28-19
AIRPORT LIGHTING IMPACTS					
VL03	Airport lighting impacts will be mitigated through the use of low angle, cut off LED fixtures in the design of airport infrastructure, where practicable.	Detailed design Pre-construction	To be incorporated into detailed design.	Design Manager Environmental Manager	EIS Table 28-19
VISUAL DISTURBANCE AND CLUTTER FROM FENCING					
VL04	Avoiding long, straight continuous runs for fencing	Construction	Incorporate requirement into construction planning	Construction Manager Environmental Manager	EIS Table 28-19
VL05	Avoiding finish and colour that is reflective or brightly coloured	Construction	Incorporate requirement into design planning	Design Manager Environmental Manager	EIS Table 28-19

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
VL06	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.	Environmental Manager	EIS Table 28-19
VL07	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.	Environmental Manager	EIS Table 28-19
<b>VISUAL DISTURBANCE AND CLUTTER FROM CONSTRUCTION</b>					
VL08	Large grade cut and fill transitions will be avoided where practicable, particularly near the Airport Site boundary	Construction	Investigate other construction alternatives.	Environmental Manager Foreman	EIS Table 28-19
VL09	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.	Environmental Manager Foreman	EIS Table 28-19
VL10	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.	Environmental Manager Foreman	EIS Table 28-19
VL11	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.	Environmental Manager	EIS Table 28-19



ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
VISUAL SCREENING					
VL12	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.	Environmental Manager	EIS Table 28-19
VL13	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.	Environmental Manager	EIS Table 28-19



## 8 Roles and Compliance management

The key environmental management roles and responsibilities for the construction phase of the work are detailed in Section 4.5 of the SEMF.

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

Specific responsibilities for the implementation of this Visual and Landscape CEMP are detailed in the sections below.

### 8.1 External roles and responsibilities

#### **Environment Minister (or an SES employee in the Environment Department)**

- The Approver for the Biodiversity Offset Delivery Plan.
- On 24 August 2018, the Approver approved the Biodiversity Offset Delivery Plan as required by Condition 30 of the Airport Plan.
- The Environment Department receives notification regarding publication of annual reports under condition 39 of the Airport Plan.

#### **Infrastructure Minister (or an SES employee in the Infrastructure Department)**

- The Approver for the Construction Plan, CEMPs, the Community and Stakeholder Engagement Plan and the Sustainability Plan
- Approval for variation of an Approved Plan; and
- Review other matters (excluding Biodiversity Offset Delivery Plan).
- The Infrastructure Department is also responsible for administration and enforcement of the Airports Act, including the conditions under the Airport Plan.

#### **Airport Environment Officer**

The responsibilities of the Airport Environment Officer (AEO) include the following:

- Monitoring compliance with the AEPRs;
- Facilitate an understanding of the obligations of the AEPRs;
- Ensure the best possible outcomes are achieved;
- Complete site inspections to review monitoring requirements and completion of works;
- Review and comment on CEMPs, incidents, and remedial activities;
- Issue an environmental protection order in accordance with Part 7 of the AEPR; and
- Issue an infringement notice in response to an offence against the AEPR.

### 8.2 WSA Co roles and responsibilities

#### **WSA Co Executive General Manager**

Environmental responsibilities of the WSA Co Executive General Manager include (but are not limited to):

- Provide resources to ensure compliance with this CEMP is achieved;

- Mandate and ensure that environmental protection remains an integral element of all Project activities;
- Authorise resourcing with regards to the management of visual and landscape impacts.

### **WSA Co Environmental Manager**

The WSA Co Environment Manager is responsible for leading the planning, approvals and environmental function and is responsible for the ongoing requirements associated with the management of visual and landscape impacts as follows:

- Coordinate and manage the preparation of the Visual and Landscape CEMP (this Plan) and associated documents / plans / procedures;
- Liaise regularly with the Delivery Partner on environmental matters routinely and as required;
- Coordinate ongoing training in environmental awareness for all levels of WSA Co staff as required to implement this Visual and Landscape CEMP;
- Ensure that an appropriate environmental induction and training program is developed such that personnel are aware of their environmental responsibilities under relevant legislation and the contract, including the requirements associated with visual and landscape impact management;
- Ensure compliance of Stage 1 development activities with this Visual and Landscape CEMP;
- Implement, maintain, monitor, report and advise the Executive General Manager on all environmental matters including those associated with visual and landscape management;
- Liaise with the Infrastructure Department Environment Manager on environmental issues, including the written notification of non-conformances;
- Monitor the implementation of all environmental management requirements as detailed in this Plan;
- Provide direction and guidance on implementation of this WSA Co Visual and Landscape CEMP to all levels of the Project, including to the Delivery Partner and contractors as required;
- Ensure Project contractors comply with all relevant statutes, regulations, rules, procedures, standards and policies as detailed in this Visual and Landscape CEMP;
- Ensure the timely review and assessment of environmental monitoring, auditing and inspection outcomes to ensure identification and implementation of continual improvement with regards to environmental management;
- Overall reporting of the environmental performance of the Project.

### **WSA Co Site Environmental Officer**

The environmental responsibilities of the WSA Site Environmental Officer include (but are not limited to):

- Daily interaction and coordination with Project contractor representatives to ensure their environmental management requirements are discharged; and
- Work collaboratively with the WSA Co Environment Manager to ensure desired environmental outcomes are achieved.

### **Western Sydney Airport Delivery Partner roles and responsibilities**

The Western Sydney Airport Delivery Partner is responsible for the coordination and management of contractors ensuring all necessary planning approvals and environmental management activities and documentation are undertaken in accordance with WSA Co requirements.

In summary, the environmental requirements of the Western Sydney Airport Delivery Partner in relation to visual and landscape impact management are as follows:

- Ensure that this Visual and Landscape CEMP is effectively implemented by the contractor as required;
- Ensure that the required monitoring and reporting, including environmental auditing, is undertaken and reported to WSA Co as required;
- Ensure that all necessary planning approvals, licenses and permits are obtained, as required by this Visual and Landscape CEMP, prior to commencement of applicable works;
- Liaise with the WSA Co Environment Manager on visual and landscape related issues, including the written notification of non-conformances;
- Participate in regular workplace inspections to ensure compliance;
- Provide direction and guidance on implementation of the Visual and Landscape CEMP; and
- Liaise between contractors and relevant government stakeholders as required and provide notification / information where environmental incidents / events have occurred.

## **8.3 WSA Co contractor roles and responsibilities**

### **Contractor responsibilities**

The responsibilities of the relevant contractor with regards to the management of impacts associated with visual and landscape are:

- Identify resources required for implementation of the Visual and Landscape CEMP;
- Report to the WSA Co Delivery Partner as required to inform community and stakeholder notifications and to provide information where environmental incidents / events have occurred;
- Report to WSA Co Delivery Partner on environmental performance monthly or at other times as necessary;
- Ensure that all personnel receive appropriate induction training, including details of the environmental obligations associated with visual and landscape management;
- Ensure suppliers and subcontractors comply with requirements regarding visual and landscape management;
- Undertake weekly inspections, ensuring all works comply with relevant regulatory and Project requirements, including visual and landscape management objectives;
- Provide other information as required from time to time, in order to demonstrate to WSA Co that environmental management requirements are being met by the contractor;
- Program toolbox talks and daily pre-start meetings to include any relevant visual and landscape management requirements;
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to WSA Co;
- Stop activities where there is an actual or immediate risk of harm to the environment and advise WSA Co;
- Ensure steps are taken to rectify and prevent future incidents from occurring;
- Ensure that visual and landscape management controls are properly maintained and effective; and
- Carefully select suppliers and subcontractors based upon their ability to meet stated requirements.

## **9 Environmental inspection, monitoring and auditing**

Monitoring, inspection and auditing will be undertaken to measure effectiveness and facilitate continuous improvement of visual amenity and landscape management.

General environmental monitoring, inspection and auditing requirements are summarised in Table 16 of the SEMF.

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

### **9.1 Environmental inspections**

#### ***WSA Co environmental inspections***

Environmental site inspections will be undertaken by the WSA Co Environment Manager (or delegate) on a monthly basis to evaluate the effectiveness of environmental controls implemented by the contractor.

The monthly 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 of visual screening devices / structures and ensuring they remain effective and fit for purpose;
- 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 Co site environmental inspection will be recorded on a WSA Co Site Environmental Inspection Checklist with an accompanying photographic style inspection report.

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

#### ***Contractor environmental inspections***

As a minimum, the contractor is to undertake formal site environmental inspections at least weekly and the findings of the inspection documented on a suitable checklist or report. The contractor's weekly environmental site inspection includes triggers for visual amenity and landscape management. In addition, the contractor inspections are to be increased frequency for the inspection of visual amenity and landscape management measures following strong winds (in accordance with the Beaufort wind scale number – refer to Appendix B) winds and heavy rainfall (considered to be greater than 10 mm in any 24-hour period).

Refer to the SEMF for further details with regards to site environmental inspections and contractor requirements.

#### ***Pre-start inspection***

Prior to the commencement of works on each shift, an 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.

## 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 21.

**Table 21 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	Contractor

## 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.

## 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 below in Table 22.

**Table 22 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 39). Unless otherwise agreed in writing by an Approver, WSA Co will publish each of the annual reports on its website within three months of the 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 39).	Annually	WSA Co
Monthly compliance reporting	Provide WSA Co 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	Contractor
Complaints reporting	Recording of complaints and stakeholder interactions	As required	WSA Co and Contractor

## **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 Co Environment Manager will coordinate the necessary and relevant environmental training in conjunction with other training and development activities.

All competence, training and awareness requirements will be implemented as detailed in the SEMF. A summary of these requirements is provided in the sections below.

### **10.1 Environmental Project induction**

All Project personnel working on the Stage 1 development (including sub-contractors) are required to attend a compulsory Project induction that includes an environmental component prior to commencement of works on site, which will include:

- Dust minimisation requirements;
- General site cleanliness and housekeeping;
- Retention of vegetation in areas that are not impacted by construction; and
- Where lighting is required, managing light spill on receivers.

Short-term visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times. A visitor's induction will also be undertaken for visitors onsite for short periods as agreed with the WSA Co Safety Manager.

The WSA Co Environment Manager (or delegate) will be responsible for providing the environmental component of the Project inductions, ensuring that the environmental management requirements of this Plan are incorporated.

A WSA Co Induction and Training Register will be maintained at all times including the details of all personnel who have completed the WSA Co Project induction and any other pertinent environmental training and or awareness forums (workshops, presentations etc.).

### **10.2 Contractor specific site inductions**

In addition to the WSA Co Project induction, contractors will be required to develop and implement their own environmental training and induction program relevant to their scope of works. A record of all environment inductions is to be maintained by the contractor and provided weekly to WSA Co.

### **10.3 Toolbox talks, training and awareness**

Toolbox talks or similar will be one method of raising awareness and educating personnel on issues related to aspects of construction including environmental issues. The toolbox talks are used to ensure environmental awareness continues throughout construction.

Toolbox attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained as part of the Induction and Training Register.

Environmental issues associated with visual amenity and landscape management to be considered for toolbox talks may include (but are not limited to):

- The need to maintain a high standard of general housekeeping, ensuring the site is of a reasonable state with consideration given the current stage of work and level of construction activity;



- Complaints handling procedure – what to do if approach by a member of the public or stakeholder with a complaint or enquiry; and
- The need to be considerate of light-splash during night-time works where there is a potential for impact on sensitive receivers, including vehicle users on adjacent roadways.

For activities with high environmental risk (as identified through the risk assessment process undertaken as part of the CEMP), targeted environmental awareness training is to be provided.

The WSA Co Environment Manager will establish a schedule of environmental training.

## **10.4 Daily pre-start meetings**

The pre-start meeting is a tool for informing the workforce of the day's activities, safe work practices, environmental protection practices, work area restrictions, activities that may affect the works, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

Specifically, with regards to the Visual and Landscape CEMP, the daily pre-start forum can be used as an opportunity to discuss the following:

- Forecast of work activities that may have a higher than usual impact on visual amenity and reiterate mitigation measures and controls;
- Ideas for additional visual and landscape screening management measures that could be considered during the works;
- Planning of works to manage impacts potentially associated with a specific community / local event (if required); and
- The need to be considerate of light-splash during night-time works where there is a potential for impact on sensitive receivers, including vehicle users on adjacent roadways.

## **11 Communications and complaints management**

All communications and complaints management will be implemented and managed in accordance with Section 7 of the SEMF and the Community and Stakeholder Engagement Plan.

### **11.1 Complaints management**

A Complaints and Enquiries Procedure, consistent with AS 4269: Complaints Handling, has been developed for the work, in accordance with the requirements of Condition No. 15 (Airport Plan, Section 3.10.2).

All community inquiries and complaints related to the construction activities will be referred to the 24-hour community information line (1800 972 972). A postal address ((PO BOX 397 NSW 1871) and email address (info@wsaco.com.au) has been provided for receipt of complaints and enquiries. The telephone number, the postal address and the email address will be published in newspapers circulating in the local area prior to the commencement of construction and is provided on the Project website.

The Community and Stakeholder Engagement team will take the lead in responding to complainants. Attempts will be made to resolve all complaints in accordance with the Community and Stakeholder Engagement Plan. Timeframes for initial responses to complaints are outlined below.

- Telephone complaints received during work hours will be provided a response within two hours. Complaints received outside of works hours will be provided a response within two hours of the next working day; and
- Email and postal complaints will be responded to within two (2) business days of receipt.

The aim is to resolve the complaint at the first point of contact, by providing a solution or negotiating an agreed course of action. The complainant will be provided updates on the progress of their complaint and a written response will be provided within 10 working days if the complaint cannot be resolved by the initial or follow up verbal response.

The community contacts database will be used as a complaints register. The database will be used to record, track and respond to complaints efficiently. Information on all complaints received, the means by which they were addressed and whether resolution was reached with or without mediation, shall be included in the construction compliance reports.

The WSA Co Environment Manager in consultation with the relevant contractor where required, will apply an adaptive approach to ensure that corrective actions are applied in consultation with the appropriate construction staff to allow modifications and improvements in the management of any environmental issues resulting in community complaints.

### **11.2 Community and stakeholder communication**

Construction of the Stage 1 Development will involve a number of interactions with local residents, local councils and NSW Government agencies, among others. To ensure a consistent approach with regards to community and stakeholder management, WSA Co have developed a Community and Stakeholder Engagement Plan to address broader stakeholder engagement objectives during construction and to coordinate engagement activities for all environmental management issues during construction. For further detail refer to the Community and Stakeholder Engagement Plan and Section 7.3 of the SEMF.

## **12 Environmental incidents, non-conformance 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. The management and reporting of environmental incidents shall be undertaken by the appropriate person as detailed in Section 6 of the SEMF.

It should be noted that the management and reporting requirements associated with major accidents and emergency situations (for example a major chemical or hydrocarbon spill, fuel storage tank failure, surface fires, sediment basin failure) should be undertaken in accordance with the WSA Co Emergency Preparedness and Response Procedure.

## 13 Review and improvement

### 13.1 Continuous improvement

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement. This process is detailed further in the SEMF.

The continuous improvement process is designed to:

- Identify areas of opportunity for improvement of environmental management and performance;
- Determine the cause or causes of non-conformances and deficiencies;
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies;
- Verify the effectiveness of the corrective and preventative actions;
- Document any changes in procedures resulting from process improvement; and
- Make comparisons with objectives and targets.

### 13.2 Change management

Further refinements to the Stage 1 Development may result from detailed design refinement or changes identified during the construction phase of the works. Any design changes or changes in scope of works will be communicated to the WSA Co Environmental Manager.

WSA Co would be responsible for assessing any potential inconsistencies with the Airport Plan and formally seeking approval from the Infrastructure Minister for any project modifications as required, prior to commencement of the scope of works in question.

### 13.3 Variation of approved plans

WSA Co will seek approval for variation of an Approved Plan from the Infrastructure Minister or an SES Officer (SES employee under the *Public Service Act 1999*) in the Infrastructure Department by submitting a version of the plan with the proposed variation clearly marked. All variations to an Approved Plan must be approved in accordance with Condition 41 of the Airport Plan. As each package of work is developed the SEMF and associated CEMPs documents will be reviewed and where applicable updated to ensure the environmental aspects of the work package are managed. Where necessary the document will be updated and submitted for approval in accordance with the Airport Plan prior to the work commencing. A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure, including update of the publicly available copy of the document on the Project website.

The Infrastructure Minister or an SES Officer in the Infrastructure Department may vary an Approved Plan or request WSA Co prepare and seek approval for a specified variation if the Infrastructure Minister or an SES Officer in the Infrastructure Department believes on reasonable grounds that:

- A Condition of Approval has been contravened and the nature of the contravention is relevant to the subject matter of the Approved Plan;
- The variation will address the contravention; and
- WSA Co will comply with any such request within three months.

## **13.4 Review of approved plans**

WSA Co will review each approved plan at least every five years (from the date of approval) as required by the Airport Plan. A review will also be completed annually to ensure that it continues to meet the approval criteria. Details of the review will be included in the annual report (refer to Section 8.3 of the SEMF). 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.

WSA Co may initiate reviews of Approved Plans at other times in response to improvement opportunities, non-conformances 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 Co Approved Plan and subsequent training and awareness (refer to Section 5 of the SEMF).

## 14 References

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. *Western Sydney Airport Environmental Impact Statement, 2016*

Standards Australia 2001. *Australian and New Zealand environmental management international standard (AS/NZS ISO 14001)*



# Appendix A

## Visual and Landscape CEMP Consultation

## A1 Stakeholder consultation – Department of Environment and Planning

**Table A1 NSW Department of Planning and Environment CEMP consultation summary**

Input	Response / where addressed
<b>Consultation prior to Rev 0 approval</b>	
<p>A response to an invite for comment on the Visual and Landscape CEMP was received from the NSW Department of Planning and Environment (NSW DPE) on 26 July 2018.</p> <p>The relevant comments were addressed and considered in the preparation of the CEMP.</p> <p>Details with regards to how the NSW DPE comments were addressed are provided below.</p> <p>A letter acknowledging receipt of the review comments from NSW DPE and how the comments were addressed was prepared and issued from WSA Co to NSW DPE in September 2018.</p>	
<p><b>Table 1</b> - Query if Greater Sydney Commission should now be included separately (although construction visual and landscaping likely not a key priority).</p>	<p>The consultation requirements addressed in Section 1.5 (and this appendix) of the CEMP meet the requirements of the Airport Plan (and as detailed in the EIS).</p> <p>All additional stakeholders outside of the required stakeholders will be managed through the process detailed in the WSA Co Community and Stakeholder Engagement Plan.</p>
<p><b>Table 1</b> - Suggest including local community or affected sensitive receivers/ businesses.</p>	<p>The consultation requirements addressed in Section 1.5 (and this appendix) of the CEMP meet the requirements of the Airport Plan (and as detailed in the EIS).</p> <p>All additional stakeholders outside of the required stakeholders will be managed through the process detailed in the WSA Co Community and Stakeholder Engagement Plan, including the provision of appropriate consultation and community notification forums.</p>
<p><b>Table 1</b> - Consider including RMS – given the early earthworks include roadworks and bridge structures, the agency has an interest in achieving good urban design, landscaping and amenity.</p>	<p>Whilst consultation with the RMS was not a requirement of this Visual and Landscape CEMP, they have been consulted with regards to the Traffic and Access CEMP and are also participants of the <i>Roads and Rail Forum</i> which meet monthly. Any ongoing consultation requirements with RMS will likely be raised and addressed through the Roads and Rail forum.</p>
<p><b>Table 2</b> - Additional guidelines may include the following:</p> <ul style="list-style-type: none"> <li>• AS4282-1997 Control of the obtrusive effects of outdoor lighting</li> <li>• Technical guideline for Urban Green Cover in NSW</li> <li>• Crime Prevention through Environmental Design (CPTED) (Queensland Government, 2007)</li> <li>• Better Placed - An integrated design policy for the built environment of New South Wales (Government Architect)</li> <li>• Sydney Green Grid (Government Architect)</li> </ul>	<p>Section 4.1 of the CEMP (Table 7) has been updated to include consideration of the referenced guidelines documents.</p>

Input	Response / where addressed
<p><b>Table 2</b> - RMS has also published urban design guidelines for road design, which may be relevant for the EEW:</p> <ul style="list-style-type: none"> <li>• <i>Beyond the Pavement: urban design policy, procedures and design principles (RMS, 2014)</i></li> <li>• <i>Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW (RMS, 2012).</i></li> </ul>	<p>Section 4.1 of the CEMP (Table 7) has been updated to include consideration of the referenced guidelines documents.</p>
<p><b>Consultation prior to Rev 1 approval</b></p>	
<p>A request to provide comments on the CEMPs (Revision 0) was submitted to the NSW Department of Environment and Planning (DPE) on 30th October 2018. The request included an outline of the Visitor Centre and Site Accommodation phase and Material Importation phase, i.e. the Visitor Centre, Site Accommodation and Material Importation.</p> <p>No response to the invitation for comment on the Visual and Landscape CEMP was received from NSW DPE as noted below.</p>	
<p>No comments received from NSW DPE regarding the update of this Visual and Landscape CEMP.</p>	<p>Ongoing consultation to be undertaken in accordance with Section 1.5 of the Visual and Landscape CEMP and the Community and Stakeholder Engagement Plan.</p>

## A2 Stakeholder consultation – The Government Architect

**Table A2 Government Architect consultation summary**

Input	Response / where addressed
<p><b>Consultation prior to Rev 0 approval</b></p>	
<p>A response to an invite for comment on the Visual and Landscape CEMP was received from the Government Architect on 26 July 2018.</p> <p>The relevant comments were addressed and considered in the preparation of the CEMP.</p> <p>Details with regards to how the Government Architect comments were addressed are provided below.</p> <p>A letter acknowledging receipt of the review comments from the Government Architect and how the comments were addressed was prepared and issued from WSA Co to the Government Architect in September 2018.</p>	
<p><i>Note - initial comments are provided without knowing the detail of how the works relate to initial works or master planning.</i></p>	<p>Note</p>
<p><i>Ensure the Plans have understanding and consideration of other existing neighbourhoods, existing green infrastructure networks and any areas of public domain and potential impact to these</i></p>	<p>This has been considered in the environmental impact assessment phase (EIS) and any associated impacts have been reflected in the mitigation measures and controls to be implemented during the construction and detailed design phase.</p>
<p><i>Ensure design and location of early infrastructure works:</i></p> <ul style="list-style-type: none"> <li>• <i>Supports the provision of network of open space, walking and cycling opportunities as a key part of the transport and access plan for the wider site and surrounding area master plan</i></li> <li>• <i>Does not provide visual or other impacts to surrounding areas including neighbourhoods or local centres</i></li> </ul>	

Input	Response / where addressed
<p>Support agreed road and transport hierarchy for the wider area</p>	
<p>Consideration of the detailed evaluation criteria, measures and methodology being undertaken to assess and mitigate impacts, either visual or physical – whether temporary impacts for life of construction, or beyond.</p>	
<p>Opportunities - consideration of opportunities to embed green infrastructure from the beginning of the project in accordance with the principles of GANSW Greener Places Policy</p>	<p>This is detailed further and addressed in the WSA Co Sustainability Plan.</p>
<p>A key issue is Context Aware Development which includes the following considerations from a green infrastructure perspective:</p> <ul style="list-style-type: none"> <li>• Protection of primary natural water systems</li> <li>• Consideration and protection of secondary natural water system</li> <li>• Protection of remnant vegetation which includes riparian corridors, nature reserves and conservation areas</li> <li>• Protection of ecological lands</li> <li>• Enabling linkages and networks of remnant vegetation</li> <li>• Draw on the indigenous meaning of place</li> <li>• Ensure that works are consistent with the vision for the Western Parkland City concept</li> <li>• Ensure that stormwater treatment, urban canopy cover, biodiversity and other environmental system are considered at a precinct level</li> <li>• Ensure that bridges are designed in such a way that they contribute to the legibility of the public open space</li> <li>• Consideration of planting at the outset ie that early earthworks facilitate diverse planting structure</li> <li>• Consideration of consolidated precinct wide stormwater treatment strategy</li> </ul>	<p>Where relevant, this is detailed further and addressed in the WSA Co Sustainability Plan.</p>
<p><b>Consultation prior to Rev 1 approval</b></p>	
<p>A request to provide comments on the CEMPs (Revision 0) was submitted to the Government Architect on 30th October 2018. The request included an outline of the Visitor Centre and Site Accommodation phase and Material Importation phase, i.e. the Visitor Centre, Site Accommodation and Material Importation.</p> <p>No response to the invitation for comment on the Visual and Landscape CEMP was received from the Government Architect as noted below.</p>	
<p>No comments received from the Government Architect regarding the update of this Visual and Landscape CEMP.</p>	<p>Ongoing consultation to be undertaken in accordance with Section 1.5 of the Visual and Landscape CEMP and the Community and Stakeholder Engagement Plan.</p>

### A3 Stakeholder consultation – Liverpool City Council

**Table A3 Liverpool City Council consultation summary**

Input	Response / where addressed
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<b>Consultation prior to Rev 0 approval</b>	
A response to an invite for comment on the Visual and Landscape CEMP documentation was received from Liverpool City Council on 27 July 2018 which did not contain any specific comments relating to the preparation of the Visual and Landscape CEMP. This is reflected below.	
<i>No comments related to the Visual and Landscape CEMP were provided.</i>	Ongoing consultation to be undertaken in accordance with Section 1.5 of the Visual and Landscape CEMP.
<b>Consultation prior to Rev 1 approval</b>	
A request to provide comments on the CEMPs (Revision 0) was submitted to Liverpool City Council on 30th October 2018. The request included an outline of the Visitor Centre and Site Accommodation phase and Material Importation phase, i.e. the Visitor Centre, Site Accommodation and Material Importation.	
No response to the invitation for comment on the Visual and Landscape CEMP was received from Liverpool City Council as noted below.	
<i>No comments received from the Liverpool City Council regarding the update of this Visual and Landscape CEMP.</i>	Ongoing consultation to be undertaken in accordance with Section 1.5 of the Visual and Landscape CEMP and the Community and Stakeholder Engagement Plan.

## **A4 Stakeholder consultation – Penrith City Council**

**Table A4 Penrith City Council consultation summary**

<b>Input</b>	<b>Response / where addressed</b>
<b>Consultation prior to Rev 0 approval</b>	
A response to an invite for comment on the CEMP documentation was received from Penrith City Council on 24 July 2018 which included a single comment regarding water quantity usage during construction, which is considered pertinent to the preparation of this Visual and Landscape CEMP. This is reflected in Table A4 below. A letter acknowledging receipt of the review comments from Penrith City Council for the overall CEMP documentation and how the comments were addressed was prepared and issued from WSA Co to Penrith City Council in September 2018.	
The visual and landscape section of the strategy has no reference to Penrith City Council's Local Environmental Plan 2010 and Penrith Development Control Plan 2014. There are scenic landscape value considerations and landscape character objectives that are relevant considerations for the proposal and any works within the Penrith Local Government Area, or immediately adjoining the Penrith Local Government Area, should have specific regard to these standards and objectives.	Table 7 (Relevant guidelines and standards) has been updated to include reference to the Penrith Local Environmental Plan 2010. Reference to the Development Control Plan at this stage has not been included in the CEMP as it is considered that the scope of works is adequately covered by other legislation and guidelines. It is considered that the CEMP has addressed all relevant standards and objectives as required under the Airport Plan and EIS, which are considered consistent with the objectives and outcomes of the local level requirements.
<b>Consultation prior to Rev 1 approval</b>	
A request to provide comments on the CEMPs (Revision 0) was submitted to Penrith City Council on 30th October 2018. The request included an outline of the Visitor Centre and Site Accommodation phase and Material Importation phase. No response to the invitation for comment on the Visual and Landscape CEMP was received from Penrith City Council as noted below.	

Input	Response / where addressed
<p><i>No comments received from the Penrith City Council regarding the update of this Visual and Landscape CEMP.</i></p>	<p>Ongoing consultation to be undertaken in accordance with Section 1.5 of the Visual and Landscape CEMP and the Community and Stakeholder Engagement Plan.</p>



# 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