Western Sydney Airport

Air Quality
Construction Environmental Management Plan

March 2024

Western Sydney Airport

Document Control

File Number	Document Name	Revision
WSA00-WSA-00400-EN-PLN-000006	WSA Air Quality CEMP	5D

Revision History

Revision	Date	Description	Author	Reviewer
0	24/09/2018	Approved for Early Earthworks		
1	14/12/2018	Revision update to include the Experience Centre and Site Accommodation phase and Material Importation	WSA	S Reynolds
2	18/12/2019	Approved for Bulk Earthworks	WSA	S Reynolds
3	28/10/2021	Approved for Terminal Works	WSA	L Laughton
4	27/07/2022	Updated to reflect Commonwealth and Stakeholder comments. Approve for Use	WSA	L Laughton
5D	28/03/2024	Updated to include Stage 1 Cargo Works, Standalone facilities and Testing and Commissioning.	WSA	L. Laughton

Plan Authorisation

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

Terms and Definitions

Item	Definition
ABC	Airport Building Controller
ABC Regulations	*Airports (Building Control) Regulations 1996* (Cth)
ACP	Airside Civil and Pavements
AEO	Airport Environment Officer (person appointed under the AEPR 2.01)
AEPR	*Airports (Environment Protection) Regulations 1997* (Cth)
AHD	Australian Height Datum
Airport	Western Sydney International (Nancy-Bird Walton) Airport (WSI). NB: The Airport is referred to in the Airports Act as Sydney West Airport and is also commonly known as Western Sydney Airport
Airport Lease	A lease for the Airport granted under section 13 of the Airports Act
Airport Plan	Means the Airport Plan for the Airport Site as determined by the Infrastructure Minister under section 96B of the Airports Act. The latest Airport Plan was determined in September 2021 and authorises Rail Development on the Airport Site.
Airport Site	The site for Sydney West Airport as defined by the Airports Act
Airports Act (or 'the Act')	*Airports Act 1996* (Cth)
ALC	Airport Lessee Company (the Company granted a lease over the Airport Site)
Ancillary Development	An 'ancillary development' as set out in section 96L of the Airports Act
Approved Plan	A Plan approved in accordance with the Airport Plan Conditions of Approval
Approver	For Condition 30 of the Airport Plan (Biodiversity Offset Delivery Plan) and any matter relating to the Biodiversity Offset Delivery Plan – the Environment Minister or an SES employee in the Environment Department For other matters – the Infrastructure Minister or an SES employee in the Infrastructure Department
Apron	The part of an airport used for: a. the purposes of enabling passengers to embark/disembark an aircraft; b. loading cargo onto, or unloading cargo from, aircraft; and/or c. refuelling, parking or carrying out maintenance on aircraft
ARFFS	Aviation Rescue and Firefighting Service
AS/NZS	Australian Standard / New Zealand Standard
Associated Site	An 'associated site for Sydney West Airport' as set out in section 96L of the Airports Act
ATC	Air Traffic Control
ATCT	Air Traffic Control Tower
AWS	Automatic Weather Station
BEC	Bulk Earthworks Contract
Bulk Earthworks	The large-scale earthworks required to flatten the Stage 1 Airport Development Area in preparation for further construction works as described in section 6 of the Construction Plan
CASA	Civil Aviation Safety Authority
CASR	*Civil Aviation Safety Regulations 1998* (Cth)
CEMF	Contractor Environmental Management Framework

Item	Definition
CEMP	Construction Environmental Management Plan (required under Section 3.11.2 of the Airport Plan)
CIP	Cumulative Impacts Plan
CIZ	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
CO	Carbon Monoxide
Condition	A condition set out in Part 3 of the Airport Plan in accordance with section 96C of the Airports Act
Construction Period	The period from the date of commencement of Main Construction Works in any part of the Airport Site until the date of commencement of Airport Operations
CSEP	Community and Stakeholder Engagement Plan (required under Condition 15 in Section 3.11.2 of the Airport Plan)
CSR	Combined Services Route
D&C	Design and Construct
DAWE	Department of Agriculture, Water and the Environment (Cth)
DCCEEW	Department of Climate Change, Energy, the Environment and Water (formerly part of DPE)
DCJ	Department of Communities and Justice
DCS	Department of Customer Service
DFSI	Department of Finance, Services and Innovation (Cth)
DIPNR	NSW Department of Infrastructure, Planning and Natural Resources (now DPE)
DITRDCA	Department of Infrastructure, Transport Regional Development ,Communications and the Arts (Infrastructure Department) (Cth)
DPC	NSW Department of Premier and Cabinet
DPE	NSW Department of Planning and Environment (now split into DCCEEW and DPHI)
DPHI	Department of Planning Housing and Infrastructure (formerly part of DPE)
DPI	Department of Primary Industries (including Agriculture NSW, Fisheries NSW and NSW Office of Water) (now DPE)
ECM	Environmental Control Map
Ecologically 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)
ECZ	Environmental Conservation Zone
EES	The Environment, Energy and Science (EES) group within the Department of Planning, Industry and Environment, formerly known as Office of Environment and Heritage
EEW	Early Earthworks
EIS	Environmental Impact Statement prepared for WSI under the EPBC Act
EMS	Environmental Management System
Environment Minister	The Minister responsible for the EPBC Act
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPA	NSW Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
ESA	Environmentally Sensitive Area

Item	Definition
ESCP	Erosion and Sediment Control Plan
ETC	Enterprise Technology Contract
EWMS	Environmental Work Method Statement
FASL	Final Airport Site Layout
GSE	Ground Support Equipment
Ha	Hectares
Infrastructure Department	The Department responsible for administering the Airports Act, currently the Australian Government Department of Infrastructure, Transport Regional Development, Communications and the Arts (DITRDCA)
Infrastructure Minister	The Minister responsible for the Airports Act from time to time
ISO 14001	AS/NZS ISO 14001:2016 Environmental Management Systems
Km	Kilometres
LCB	Landside Civil and Buildings
LDP	Land Disturbance Permit
LEP	Local Environmental Plan
M12 on Airport Works	The physical works and infrastructure, including temporary works and infrastructure which the M12 Authority, its contractors and nominees plan, investigate, design, construct, install, commission, test, accept, complete, maintain, operate or repair within the Airport Site
Main Construction Works (MWC)	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
MI	Material Importation
MTIP	Major Transport and Infrastructure Projects (Cth) - a Division of DITRDCA
NEPM-AQM	*National Environment Protection (Ambient Air Quality) Measure*
NERDDC	National Energy Research Development and Demonstration Council
Non-conformance	Failure to conform to the requirements of the Airport Plan including Approved Plans
NSWRA	NSW Reconstruction Authority
OU	Odour Unit
PM	Particulate Matter
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
Preparatory Activities	a. day to day site and property management activities; b. site investigations, surveys (including dilapidation surveys), monitoring, and related works (e.g. geotechnical or other investigative drilling, excavation, or salvage); 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); d. enabling preparatory activities such as: i. demolition or relocation of existing structures (including buildings, services, utilities and roads); 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 iii. application of environmental impact mitigation measures; and

Item	Definition
	e. any other activities which an Approver determines are Preparatory Activities for this definition
RAP	Remediation Action Plan
SEMF	Site Environmental Management Framework (Construction Plan, Appendix 2)
SEPP	State Environmental Planning Policy
SES	Senior Executive Service
SES Officer	An SES employee under the *Public Service Act 1999* (Cth)
Stage 1 Airport Development	The Airport development described in Part 3 of the Airport Plan
Stage 1 Cargo Works	The physical things and works which the Stage 1 Cargo Works Contractor will design, supply, construct, install, produce, or complete for WSA
Standalone Facilities	The physical things and works which include Commonwealth standalone facilities which Contractors will design, supply, construct, install, produce or complete for WSA and any other associated works required by agencies or for the Stage 1 Airport Development.
Sustainability Plan	Plan required by Condition 29, Section 3.11.5 of the Airport Plan
Sydney West Airport	The Airport. NB: this is the name used in the Act. The Airport is known as Western Sydney International (Nancy-Bird Walton) Airport, or, more commonly, Western Sydney International
TfNSW	Transport for New South Wales
the Project	Western Sydney Airport – Stage 1 Airport Development
TSP	Total Suspended Particulate Matter
TSS	Terminal and Specialty Services
WSA	WSA Co Limited (ACN 618 989 272), the entity responsible for constructing and operating the Airport in accordance with the Airport Plan. For the purposes of the Airports Act, WSA is the “Airport Lessee Company” for WSI.
WSI	Western Sydney International (Nancy Bird Walton) Airport. The Airport. NB: Under the Airports Act, the Airport is referred to as Sydney West Airport

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1. Introduction

1.1. Background/Context

This WSA Air Quality Construction Environmental Management Plan (Air Quality CEMP) (this Plan) has been prepared to satisfy the requirements of the Air Quality CEMP set out in the Conditions for the Stage 1 Development of the Western Sydney International (Nancy-Bird Walton) Airport (**WSI**) detailed in Section 3.11.2 of the Airport Plan. Specifically, Section 3.11.2 Condition 10(1) of the Airport Plan requires that an Air Quality CEMP be approved under the Airport Plan prior to the commencement of Main Construction Works.

This Air Quality CEMP provides the management approach and requirements (including environmental mitigation measures, controls, monitoring and reporting) for managing air quality during construction of the Stage 1 Airport Development. This Plan forms one of nine CEMPs which are collectively covered by the WSA Site Environmental Management Framework (SEMF). To ensure the environmental resources, responsibilities and management measures are implemented during the construction activities, the SEMF is contained within the Construction Plan (included as Appendix 2). The implementation of the Construction Plan, including the SEMF, sits adjacent to other Project level management plans including the Community and Stakeholder Engagement Plan (CSEP) 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. For the Air Quality CEMP, it is considered that the following management plan linkages can be made:

- Biodiversity CEMP – Management of dust and air emissions to prevent impact on adjacent vegetation and fauna habitat, including aquatic and terrestrial.
- Soil and Water CEMP – Management of dust emissions often requires the application and use of water for suppression to control release of particulate matter. The use of water on site will need to be undertaken in a manner to ensure the control of runoff is managed and receiving waters are not impacted by the works.
- Waste and Resources CEMP – Water usage is considered a key resource for the suppression and management of dust generation during the construction phase. Where possible, water required for dust generation will be sourced from the on-site storage dams. If the water within the storage dams are insufficient, alternative water sources would be sought as per the Waste and Resources CEMP.
- Visual and Landscape CEMP – Impact on the air quality has the potential to affect the visual amenity and landscape of the receiving environment, particularly with regards to dust generation.
- Community and Stakeholder Engagement Plan (CSEP) – it is anticipated that the surrounding community and stakeholders will be highly receptive to air quality impacts, particularly dust generation and the accumulation of particulate matter.
- Sustainability Plan– Management and reduction of greenhouse gas emissions and management of impacts regarding general health, wellbeing, and quality of life for surrounding communities. This linkage with the WSA Sustainability Plan extends to IS Rating discharge credit Discharge Dis-4 Air Quality, where compliance with this CEMP will ensure the project will meet credit requirements.

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

Table 1 highlights relationships and linkages of this Air Quality CEMP with other CEMPs and Plans, including key cross-referencing to the Airport Plan and Environmental Impact Assessment (EIS) requirements.

Table 1: Air Quality CEMP Relationship with other Plans

CEMP or Plan	Airport Plan Condition (3.11.2)	EIS Chapter Table 28: Management area	EIS Chapter Table 28: Mitigation measures
Aboriginal Cultural Heritage	11	28-12	28-13
Air Quality (this Plan)	**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 Plan	29	28-37	28-38
Traffic and Access	9	28-08	28-09
Visual and Landscape	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 10 of the SEMF.

The context of this Plan in relation to the WSA Environmental Management System (EMS) is presented in Figure 1.

1.2. Document Purpose

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

This Plan details the air quality management requirements that must be satisfied to demonstrate compliance with Condition 10 of Section 3.11.2 of the Airport Plan for the construction of the Stage 1 Airport Development.

Legal and other requirements are identified and maintained in a register within the SEMF (refer SEMF Appendix L). Specific air quality mitigation measures are included within this CEMP (refer Section 7) and are derived from the EIS (refer Section 4.4) and are required to be satisfied and assessed through risk assessment processes (refer Section 6.4).

Section 7, **Table 13** outlines how mitigation measures will be implemented, by who and at which phase of construction. Implementation of these measures is ensured through a program of work activities, monitoring, training and competence, inspection, auditing and reporting actions (refer Sections 10 and 11), with the responsibilities for implementation identified in Section 9. Continual improvement processes in relation to compliance with regulatory requirements are detailed in SEMF Section 9.2.

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

- Provision of details for the management and mitigation measures to be implemented, including timing and responsibilities;
- Ensuring the commitments of the Conditions (as set out in the Airport Plan) and regulatory requirements are met and satisfied by both WSA and contractors;
- Provision of process for monitoring implementation, reporting, and auditing of air quality related management and compliance related issues;
- Commitment to meeting the requirements of AS/NZS ISO 14001:2016 Environmental Management Systems, including the need for continual improvement;

- Provision of a process to be implemented for the management of complaints, for stakeholder engagement, and for the management of emerging environmental issues as they arise; and
- Provision of a system including procedures, plans and documentation for implementation by WSA personnel and contractors to enable Project completion in accordance with the environmental requirements.

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

1.3. WSA EMS Overview

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

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

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

The structure of the EMS for the Project is shown in Figure 1.

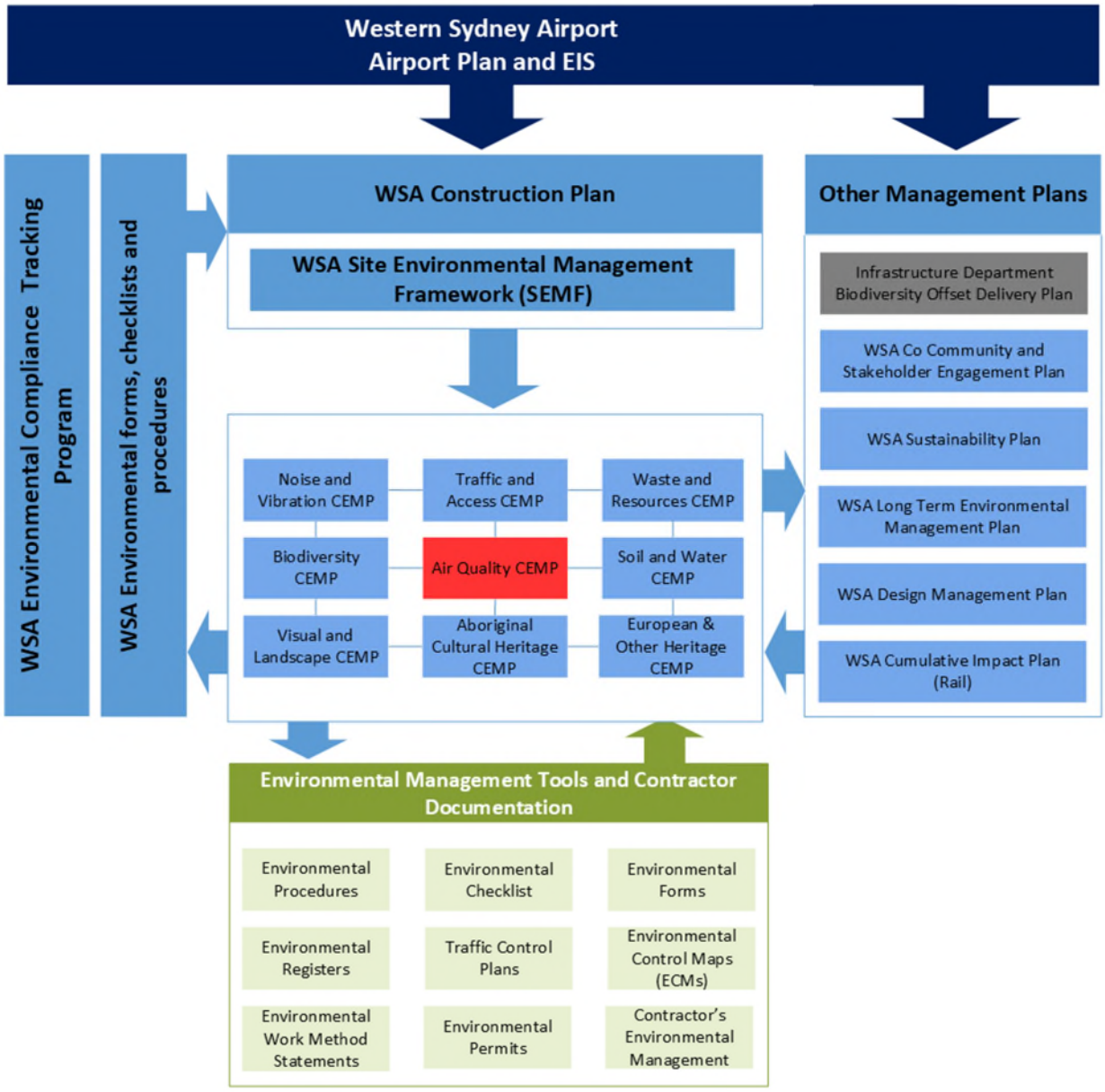

Figure 1: WSA EMS and CEMP context

1.4. Consultation Requirements of this Plan

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

Further, Airport Plan Condition 10(3) requires that this CEMP consider Table 28-10 of the EIS which states the CEMP should also be prepared in consultation with the NSW Environment Protection Authority (EPA) and NSW Health.

Consultation has been completed during the development of this CEMP during the review and update of Revision 0 and 1 in 2018, Revision 2 in 2019, Revision 3 in 2021, Revision 4 in 2022 and this Revision 5 in

2024. A summary of the stakeholder and government agency consultation completed and used to inform the review and finalisation of Revision 5 is presented in **Table 2**.

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

1.4.1. Consultation to Inform Revision 5

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

Details of the construction phases were described in the correspondence to provide context to stakeholders on the level of impact that would result from the next phase of construction activities. Upcoming Commercial and Commonwealth Development phase of construction captured in Revision 5 of the CEMPs include a Cargo facility and standalone facilities, .

On 04 March 2024, stakeholders were provided with the draft Construction Plan, the nine draft CEMPs and the CSEP to review and were invited to provide comment. A summary of the consultation is provided in **Table 2**.

Table 2: Air Quality CEMP Consultation

Activity	Date	Invitees	Summary
Consultation Summary			
Briefing presentation for stakeholders	20 February 2024	• Aboriginal Affairs NSW • Aerotropolis Community Commissioner • Department of Infrastructure, Transport, Regional Development, Communications and the Arts • NSW Department of Climate Change, Energy, the Environment and Water • Commonwealth Department of Climate Change, Energy, the Environment and Water • Department of Communities and Justice • Department of Customer Service (Building Commission, Fair Trading, Safework) • Department of Planning Housing and Infrastructure (Valuer General, Property, Western Parkland City Authority) • Liverpool City Council • NSW Health (Health Infrastructure, South Western Sydney and Nepean Blue Mountains Local Health District) • NSW Reconstruction Authority (NSWRA) • NSW Rural Fire Services • Penrith City Council • The Cabinet Office (NSW Department of Premier and Cabinet) • Transport for NSW	Stakeholders who joined the meeting were taken through a presentation outlining updates to the Construction Plan, CEMP and CSEP.
CEMPs provided to stakeholders for comment	04 March 2024		

1.5. Certification and Approval

This Air Quality CEMP has been reviewed and approved for issue by the WSA Environment Manager prior to submission to the Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts (Infrastructure Department) for approval, in accordance with the EIS Table 28-10 (refer **Table 8**).

1.6. Distribution

All WSA personnel and contractors will have access to this Air Quality CEMP via the Project document control management system. The Approved Plan must be published on WSA's website within one month of being approved and be available until the end of the Construction Period. An electronic copy can be found on the Project website https://westernsydney.com.au.

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

2. Scope of Works

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

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

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

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

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

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

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

3. Objectives and Targets

3.1. Objectives

The key objective of this Air Quality CEMP is to ensure that impacts associated with air quality are managed to within permitted air quality criteria as far as practicable, and best practice controls and procedures are implemented during construction activities to maintain ambient air quality at acceptable levels at sensitive receivers surrounding the Airport Site and minimise the risk of dust or odour nuisance impacts on neighbours.

To achieve this objective, the following will be undertaken:

- Ensure emissions are minimised from all plant, equipment and machinery;
- Ensure appropriate measures are implemented to address the management measures detailed in Table 28-10 and the mitigation measures Table 28-11 in Chapter 28 the EIS; and
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 4 of this Plan.

3.2. Targets and Performance Criteria

Targets and performance criteria have been established for the management of air quality impacts during the Project which have been, derived from the framework and performance criteria identified in the EIS Table 28-10, as presented below in **Table 3**.

Table 3: Air Quality Objectives, Targets and Performance Criteria

Objective	Target	Performance Criteria	Document Reference
Ensure ambient air quality is maintained at acceptable levels at sensitive receptor locations surrounding the Airport Site	Ensuring that air pollution remains within the accepted limits set out in the AEPR.	Not exceeding the criteria outlined in Section 8. No dust or odour related complaints	Air quality monitoring results Complaints database
Minimising the risk of dust or odour nuisance impacts on neighbours	Ensuring that air pollution remains within the accepted limits set out in the AEPR	No dust or odour related complaints Not exceeding the criteria outlined in Section 8	Air quality monitoring results Complaints database
Ensure emissions are minimised from all plant, equipment and machinery	Ensuring that air pollution remains within the accepted limits set out in the AEPR	All plant and equipment are maintained in accordance with manufacturers requirements Not exceeding the criteria outlined in Section 8	Plant and equipment logbooks

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

4. Environmental Legal and other Requirements

Relevant environmental legislation and other requirements are identified below.

4.1. Relevant Legislation and Guidelines

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

4.1.1. Legislation

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

Table 4: Principal Environmental Legislation and Relevance

Legislation or Regulation	Relevance	CEMP Compliance Provisions
Commonwealth		
Airports Act 1996 (Airports Act)	The Airports Act and AEPRs 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. The Airport Plan prepared under the Airports Act covers several environmental matters and details specific measures to be carried out for the purposes of preventing, controlling or reducing the environmental impact associated with the airport. Criminal offences may be applicable if these measures are not complied with.	This CEMP forms part of the overall WSA EMS which has as a target of full compliance with the Airport Plan. Relevant mechanisms within this CEMP that will contribute to this include but are not limited to: • Section 3.1 – Objectives • Section 4.5 – Airport Plan Conditions • Section 4.6 – Environmental Impact Statement Requirements • Section 6.4 – Risk assessment • Section 7 – Environmental control measures • Section 9 – Roles and responsibilities • Section 10 –Environmental Inspection, Monitoring, Auditing & Reporting • Section 10.5 – Review of Approved Plans • Section 10.6 – Environmental Incidents and complaints management
Airports (Building Control) Regulations 1996 (ABC Regulations)	Any conditions imposed on the ABC and ALC on their consents must be satisfied by the Applicant. These conditions are additional to any requirements identified under the CEMPs	This CEMP
Airports (Environment Protection) Regulations 1997 (AEPRs)	Imposes a general duty to prevent or minimise environmental pollution once an airport lease is granted.	Refer to commentary on Airports Act above.

Legislation or Regulation	Relevance	CEMP Compliance Provisions
	Promotes improved environmental management practices at airports. Includes provisions setting out definitions, acceptable limits and objectives for air quality, as well as monitoring and reporting requirements.	
National Environment Protection (Ambient Air Quality) Measure (NEPM-AAQ)	Sets the national health-based air quality standards for six air pollutants (carbon monoxide, nitrogen dioxide, sulphur dioxide, lead, ozone and PM_{10}) and includes advisory reporting standards for PM2.5.	Section 7 – Environmental Control Measures Section 8.1 – Air Quality Criteria Section 10 – Environmental Inspection, Monitoring, Auditing and Reporting
National Environment Protection (Air Toxics) Measure National Environment Protection (National Pollutant Inventory) Measure 1998	Sets a nationally consistent approach to monitoring (by reference to 'investigation levels') for five air toxics: benzene, formaldehyde, toluene, xylenes and benzo (a) pyrene (as a marker for polycyclic aromatic hydrocarbons). These are not compliance standards but are for use in assessing the significance of the monitored levels of air toxics with respect to the protection of human health.	Section 8.1 – Air Quality Criteria Section 10 – Environmental Inspection, Monitoring, Auditing and Reporting Note: Monitoring of these five air toxins may not be relevant, however, this summary is provided as a trigger for continued consideration of this requirement as delivery of the Airport progresses.
National Environment Protection (National Pollutant Inventory) Measure	The primary goals are to: (a) collect a broad base of information on emissions and transfers of substances and (b) disseminate information to all sectors of the community. This NEPM covers a variety of air pollutants.	Refer to Sustainability Plan
National Greenhouse and Energy Reporting Act 2007	An Airport Lessee Company (ALC) is required to register and report its operational greenhouse gas emissions attributable to the activities over which it has operational control. This is because it is expected that its emissions will exceed relevant thresholds. This may also apply to the construction contractor and other contractors or users of the airport (e.g. airlines).	Section 7 – Environmental Control Measures
Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 and the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995	This Act and Regulations impose controls on the manufacture, import, export and management of substances that deplete ozone in the atmosphere including CFCs 11, 12, 113, 114 and halons 1211, 1301 and 2402.	Section 7 – Environmental Control Measures
NSW		
Environmental Planning and Assessment Act 1979 (EP&A Act)	Objects of the Act include the encouragement of proper management and conservation of natural and artificial resources and the promotion of the orderly and economic use and development of land in NSW. The EP&A Act also provides for the making of environmental planning instruments including State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs), which include land use controls, such as development standards applicable to the land within the area covered by each instrument.	This Project has been authorised under the Airports Act; however, a range of matters arising from the EP&A Act have been considered. Section 7 – Environmental Control Measures
Liverpool Local Environmental Plan 2008 (Liverpool LEP)	The Liverpool LEP provides local environmental planning controls and standards for land in the Liverpool LGA in accordance with the standard environmental planning instrument under Section 3.20 of the EPA Act.	Section 7 – Environmental Control Measures
Ozone Protection Act 1989	This Act regulates or prohibits the manufacture, sale, distribution, conveyance, storage,	Section 7 – Environmental Control Measures

Legislation or Regulation	Relevance	CEMP Compliance Provisions
	possession and use of ozone-depleting substances in NSW.	
Penrith Local Environmental Plan 2010 (Penrith LEP)	The Penrith LEP provides local environmental planning controls and standards for land in the Penrith LGA in accordance with the standard environmental planning instrument under section ~~33A~~3.20 of the EPA Act.	Section 7 – Environmental Control Measures
Protection of the Environment Operations Act 1997 (POEO Act), and the Protection of the Environment Operations (General) Regulation 2022	The POEO Act provides a range of controls regarding air quality including requirements to maintain plant and equipment in proper and efficient condition and to operate plant and equipment in a proper and efficient manner. This includes the means of processing, handling, moving, storage and disposal of materials.	Section 7 – Environmental Control Measures
POEO Act and Protection of the Environment Operations (Clean Air) Regulation 2010 (Clean Air Regulation)	The Clean Air Regulation prescribe standards for certain groups of plant and premises to regulate industry's air emissions and impose requirements on the control, storage and transport of volatile organic liquids.	Section 7 – Environmental Control Measures
State Environmental Planning Policy (Precincts – Western Parkland City) 2021	Formerly the Aerotropolis SEPP, this SEPP was made in accordance with division 3.3 of the EP&A Act and provides planning controls for development within the Western Sydney Aerotropolis (the land immediately surrounding WSI). The SEPP overrides any LEP provisions that apply to that land.	Section 7 – Environmental Control Measures
Work Health and Safety Act 2011 (WHS Act) & Work Health and Safety Regulation 2017(WHS Regulation)	The WHS Act provides a framework to protect the health, safety and welfare of all workers and others in relation to NSW workplaces and work activities. The WHS Regulation sets out specific requirements for particular hazards and risks, such as noise, machinery, and manual handling.	WSA Work Health & Safety (WHS) Plan

4.1.2. Guidelines and Standards

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

Table 5: Relevant Guidelines and Standards

Guidelines and Standards	Relevance to this CEMP
AS 3580.1.1-2007 Methods for Sampling and Analysis of Ambient Air – Guide to Siting Air Quality Monitoring Equipment	Section 10.2 - Stage 1 Airport Development Air Quality monitoring program
AS 3580.10.1-2003 Methods of Sampling Analysis of Ambient Air	Section 10.2 - Stage 1 Airport Development Air Quality monitoring program
AS/NZS 3580.10.1:2016 - Methods for sampling and analysis of ambient air Method 10.1: Determination of particulate matter—Deposited matter—Gravimetric method.	Section 10.2 - Stage 1 Airport Development Air Quality monitoring program
Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA, 2022)	Section 8.1 - Air Quality criteria
Managing particles and improving air quality in NSW (EPA 2013)	Section 6.3 – Cross Package Impacts

Guidelines and Standards	Relevance to this CEMP
Western Sydney Aerotropolis Development Control Plan 2022 Phase 2	Section 4.1 – Relevant Environmental Legislation and Guidelines
NERDDC 1988, Air Pollution from Surface Coal Mining: Measurement, Modelling and Community Perception, Project No. 921, National Energy Research Development and Demonstration Council, Canberra	Section 8.1 - Air Quality criteria

4.2. Approvals and other Specifications

Approvals that are relevant to air quality management and this Plan are summarised in **Table 6**.

Table 6 Approvals Relevant to Air Quality Management

Approvals	Relevance to this CEMP
Western Sydney Airport Plan	Provides the Conditions of Approval relevant to air quality management during construction.
Western Sydney Airport EIS	The requirements of air quality management to be considered and addressed during the construction phase of the Stage specifically EIS Table 28-10.

In addition to the above approvals, the following specifications are relevant to air quality management and this CEMP:

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

4.3. Airport Plan Conditions

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

Table 7: Conditions Relevant to Air Quality Management

Condition No.	Condition	Timing	Responsibility	Document Reference
1.4	The Site Occupier must ensure that no CEMP is inconsistent with the approved Construction Plan	Ongoing	WSA	This CEMP
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	Ongoing	WSA	This CEMP and the Construction Plan

Condition No.	Condition	Timing	Responsibility	Document Reference
	condition 49 (Variation of Approved Plans) prior to commencement of any new phase.			
5.3	In carrying out a Preparatory Activity for the Airport Stage 1 Development, the Site Occupier must: a) implement any plan approved in accordance with sub condition (1) or (2), except to the extent that the plan is inconsistent with any subsequently approved CEMP or the approved Construction Plan; and b) not act inconsistently with any approved CEMP or the approved Construction Plan.	Construction Works	WSA	SEMF
10.1	The Site Occupier must not: a) Commence Main Construction Works until an Air Quality CEMP has been prepared and approved in accordance with this condition; or b) Carry out any development described in Part 3 of the Airport Plan inconsistently with the approved Air Quality CEMP	Prior to Main Construction Works	WSA	This CEMP
10.2	The Site Occupier must: a) Prepare, and b) Submit to an Approver for approval; an Air Quality CEMP in relation to the carrying out of the developments which are part of the Airport Stage 1 Development.	Prior to Main Construction Works	WSA	This CEMP
10.3	The criteria for approval of the Air Quality CEMP are that an Approver is satisfied that: a) in preparing the Air Quality CEMP, the Site Occupier has considered Table 28-10 in Chapter 28 of the EIS; and b) the Air Quality CEMP complies with Table 28-11 in Chapter 28 of the EIS and is otherwise appropriate.	Prior to Main Construction Works	Approver	This CEMP
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: i) consulted with any NSW Government agencies specified by the NSW Department of Premier and Cabinet; (b) has provided: i) the Approver; and ii) each consulted agency, with an explanation of how any responses have been addressed.	Ongoing	Approver	This CEMP Section 1.4.1 Consultation Requirements for this Plan
42	Cumulative Impacts Plan 1) The Rail Authority must not commence Rail Construction Works until a Cumulative Impacts Plan has been approved in accordance with this condition. 2) The ALC must: a) prepare; and	Prior to rail construction works occurring	WSA and the Approver	Cumulative Impacts Plan (Rail) - WSA00-WSA-00400-EN-PLN-000013

Condition No.	Condition	Timing	Responsibility	Document Reference
	b) submit to an Approver for approval; a Cumulative Impacts Plan in relation to cumulative impacts arising from the concurrent construction of the Airport Stage 1 Development and the Rail Development. 3) The criteria for approval of the Cumulative Impacts Plan are that an Approver is satisfied that the Cumulative Impacts Plan: a) sets out: I. co-ordination and consultation requirements between the following stakeholders as relevant to manage the interface of projects under construction at the same time: the ALC, the Rail Authority, Transport for NSW, Western Parkland City Authority, Sydney Water, emergency service providers and utility providers; II. the responsibility for management of the impacts set out in the Cumulative Impacts Plan; III. the relevant environmental management framework relating to construction of the Airport Stage 1 Development and the Rail Development; and IV. the process for proactively identifying and managing cumulative impacts; b) has been prepared in consultation with the Rail Authority; and c) is otherwise appropriate. 4) Each of the Rail Authority and the ALC must not act inconsistently with the approved Cumulative Impacts Plan.			
45 to 50	Set out requirements in relation to informing other parties of conditions, keeping records, publishing reports, independent audits, variation to approved plans and publication of approved plans	Ongoing	WSA and Approver	This CEMP

4.4. EIS Requirements

The requirements of air quality management to be considered and addressed during the construction phase of the Stage 1 Airport Development are included in the EIS, Table 28-10 and 28-11.

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

Table 8: Summary of Air Quality Management Requirements

EIS Reference	Topic	Summary	Air Quality CEMP Reference
Table 28-10	Performance Criteria	Compliance with the approved Air Quality CEMP; and	Section 3 – Objectives and targets
		Ensuring that air pollution remains within the accepted limits set out in the AEPR.	Section 4.4 - EIS requirements Table 8 - Summary of Air Quality Management Requirements Section 8.1 - Air Quality criteria
Table 28-10	Implementation Framework	An Air Quality CEMP will be approved prior to commencement of Main Construction Works for the proposed airport. The CEMP will collate measures to mitigate and manage potential impacts on air quality and include cross-references to other environmental management plans where relevant. The Air Quality CEMP will as a minimum:	Section 7 – Environmental control measures
		Detail the management and mitigation measures to be implemented, including those outlined in this Section	Section 7 – Environmental control measures
		Describe the process for managing complaints, stakeholder engagement, and emerging environmental management issues as they arise	Section 10.6 – Environmental incidents and complaints management
		Specify the process for monitoring implementation, reporting, and auditing	Section 10 – Environmental inspection, monitoring, auditing and reporting
		Identify the party responsible for implementing of the Air Quality CEMP	Section 9 – Environmental roles and responsibilities
Table 28-10	Monitoring	General monitoring requirements are set out in the AEPR. These include that:	-
		Monitoring must take place under direction of an appropriately qualified person;	Section 10 – Environmental inspection, monitoring, auditing and reporting
		The results for the monitoring must be kept in a written record	Section 10 – Environmental inspection, monitoring, auditing and reporting
		Additional monitoring requirements include that:	-
		Suitable locations for dust deposition, dust flux, or real-time PM_{10} continuous monitoring have been determined in consultation with the NSW Environment Protection Authority	Section 7 – Environmental control measures Section 10.2 Air quality monitoring
		Baseline monitoring will commence at least three months before Main Construction Works commence	Section 7 – Environmental control measures

EIS Reference	Topic	Summary	Air Quality CEMP Reference
		Regular site inspections will be undertaken to monitor compliance with the dust management plan. Inspection results will be recorded, and the inspection log made available to the Department of Infrastructure and Regional Development upon request	Section 10 – Environmental inspection, monitoring, auditing and reporting
		More frequent site inspections by the person accountable for air quality and dust issues will be conducted onsite when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions	Section 10 – Environmental inspection, monitoring, auditing and reporting
Table 28-10	Auditing and reporting	General reporting requirements are set out under AEPR	-
		In addition, an annual report will be prepared and submitted to the Infrastructure Department in relation to compliance with the Air Quality CEMP for the period until the airport commences operations	Section 10.4 – Environmental reporting
		The community and stakeholder engagement plan provide for the development of a complaints log and includes specific measures for how complaints will be managed	Section 10.6 – Environmental incidents and complaints management
Table 28-10	Responsibility	Responsibilities include:	-
		The Air Quality CEMP will be prepared in consultation with the NSW Environment Protection Authority and NSW Health	Section 1.4 – Consultation requirements of this Plan
		The Air Quality CEMP will be submitted for approval to the Infrastructure Minister or an SES Officer in the Department of Infrastructure and Regional Development	Section 1.5 – Certification and approval
		The design and construct (D&C) contractor will be responsible for implementing site specific environmental procedures and work method statements applicable to the proposed woks in accordance with the requirements of this Air Quality CEMP	Section 8 – Air Quality Management Section 9 – Environmental roles and responsibilities SEMF Section 4 – Roles and Responsibilities
		The airport environment officer will be responsible for day-to-day regulatory oversight of the AEPR compliance at the airport after an airport lease is granted.	Section 9 – Environmental roles and responsibilities SEMF Section 4 – Roles and Responsibilities
Table 28-11	Dust Management Plan	As part of the Air Quality CEMP, a dust management plan will be developed to mitigate the impacts of dust during construction. This plan will involve: • Avoiding site run-off of water or mud to reduce the potential for track-out dust emissions. • Only using cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays. • Ensuring adequate water will be made available on the site for effective dust and particulate matter suppression and mitigation, using non-potable water where possible.	Appendix A – Dust Management and Vehicle and Equipment Emissions Plan Section 7 – Environmental control measures

EIS Reference	Topic	Summary	Air Quality CEMP Reference
		• Using enclosed chutes and conveyors and covered skips where appropriate. • Minimising drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment, and using fine water sprays on such equipment wherever appropriate. • Making equipment readily available on-site to clean up spillages as soon as reasonably practicable after the event • Measures to reduce dust impacts from earthworks and other works outlines elsewhere in this table; and • Measures to reduce dust track out as outlined elsewhere in this table.	
Table 28-11	Dust impacts from bulk earthworks	Measures to address impacts from bulk earthworks will include: • Minimise exposed areas as afar as practicable • Re-vegetate earthworks and exposed areas or soil stockpiles to stabilise surfaces as soon as practicable; and • Issue of hessian, mulches or tackifiers to cover exposed areas as soon as possible after completion of earthworks where it is not possible to re-vegetate or cover with topsoil.	Section 7 – Environmental control measures
Table 28-11	Dust impacts from other main construction works	Measures to mitigate dust impacts associated with other Main Construction Works include: • Avoiding scabbling (roughening of concrete surfaces) where practicable. • Storing sand and other aggregates in bunded areas and not allowing them to dry out unless required for particular purposes. If they are required for particular purposes, appropriate additional control measures would need to be in pace; • Delivering bulk cement and other fine powder materials in enclosed tankers and storing them in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. • Sealing and appropriately storing bags of any fine powder materials to prevent dust generation.	Section 7 – Environmental control measures
Table 28-11	Dust Track out	Mitigating the impacts associated with track out dust will involve: • Using water-assisted dust sweeper(s) on the access and local roads to remove, as necessary, any material tracked out of the site. This may require the sweeper to be continuously in use. • Avoiding dry sweeping of large areas. • Sealing high use haul roads and regularly inspecting and making necessary repairs to the surface as soon as reasonably practicable. • Recording all inspections of haul routes and any subsequent action in a site logbook. • Regularly cleaning and damping down hard surfaced haul routes with fixed or mobile sprinkler systems or mobile water bowsers.	Section 7 – Environmental control measures

EIS Reference	Topic	Summary	Air Quality CEMP Reference
		• Implementing a wheel washing system (with rumble grids to dislodge accumulated dust and mud) prior to leaving the site. • Providing an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. • Locating site access points as far as practicable from sensitive receptors.	
Table 28-11	Vehicle and equipment emissions	• A vehicle and equipment emissions plan will be developed and implemented as part of the Air Quality CEMP to mitigate the impacts associated with vehicle and equipment emissions. The plan will involve: • Requiring vehicle operators to switch off engines when not in use; • Avoiding the use of diesel- or petrol-powered generators and instead using mains electricity or battery powered equipment, where practicable; • Considering appropriate vehicle speeds on sealed and unsealed roads; • Developing and implementing a construction logistics plan to manage the sustainable delivery of goods and material to the airport site; and • Implementing measures to support and encourage sustainable travel for construction workers to and from the airport site, including public transport, shuttle busses, cycling, walking and car-sharing (as also outlines in the Traffic and Access CEMP).	Appendix A – Dust Management and Vehicle and Equipment Emissions Plan

5. Existing Environment

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

For the phase of Main Construction Works covered by this CEMP, 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 air quality impacts refer to Section 7.

5.1. Sensitive Receptors

Sensitive receptors were identified within about five kilometres of the Airport Site for the purpose of assessing the potential impacts of air emissions at these locations. Due to the density of sensitive receptors in the vicinity of the Airport Site, a representative selection comprising 152 of these sensitive receptors was made. These sensitive receptor types include residences, schools, churches and other community infrastructure. Sensitive receptors from suburbs surrounding the Airport Site at varying distances were also included.

The location of the sensitive receivers in relation to the Airport Site in general, and specifically to the phase of Main Construction Works covered by this CEMP is included in Appendix B.

5.2. Air Quality Records

Existing air quality has been characterised from air quality monitoring data collected over ten years (2005–2014) at monitoring stations operated by the Infrastructure Department. These monitoring stations included Bringelly, Macarthur/Campbelltown West, Liverpool and Richmond, and recorded parameters such as nitrogen dioxide, particulate matter, sulphur dioxide and ozone.

Generally, air quality for the local area is good, except for isolated high pollution days or extreme events such as dust storms and bushfires. Uncontrolled combustion events such as bushfires will influence regional observations of PM_{10} and $PM_{2.5}$, and to a lesser extent, nitrogen oxides.

A summary of monitoring data considered applicable to the work activities covered by this CEMP collated over the period of 2005 to 2014 for the area Sydney West and Southwest (Bringelly, Macarthur/Campbelltown West, Liverpool and Richmond) is presented in **Table 9**.

Table 9: Air Quality Monitoring Results

Pollutant	Averaging Period	NEPM Goals	Monitoring Results
		Maximum Concentration	Average Recorded Concentration (2005 – 2014)
National standards and goals for ambient air quality			
PM_{10}	1 day	50 µg/m^3	40 - 97 µg/m^3
	Annual	25 µg/m^3	15 - 25 µg/m^3
$PM_{2.5}$	1 day	25 µg/m^3	Liverpool: 22 - 268 µg/m^3 Richmond: 18 - 149 µg/m^3
	Annual	8 µg/m^3	Liverpool: 6 - 9 µg/m^3 Richmond: 4 - 8 µg/m^3
SO_2	1 day	228 µg/m^3	Bringelly: 5.1 – 9.2 µg/m^3 C' West: 5.7 – 9.9 µg/m^3
	Annual	60 µg/m^3	Bringelly: 0.3 – 1.2 µg/m^3 C' West: 1.2 – 1.4 µg/m^3

Since the completion of the EIS in 2015, ongoing monitoring has been undertaken. Monitoring stations will continue to be used throughout the construction phase with further details provided in Section 10. A summary of the data collected post-EIS but prior to construction (i.e. 'baseline') is included in **Table 10**. Ongoing comparison to NEPM goals forms part of monthly and Annual Reports.

Table 10: Comparison on Measured Air Quality Data versus NEPM Goals and Pre-Construction Data

Pollutant	Averaging Period	NEPM Goals	EIS Monitoring Results	Recorded Average Daily (µg/m3)			
		Maximum Concentration	Average Recorded Concentration (2005 – 2014)	North	South	East	West
National standards and goals for ambient air quality							
PM_{10}	1 day	50 µg/m^3	40 - 97 µg/m^3	314.1	80.2	29.4	92.5
	Annual	25 µg/m^3	15 - 25 µg/m^3	-	-	-	-
$PM_{2.5}$	1 day	25 µg/m^3	Liverpool: 22 - 268 µg/m^3	22.4	61.3	7	67.6
			Richmond: 18 - 149 µg/m^3	-	-	-	-

**Values indicated in red exceed National Environmental Protection Measures (NEPM) air quality standards.*

5.3. Wind Speed and Direction

The average wind speed across the five-year review period (2010-14) was 2.6 metres per second. The percentage of calm period with winds less than 0.5 metres per second during this period was nine per cent. A copy of the annual and seasonal wind rose for Badgerys Creek for the year 2021 is provided in Figure 2. As shown, the average wind speed was 2.36 metres per second, with a percentage calm period of 7.15%. The reduced number of calm periods is not considered to modify assumptions behind the approach to dust control.

An analysis of the climatic data suggests that there is no strong relationship between the time of year and the monthly wind speed, although the monthly average wind speeds are generally less during autumn.

On an annual basis, the predominant winds at Badgerys Creek originate from the south-west, followed by the south-south-west and north. Very few winds originate from the north-west. Winds vary across seasons; during winter the majority of winds originate from the south-west while in summer they are more frequently from the north-east.

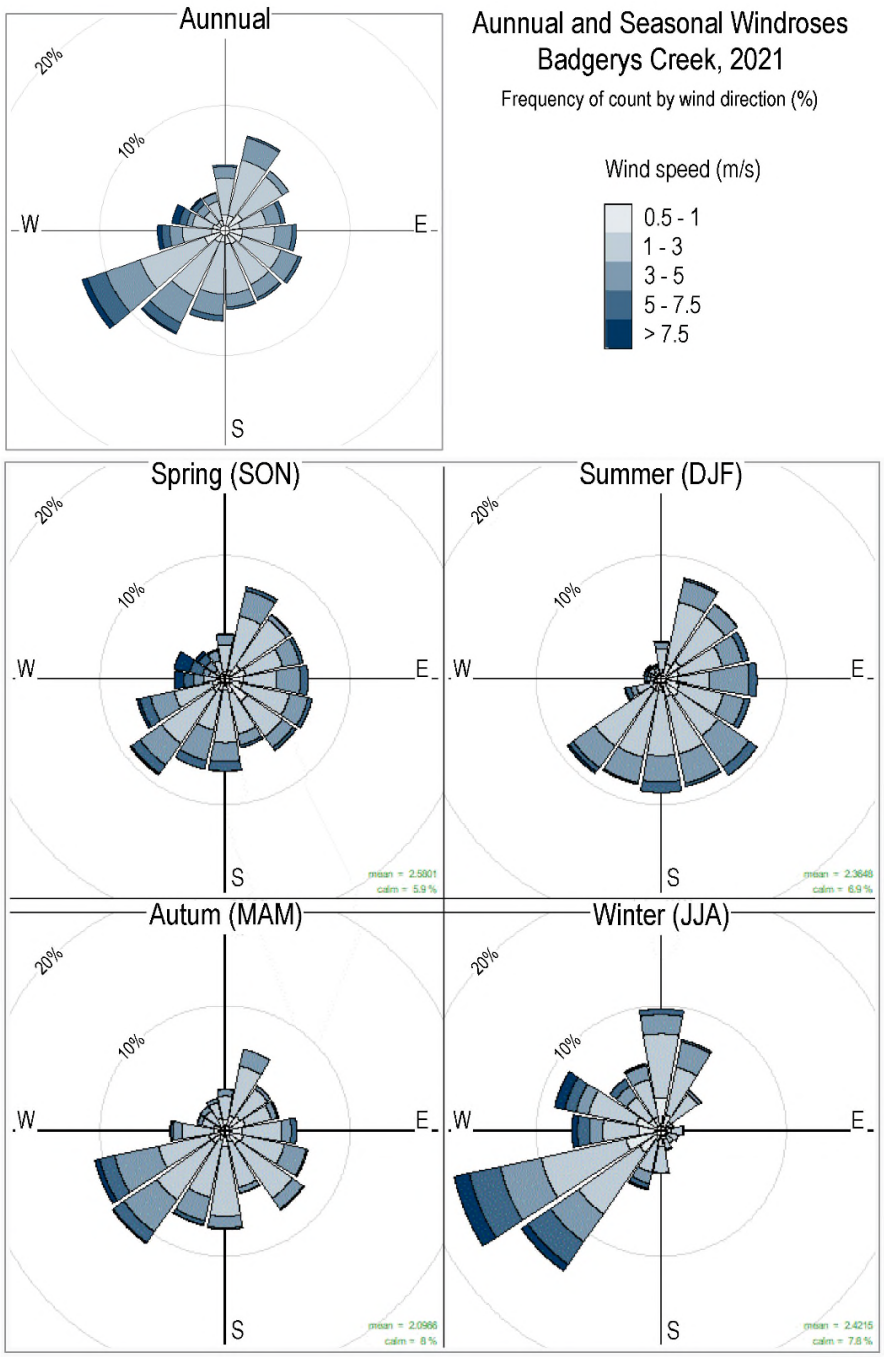

Figure 2: Annual and Seasonal Wind Rose, Badgerys Creek 2021

5.4. Temperature, Rainfall and Humidity

The Airport Site hosts an automatic weather station operated by the Bureau of Meteorology. The weather station has recorded rainfall data at the Airport Site since 1998. Data is provided in **Table 11**. Average annual rainfall at the Airport Site is 676.6 millimetres (mm).

Climate and rainfall data has been updated since EIS development. There is a strong seasonal variation in temperature at Badgerys Creek, with January being the hottest month, and July being the coldest month as presented below in **Table 11**.

The rainfall data collected during the EIS indicates that February is the wettest month, with an average mean rainfall of 114 mm while July is the driest month, with an average mean rainfall of 30 mm. In 2021, The average February and July rainfall had slightly decreased to 111.6 mm and 24.5 mm respectively. February remains the wettest month with a maximum recorded monthly rainfall of 342 mm while July continues to be the driest month. While these averages have decreased slightly, since 2019, the site has experienced 'La Nina' weather patterns with associated increased rainfall (particularly relative to the EIS period – for instance in February 2016 12.8 mm of rain was recorded, while in February 2020, 433 mm was recorded (this is the highest monthly total recorded). It is noted that both 2020 and 2021 recorded >1,000 mm of rain (compared to 664 mm in 2016).

In the EIS and in 2019, the annual average relative humidity reading at Badgerys Creek was 73 per cent. The month with the highest relative humidity on average was June, at 79 per cent. September and October had the lowest relative humidity.

Table 11: Average Monthly Rainfall at the Airport Site*

Statistic	J	F	M	A	M	J	J	A	S	O	N	D
Mean Max Temperature	30	29	27	24	21	18	17	19	23	25	26	29
Mean Min Temperature	17	17	15	11	8	6	4	5	8	11	14	15
Mean monthly rainfall (mm)[a]	78	112	95	45	38	59	25	37	24	54	70	56
Highest monthly rainfall (mm) [a]	92	433	372	253	156	250	77		82	182		131
Lowest monthly rainfall (mm)[a]	1	13	21	2	2	2	0.4	1	1	0.4	8	0.0
Highest daily rainfall (mm)[a]	138	200.0	145.6	84	54	109	52.8	70	51	63	63	65
Evaporation (mm) [b]	173	128	116	76	50	38	38	56	75	120	146	154

*Note: * All data has been rounded to the nearest decimal point (except for July, October and December Lowest monthly rainfall).*

a. Data from Bureau of Meteorology Badgerys Creek automatic weather station

b. Data from Bureau of Meteorology Parramatta weather station, as the nearest representative location with available evaporation data.

5.5. Odour

The Airport Site is mostly isolated from other industry activities that have the potential to be odorous. The exception is the poultry industry with several broiler and egg-laying farms in the vicinity, particularly to the east of the Airport Site. Background odour was not included as part of the air quality assessment for the Project.

6. Air Quality Aspects and Impacts

6.1. Construction Activities

Construction of the Stage 1 Airport Development will result in dust emissions generated during both the earthworks, main Terminal works and the construction of landside and aviation infrastructure, as well as nearby projects with Project interfaces, i.e. the M12 on Airport and Sydney Metro WSA. Specific to the works covered by this CEMP (refer to Section 2 and Construction Plan Section 6), the likely activities that have the potential to impact on air quality include the following:

- Operation of heavy machinery including cranes, dozers, scrapers, graders, compactors, and piling rigs;
- The transportation, loading and unloading of materials;
- Hauling on paved and unpaved roads;
- Exposure of ground surfaces resulting in wind erosion;
- Concrete batching plants and material stockpiling;
- Concrete cutting;
- Diesel and petrol powered generators providing site temporary power;
- Asphalt of roads and carpark pavements;
- Concreting of pavements;
- Bridge pilling works;
- Finishes trades include paints, glues and waterproofing products;
- Landscaping works;
- Management of large stockpiles (Fine Crushed Rock /sandstone);
- Operation of concrete batch plants (delivery and handling of cement, vehicle movements);
- Operation of asphalt batch plants (particulate emissions); and
- Operation of pugmills (cement handling and delivery)

In addition to the above, there will also be diesel particulate matter emissions (comprising $PM_{2.5}$ only) from onsite equipment. Additionally, construction of the Stage 1 Airport Development will result in greenhouse gas emissions from the operation of construction equipment and vegetation clearing.

6.2. Impacts

The potential for impacts on air quality was considered in Section 12 of the EIS. An assessment was undertaken of the potential sources detailed in Section 6.4. The findings are summarised in the sections below.

In addition to the inherent risks of specific construction activities creating the potential to generate dust, several other environment factors also affect the likelihood of dust emissions. These include:

- Wind direction – determines whether dust and suspended particles are transported in the direction of the sensitive receivers. This has been addressed in Section 5.3, with the predominant annual wind direction being from the southwest, particularly during the seasons of winter and autumn;
- Wind speed – governs the potential suspension and drift resistance of particles. This has been addressed in Section 5.3;
- Rainfall or dew – rainfall or heavy dew that wets the surface of the soil and reduces the risk of dust generation. Rainfall patterns in the area of Badgerys Creek is detailed further Section 5.4, indicating higher rainfall expectation within the months of February, March and November with mean averages exceeding 100 mm/month;
- Effectiveness of protective measures; and
- Adjacent land uses and activities that may create dust resulting in a cumulative impact on air quality.

Accordingly, project personnel involved in the activities above need to consider the factors effecting emissions to air in consultation with their environmental representatives to ensure appropriate mitigation measures are adopted.

6.3. Cross-Packages Impacts

WSA's ongoing works will include the delivery of an increasing number of concurrent packages. Accordingly, and with respect to air quality management, it is necessary to consider the combined impact of interfacing construction packages to ensure that effective mitigation measures are identified and implemented.

To achieve this, WSA will facilitate regular cross package planning meetings with all active Contractors. The purpose of these forums will be to identify when and where concurrent potential dust generating works may occur such that the cumulative impact of these works can be assessed and where possible mitigated or avoided. These forums would also involve look ahead planning sessions to highlight potential pending weather conditions that may require specific management measures. Such measures may include staggered scheduling of particular earthworks with interfacing packages during periods of elevated dust risk, the collaborative management of shared haul roads to ensure effective dust treatment or the pre-emptive use of polymers or dust binding agents in addition to the routine use of these controls.

A targeted WSA and Contractor inspection program will also be scheduled to assess the effectives of controls and the potential need to increase or augment mitigations measures to manage potential cumulative impacts.

For Sydney Metro works a formal Cumulative Impact Plan will be developed to allow for effective planning and management of air quality impacts from rail and airport construction activities. Refer to the CIP (WSA00-WSA-00400-EN-PLN-000013) for more details.

6.4. Environmental Risk Assessment

A risk assessment has been undertaken as part of the review and development of this CEMP and in accordance with the Environmental Aspects, Impact and Risk Procedure (Appendix G of the SEMF). The parts of the overall risk assessment relevant to Air Quality have been extracted and summarised in **Table 12** and apply to all phases of works that the Construction Plan authorises.

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

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

The identification of risks included a review of the works, and review of the environmental risks identified by the EIS. The mitigations in the risk assessment align with the EIS mitigation measures Table 28-11.

Table 12: Air Quality Risk Assessment Table

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
1	Site establishment	Site and delivery vehicles travelling on unsealed roads	Dust generation	Stakeholder complaints and dust on public roads	Low (8)	AQ_01 AQ_05 AQ_07 AQ_18	Low (5)	Waste and Resources CEMP Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Erosion and Sedimentation Control Plans (ESCPs) Environmental Control Map (ECM)
2	Site establishment	Topsoil stripping for compound footprint	Dust generation	Dust leaving site boundary into nearby environmental conservation zone	Low (9)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_11 AQ_12 AQ_17 AQ_20	Low (6)	Air Quality CEMP Aboriginal Cultural Heritage CEMP (Topsoil Management Protocol) Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction ESCPs ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
3	Site establishment	Construction and operation of compound buildings and amenities	Dust and waste generation	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone	Medium (13)	AQ_01 AQ_05 AQ_07 AQ_18 AQ_22 AQ_24 AQ_25 AQ_26 AQ_27 AQ_32 AQ_33	Low (9)	Air Quality CEMP Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction ESCPs ECM
4	Site establishment	Delivery of heavy plant	Dust generation and sediment tracking	Dust on public roads	Low (9)	AQ_01 AQ_18	Low (6)	Waste and Resources CEMP Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction ESCPs ECM
5	Site establishment	Spraying weeds	Chemical drift	Damage to nearby vegetation	Low (9)	AQ_01 AQ_02 AQ_17	Low (6)	Air Quality CEMP Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction ESCPs ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
6	Site establishment	General waste handling	Dust and waste materials blowing through site	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone	Low (8)	AQ_01 AQ_08 AQ_16	Low (5)	Air Quality CEMP Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
7	Earthworks	Constructing and Operating site access roads	Dust generation	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone	Medium (17)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_11 AQ_12 AQ_17 AQ_18 AQ_20 AQ_21 AQ_22 AQ_28 AQ_29	Low (9)	Air Quality CEMP Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
8	Earthworks	Use of heavy plant / multiple plant use	Emissions	Air pollution and stakeholder complaints	Medium (13)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_17 AQ_30 AQ_31 AQ_34 AQ_35 AQ_36 AQ_40	Low (9)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM Dust Management and Vehicle and Equipment Emissions Plan

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
9	Earthworks	Bulk topsoil stripping	Dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (18)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_11 AQ_12 AQ_17	Medium (18)	Air Quality CEMP Aboriginal Cultural Heritage CEMP (Topsoil Management Protocol) Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
10	Earthworks	Stockpiling materials	Dust generation	Dust from stockpile leaving site boundary into nearby environmental conservation zone or local roads	Medium (18)	AQ_01 AQ_07 AQ_09 AQ_12 AQ_14 AQ_17	Medium (14)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
12	Earthworks	Slope or embankment creation / stabilisation processes	Dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (18)	AQ_01 AQ_07 AQ_09 AQ_12 AQ_17	Medium (14)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
13	Utility realignment works	Potholing	Dust generation	Dust on public roads	Medium (14)	AQ_01 AQ_05 AQ_07 AQ_17	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
14	Utility realignment works	Trenching	Dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Low (9)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_12 AQ_17	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
15	Utility realignment works	Use of heavy plant / multiple plant use	Emissions	Air pollution and stakeholder complaints	Low (8)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_17	Low (5)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
16	Utility realignment works	Bulk excavation / open excavations	Dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (18)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_12 AQ_13 AQ_17	Medium (14)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
17	Utility realignment works	Concrete sawing	Concrete dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Low (9)	AQ_01 AQ_05 AQ_06 AQ_07 AQ_09 AQ_10 AQ_13 AQ_17	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
18	Construction Works - Typical	General education	Site requirements	Failure to follow site protocols	Low (9)	AQ_1 AQ_2 AQ_3	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
19	Construction Works - Typical	Use of heavy plant / multiple plant use	Emissions	Air pollution and stakeholder complaints	Low (6)	AQ_1 AQ_30 AQ_31 AQ_34 AQ_35 AQ_36 AQ_38 AQ_39	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
20	Construction Works - Typical	Site and delivery vehicles travelling on unsealed roads	Dust generation	Stakeholder complaints and dust on public roads	Medium (13)	AQ_1 AQ_05 AQ_07 AQ_19 AQ_20	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
21	Construction Works - Typical	Subcontractor engagement / Commencement not following procedures	Dust generation	Stakeholder complaints and uncontrolled generation of dust	Low (9)	AQ_1 AQ_2 AQ_3	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
22	Construction Works - Typical	Operation of Mobile Plant and Equipment	Dust generation	Dust on public roads from driving on unsealed pavements	Low (9)	AQ_1 AQ_20	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
23	Construction Works - Typical	Import of materials	Dust generation	Delivered pavement materials generate dust	Low (9)	AQ_1 AQ_8 AQ_14 AQ_16	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
24	Construction Works - Typical	Use and storage of hazardous Chemical / Materials / Fuels	Chemical drift	Air pollution from the incorrect storage of chemicals	Low (9)	AQ_1 AQ_14 AQ_16	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
25	Construction Works - Typical	General waste handling	Dust and waste materials blowing through site	Stakeholder complaints and dust/waste leaving site boundary	Low (9)	AQ_1 AQ_8	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
26	Site Establishment	Installation of site shed & ablution blocks	Dust generation	Stakeholder complaints and dust leaving site boundary	Low (9)	AQ_1 AQ_5	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
27	Site Establishment	Minor investigation geotechnical test pits	Dust and waste generation	Stakeholder complaints and dust leaving site boundary	Low (9)	AQ_1 AQ_12	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
28	Site Establishment	Construction of temporary roads and bridges	Dust generation	Stakeholder complaints and dust leaving site boundary	Low (9)	AQ_1 AQ_12	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
29	Site Establishment	Constructing and operating site access roads	Dust generation	Stakeholder complaints and dust leaving site boundary	Low (9)	AQ_1 AQ_23	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
30	Site Establishment	Installation of temporary Utilities	Dust generation	Stakeholder complaints and dust leaving site boundary	Low (9)	AQ_1 AQ_35	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
31	Detailed Civil works	Detailed excavation including Trenching, footings and in ground tanks	Dust generation	Dust leaving site boundary into nearby sensitive receiver	Low (9)	AQ_1 AQ_12	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
32	Detailed Civil works	Detailed excavation including Trenching, footings and in ground tanks	Dust generation	Dust leaving site boundary into adjacent construction contractor areas	Low (9)	AQ_1 AQ_12 AQ_23	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
33	Detailed Civil works	Drilling Auger Piles	Dust generation	Dust from auger leaving site boundary into nearby environmental conservation zone or local roads	Low (9)	AQ_1 AQ_09 AQ_12	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
34	Detailed Civil works	Stockpiling materials from auger works	Dust generation	Dust from stockpile leaving site boundary into local roads	Low (9)	AQ_1 AQ_5 AQ_7 AQ_14	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
35	Detailed Civil works	Earth works - Back fill	Dust generation	Dust from earthworks leaving site boundary into local roads	Low (9)	AQ_1 AQ_5 AQ_12 AQ_14	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
36	Detailed Civil works	Slope or embankment creation / stabilisation processes	Dust generation	Dust leaving site boundary into local roads	Low (9)	AQ_1 AQ_5 AQ_12	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
37	Detailed Civil works	Use and storage of fuels	Chemical odour	Air pollution from the incorrect storage of chemicals	Low (9)	AQ_1	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
38	Detailed Civil works	Material Storage / stockpiling activities	Dust generation	Dust from stockpile leaving site boundary into local roads	Low (9)	AQ_1 AQ_5 AQ_12	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
39	Detailed Civil works	Undertaking concrete placement	Dust generation	Dust from concrete works leaving site boundary	Low (9)	AQ_1 AQ_5	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
40	Installation of Aviation Fuel Ring Main	Detailed excavation and trenching	Dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ_1 AQ_5 AQ_12	Low (9)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
41	Installation of Aviation Fuel Ring Main	Undertaking Earth works and back fill operations	Dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ_1 AQ_5 AQ_12	Low (9)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
42	Installation of Aviation Fuel Ring Main	Use and storage of fuels	Chemical Odour	Air pollution from the incorrect storage of chemicals	Low (9)	AQ_1	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
43	Installation of Aviation Fuel Ring Main	Material Storage / stockpiling activities	Dust generation	Dust from stockpile leaving site boundary into local roads	Low (9)	AQ_1 AQ_5 AQ_12	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
44	Structure - Terminal & TER Buildings	Undertaking concrete placement	Dust generation	Dust from concrete works leaving site boundary	Low (9)	AQ_1 AQ_5	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
45	Structure – Terminal & TER Buildings	Undertaking Brick / Block Work cutting	Dust generation	Dust from cutting works leaving site boundary	Low (9)	AQ_1 AQ_5 AQ_6 AQ_7 AQ_8	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
46	Structure – Terminal & TER Buildings	Drilling activities for the installation of the Façade	Dust generation	Dust from drilling works leaving site boundary	Low (9)	AQ_1 AQ_5 AQ_6 AQ_7	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
47	Fit out works	Odour from Membrane activities	Chemical Odour	Stakeholder complaints and Air pollution from the membrane odour	Low (9)	AQ_1	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
48	Fit out works	Concrete Cutting, drilling and grinding works	Dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Low (9)	AQ_1 AQ_5 AQ_6 AQ_7 AQ_8	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
49	Fit out works	Undertaking Brick / Block Work cutting	Dust generation	Dust from cutting works leaving site boundary	Low (9)	AQ_1 AQ_5 AQ_6 AQ_7 AQ_8	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
50	Fit out works	Sanding gyprock & plaster boarding,	Dust generation	Stakeholder complaints and dust leaving the site boundary	Low (9)	AQ_1 AQ_5 AQ_6 AQ_7	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
51	Fit out works	Painting	Chemical Odour	Stakeholder complaints	Low (9)	AQ_1 AQ_5 AQ_7	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
52	External Works	Asphalt Road / Carpark Works	Dust generation	Dust leaving site boundary	Low (9)	AQ_1 AQ_19 AQ_21 AQ_24 AQ_25 AQ_26 AQ_27 AQ_28 AQ_29	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
53	External Works	Apron Works / Runway works	Dust generation	Dust from concrete works leaving site boundary	Low (9)	AQ_1 AQ_19 AQ_21 AQ_24 AQ_25 AQ_26 AQ_27 AQ_28 AQ_29	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
54	External Works	Landscaping works	Dust generation	Dust from landscaping leaving site boundary into local roads	Low (9)	AQ_1 AQ_19 AQ_21 AQ_24 AQ_25 AQ_26 AQ_27 AQ_28 AQ_29	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
55	External Works	Loading and transport of materials	Dust generation	Stakeholder complaints and dust on public roads	Medium (17)	AQ15 AQ18 AQ21 AQ27 AQ28 AQ29 AQ34 AQ37 AQ38 AQ45 AQ51	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
						AQ52 AQ53		
56	External Works	Storage of materials	Dust generation	Stakeholder complaints Dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ14 AQ15 AQ26 AQ41 AQ42 AQ43 AQ44 AQ45	Low (6)	Waste and Resources CEMP Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Erosion and Sedimentation Control Plans (ESCPs) Environmental Control Map (ECM)
57	External Works	Concrete Batching processes	Dust and waste generation	Stakeholder complaints Dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ08 AQ09 AQ10 AQ17 AQ46 AQ47 AQ48 AQ49 AQ50	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction ESCPs ECM
58	External Works	Emission of exhaust smoke from movement and operation of plant and equipment	Emissions	Stakeholder complaints Air pollution	Medium (17)	AQ30 AQ31 AQ32 AQ34 AQ35 AQ36	Low (6)	Air Quality CEMP EWMS Complaints Procedure Induction ESCPs ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
59	Civil Works	Operation of Mobile Plant and Equipment	Emissions	Stakeholder complaints Air pollution	Low (6)	AQ_01 AQ_30 AQ_31 AQ_34 AQ_35 AQ_36 AQ_38 AQ_39	Low (6)	Air Quality CEMP EWMS Traffic and Access CEMP Complaints Procedure Induction ESCPs ECM
60	Civil Works	Operation of Mobile Plant and Equipment	Dust Generation	Air pollution / dust generation and stakeholder complaints	Low (6)	AQ_01 AQ_05 AQ_07 AQ_13 AQ_20 AQ_22 AQ_28	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan
61	Civil Works	Import of materials	Dust Generation and Sediment Tracking	Air pollution / dust generation, tracking of material onto public roads and stakeholder complaints	Medium (17)	AQ_01 AQ_05 AQ_07 AQ_17 AQ_18 AQ_19 AQ_20 AQ_21 AQ_22 AQ_23 AQ_24 AQ_25 AQ_26 AQ_27 AQ_28 AQ_29	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan
62	Civil Works	Site establishment: Compound, Hardstands and access roads	Dust Generation	Air pollution / dust generation and stakeholder complaints	Low (9)	AQ_01 AQ_05 AQ_07 AQ_20	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
						AQ_22 AQ_28		Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan
63	Civil Works	Stockpiling	Dust Generation	Air pollution / dust generation and stakeholder complaints	Medium (13)	AQ_01 AQ_07 AQ_12 AQ_14 AQ_17	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan
64	Civil Works	Earthworks	Dust Generation	Air pollution / dust generation and stakeholder complaints	Medium (13)	AQ_01 AQ_07 AQ_12 AQ_14 AQ_17	Low (9)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan
65	Civil Works	Paving	Dust Generation	Air pollution / dust generation and stakeholder complaints	Low (9)	AQ_01 AQ_07 AQ_12 AQ_14 AQ_17	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
66	Civil Works	Paving	Odour	Odour generation and stakeholder complaints	Low (9)	AQ_01	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan
67	Civil Works	Excavations and Trenching (Services and stormwater)	Dust Generation	Air pollution / dust generation and stakeholder complaints	Low (9)	AQ_01 AQ_07 AQ_12 AQ_14 AQ_17	Low (6)	Air Quality CEMP EWMS Induction Complaints Procedure Community and Stakeholder Engagement Plan
68	Civil Works	Landscape installation	Dust Generation	Air pollution / dust generation and stakeholder complaints	Medium (13)	AQ_01 AQ_07 AQ_12 AQ_14 AQ_17	Low (9)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan
69	Civil Works	Landscape maintenance (spraying)	Chemical drift	Odour generation and stakeholder complaints	Low (9)	AQ_01 AQ_02	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
70	Civil Works	Use and storage of hazardous chemicals / materials / fuels	Chemical drift	Odour generation, spills and stakeholder complaints	Low (9)	AQ_01 AQ_10	Low (6)	Air Quality CEMP EWMS Induction Complaints Procedure Community and Stakeholder Engagement Plan
71	Civil Works	Import of materials	Dust Generation	Air pollution / dust generation and stakeholder complaints	Low (9)	AQ_01 AQ_05 AQ_07 AQ_17 AQ_18 AQ_19 AQ_20 AQ_21 AQ_22 AQ_23 AQ_24 AQ_25 AQ_26 AQ_27 AQ_28 AQ_29	Low (6)	Air Quality CEMP EWMS Induction Complaints Procedure Community and Stakeholder Engagement Plan
72	Building Works	Fit Out / Painting	Odour	Odour generation and stakeholder complaints	Low (9)	AQ_01	Low (6)	Air Quality CEMP Complaints Procedure Induction
73	Utility Works	Trenching	Dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Low (9)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_12 AQ_17	Low (6)	Air Quality CEMP EWMS, Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
74	General construction Civil Works	General construction Civil Works	Site requirements	Failure to follow site protocols	Low (9)	AQ_1 AQ_2 AQ_3	Low (6)	Air Quality CEMP EWMS, Soil and Water CEMP Traffic and Access CEMP

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
								Complaints Procedure Induction Area ESCPs ECM
75	General construction Civil Works	Use of heavy plant / multiple plant use	Emissions	Air pollution and stakeholder complaints	Low (8)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_17	Low (5)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
76	General construction Civil Works	Loading and transport of materials	Dust generation	Stakeholder complaints and dust on public roads	Medium (17)	AQ_15 AQ_18 AQ_21 AQ_27 AQ_28 AQ_29 AQ_34 AQ_37 AQ_38 AQ_45 AQ_51 AQ_52 AQ_53	Low (6)	Waste and Resources CEMP Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure, Induction Area ESCPs ECM
77	General construction Civil Works	Use and storage of fuels	Chemical Odour	Air pollution from the incorrect storage of chemicals	Low (9)	AQ_1	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
78	General construction Civil Works	Import of materials	Dust generation	Delivered pavement materials generate dust	Low (9)	AQ_1 AQ_8 AQ_14 AQ_16	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
								ECM
79	Paving	Concrete sawing	Concrete dust generation	Dust leaving site boundary into nearby environmental conservation zone or local roads	Low (9)	AQ_01 AQ_05 AQ_06 AQ_07 AQ_09 AQ_10 AQ_13 AQ_17	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
80	Concrete/asphalt batch plant	Batching/processing	Dust and waste generation	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ_08 AQ_09 AQ_10 AQ_17 AQ_46 AQ_47 AQ_48 AQ_49 AQ_50	Low (6)	Air Quality CEMP EWMS Complaints Procedure Induction ESCPs ECM
81	Concrete/asphalt batch plant	Storage of materials	Dust generation	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ_14 AQ_15 AQ_26 AQ_41 AQ_42 AQ_43 AQ_44 AQ_45	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
82	Asphalt	Asphalting	Chemical odour	Stakeholder complaints	Low (9)	AQ_1 AQ_5 AQ_7	Low (6)	Air Quality CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
83	Site Establishment	Clearing and Grubbing (if required)	Dust generation	Dust leaving site boundary into nearby local roads	Medium (18)	AQ_01 AQ_05 AQ_07 AQ_09	Medium (13)	Air Quality CEMP Biodiversity CEMP EWMS Soil and Water CEMP

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
						AQ_11 AQ_12 AQ_17		Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
84	Site Establishment	Contamination investigations (if required)	Dust generation	Stakeholder complaints and dust leaving site boundary	Low (9)	AQ_1 AQ_12	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM Community and Stakeholder Engagement Plan
85	Site Establishment	Earthworks to construct area for temporary buildings	Dust generation	Dust leaving site boundary into nearby local roads	Medium (18)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_12 AQ_13 AQ_17	Medium (14)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
86	Site Establishment	Use of heavy plant / multiple plant use	Emissions	Air pollution and stakeholder complaints	Low (8)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_17	Low (5)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM Community and Stakeholder Engagement Plan
87	Site Establishment	Delivery materials to compound	Dust generation Emissions	Stakeholder complaints and dust on public roads	Low (8)	AQ_01 AQ_05 AQ_07 AQ_18	Low (5)	Waste and Resources CEMP Air Quality CEMP EWMS

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
								Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Erosion and Sedimentation Control Plans (ESCPs) Environmental Control Map (ECM) Community and Stakeholder Engagement Plan
88	Site Establishment	Storage of hazardous Chemical / Materials / Fuels	Chemical odour	Air pollution from the incorrect storage of chemicals	Low (9)	AQ_1	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
89	Utility Works	Potholing, trenching, underbore, relocation and installation of services	Dust generation	Dust leaving site boundary into nearby local roads	Low (9)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_12 AQ_17	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
90	Earthworks and Drainage	Topsoil stripping	Dust generation	Dust leaving site boundary into nearby r local roads	Medium (18)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_11 AQ_12 AQ_17	Medium (13)	Air Quality CEMP Aboriginal Cultural Heritage CEMP (Topsoil Management Protocol) Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
								ECM
91	Earthworks and Drainage	Stockpiling	Dust generation	Dust from stockpile leaving site boundary into nearby local roads	Medium (18)	AQ_01 AQ_07 AQ_09 AQ_12 AQ_14 AQ_17	Medium (13)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
92	Earthworks and Drainage	Import and export of materials from site	Dust generation	Stakeholder complaints and dust on public roads	Medium (13)	AQ_1 AQ_05 AQ_07 AQ_19 AQ_20	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
93	Earthworks and Drainage	Temporary waste storage	Dust and waste materials blowing through site	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone	Low (8)	AQ_01 AQ_08 AQ_16	Low (5)	Air Quality CEMP Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM Community and Stakeholder Engagement Plan
94	Earthworks and Drainage	Operation of plant and machinery	Emissions	Air pollution and stakeholder complaints	Low (8)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_17	Low (5)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
95	Earthworks and Drainage	Spraying weeds	Chemical drift	Damage to nearby vegetation	Low (9)	AQ_01 AQ_02 AQ_17	Low (6)	Air Quality CEMP Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction ESCPs ECM
96	Bridge Works	Piling	Dust generation	Dust leaving site boundary into nearby local roads	Low (9)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_12 AQ_17	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
97	Bridge Works	Abutment earthworks	Dust generation	Dust from earthworks leaving site boundary into local roads	Low (9)	AQ_1 AQ_5 AQ_12 AQ_14	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
98	Bridge Works	Concreting	Dust generation	Dust from earthworks leaving site boundary into local roads	Low (9)	AQ_1 AQ_5 AQ_12 AQ_14	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
99	Bridge Works	Delivery of bridge decks	Dust generation	Stakeholder complaints and dust on public roads	Medium (13)	AQ_1 AQ_05 AQ_07 AQ_19 AQ_20	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
								Community and Stakeholder Engagement Plan
100	Road Construction	Pavement, including paving machine, trucks and pumps	Dust generation	Air pollution / dust generation and stakeholder complaints	Low (9)	AQ01 AQ07 AQ12 AQ14 AQ17	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan
101	Road Construction	Concrete cutting, drilling and grinding works	Dust generation	Dust leaving site boundary into nearby local roads	Low (9)	AQ_01 AQ_05 AQ_06 AQ_07 AQ_09 AQ_10 AQ_13 AQ_17	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction, Area ESCPs, ECM
102	Road Construction	Line marking	Chemical Odour	Stakeholder complaints	Low (9)	AQ_1 AQ_5 AQ_7	Low (6)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
103	Shared User Path Construction	Concreting, including trucks and pumps	Dust generation	Air pollution / dust generation and stakeholder complaints	Low (9)	AQ01 AQ07 AQ12 AQ14 AQ17	Low (6)	Air Quality CEMP Traffic and Access CEMP EWMS Induction Environmental Control Map (ECM) Complaints Procedure Community and Stakeholder Engagement Plan

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
104	Landscaping and Stabilisation	Stockpiling	Dust generation	Dust from stockpile leaving site boundary into nearby local roads	Medium (17)	AQ_01 AQ_07 AQ_09 AQ_12 AQ_14 AQ_17	Medium (13)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
105	Landscaping and Stabilisation	Loading and transport of materials	Dust Generation	Stakeholder complaints and dust on public roads	Medium (17)	AQ15 AQ18 AQ21 AQ27 AQ28 AQ29 AQ34 AQ37 AQ38 AQ45 AQ51 AQ52 AQ53	Low (6)	Waste and Resources CEMP Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Erosion and Sedimentation Control Plans (ESCPs) Environmental Control Map (ECM) Community and Stakeholder Engagement Plan
106	Landscaping and Stabilisation	Spraying weeds	Chemical drift	Damage to nearby vegetation	Low (9)	AQ_01 AQ_02 AQ_17	Low (6)	Air Quality CEMP Biodiversity CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction ESCPs ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
107	Site Establishment	Construction of temporary roads and access	Dust generation	Stakeholder complaints and dust leaving site boundary	Low (9)	AQ_1 AQ_12	Low (6)	Air Quality CEMP Traffic Access CEMP EWMS Complaints Procedure Induction ESCPs ECM
108	Detailed Excavation	Detailed Excavation	Dust Generation	Stakeholder complaints and dust/waste leaving site boundary	Low (9)	AQ_1 AQ_5 AQ_7, AQ_10, AQ_12, AQ_25, AQ_30, AQ_34, AQ_35, AQ_36, AQ_39,	Low (6)	Air Quality CEMP Traffic Access CEMP EWMS Complaints Procedure Induction ESCPs ECM
109	Welding of Steel Tanks	Structure	Air Contamination	Community Disturbance	Medium (18)	AQ_1 AQ_41	Low (10)	Air Quality CEMP Traffic Access CEMP EWMS Complaints Procedure Induction ESCPs - ECM
110	Civil works	Earthworks, Building and Utility infrastructure construction	Dust generation	Dust generation	Low (9)	AQ_1 AQ_2 AQ_3	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure Induction Area ESCPs ECM
111	Civil works	Earthworks, Building and Utility infrastructure construction	Potholing, trenching, underbore, relocation and	Dust generation	Low (9)	AQ_01 AQ_05 AQ_07 AQ_09 AQ_12	Low (6)	Air Quality CEMP EWMS Soil and Water CEMP Traffic and Access CEMP Complaints Procedure

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
			installation of services			AQ_17		Induction Area ESCPs ECM
112	Civil works	Earthworks including crushing, screening and stockpile management	Dust generation	Combined dust generated results in exceedances or complaints	Medium (18)	AQ_01 AQ_04 AQ_07 AQ_12 AQ_15 AQ_17 AQ_58 AQ_62	Low (10)	Air Quality CEMP Traffic & Access CEMP EWMS Complaints Procedure Induction ESCP ECM
113	Civil works	Earthworks including topsoil placement and	Dust generation	Delays to program due to having to halt work	Low (9)	AQ_01 AQ_04 AQ_07 AQ_12 AQ_15 AQ_17 AQ_58 AQ_62	Low (6)	Air Quality CEMP Traffic Access CEMP EWMS Complaints Procedure Induction ESCPs ECM
114	Shared haul roads	Management of shared haul roads	Dust generation	Combined dust generated results in exceedances or complaints	Medium (18)	AQ_01 AQ_04 AQ_05 AQ_18 AQ_20 AQ_21 AQ_22 AQ_23 AQ_24 AQ_26 AQ_27	Low (10)	Air Quality CEMP Traffic Access CEMP EWMS Complaints Procedure Induction ESCPs ECM
115	Concrete Batch Plant	Batching/ processing	Dust and waste generation	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ_08 AQ_09 AQ_10 AQ_17 AQ_46 AQ_47 AQ_48 AQ_49	Low (6)	Air Quality CEMP EWMS Complaints Procedure Induction ESCPs ECM

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level pre-mitigation	Mitigation measure	Risk level post-mitigation	Management tools
						AQ_50		
116	Concrete Batch Plant	Storage of materials	Dust generation	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ_14 AQ_15 AQ_26 AQ_41 AQ_42 AQ_43 AQ_44 AQ_45	Low (6)	Air Quality CEMP EWMS Complaints Procedure Induction ESCPs ECM
117	Testing and Commissioning	Odour from the testing of the fuel farm and fuel ring main with fuel and then disposing of it	Air Contamination	Stakeholder complaints and dust leaving site boundary into nearby environmental conservation zone or local roads	Medium (17)	AQ_01 AQ_02 AQ_03 AQ_39	Low (6)	Air Quality CEMP EWMS Complaints Procedure Induction ESCPs ECM

7. Environmental Control Measures

Mitigation and management measures that will be implemented during construction to address impacts to air quality issues are detailed in **Table 13** and are consistent with those provided in Tables 28-10 and 28-11 in Chapter 28 of the EIS, as per Condition 10 (Section 3.11.2) of the Airport Plan.

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

Table 13: Environmental Control Measures

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
GENERAL					
AQ_01	Training will be provided to all project personnel, including relevant sub-contractors on sound air quality control practices and the requirements from this Plan through inductions, toolboxes and targeted training.	Pre-construction Construction	All personnel will be inducted before commencing works.	All Contractors	Good Practice
AQ_02	The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides outside of the defined treatment area.	Construction	Meteorological information will be used to assess wind conditions.	All Contractors	Good Practice
AQ_03	Ensure there is no burning of any materials on site.	Construction	All personnel will be inducted before commencing works.	All Contractors	Good Practice
DUST MANAGEMENT					
AQ_04	Dust management measures will be implemented to mitigate the impacts of dust during construction:	Pre-construction Construction	Dust Management and Vehicle and Equipment Emissions Plan (Appendix A) ECM to include dust management details for specific activities/areas.	All Contractors	EIS Table 28-11

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
			All personnel will be inducted and provided with ongoing training.		
AQ_05	Avoiding site run-off of water or mud to reduce the potential for track-out dust emissions.	Pre-construction Construction	ECM to include access/egress controls All personnel will be inducted and provided with ongoing training.	All Contractors	EIS Table 28-11
AQ_06	Only using cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays.	Pre-construction Construction	Construction equipment will be scheduled prior to undertaking the works.	All Contractors	EIS Table 28-11
AQ_07	Ensuring adequate water will be made available on the site for effective dust and particulate matter suppression and mitigation, using non-potable water where possible.	Pre-construction Construction	Non-potable water sources will primarily be used to meet this requirement. Non-potable water sources will include stormwater runoff captured in sediment dams or existing dams on site or through agreement from adjacent landowners. Options to use Sydney Water recycled water are being investigated. However, potable water may be supplied from existing assets operated by Sydney Water. Groundwater is not currently proposed to be utilise as a water source. Refer to the Soil and Water Management Plan.	All Contractors	EIS Table 28-11
AQ_08	Using enclosed chutes and conveyors and covered skips where appropriate.	Pre-construction Construction	Where applicable, select appropriate plant/equipment to minimise dust generation. All personnel will be inducted and provided with ongoing training.	All Contractors	EIS Table 28-11

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
AQ_09	Minimising drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment, and using fine water sprays on such equipment wherever appropriate.	Pre-construction Construction	Where applicable, select appropriate plant/equipment to minimise dust generation while moving spoil. All personnel will be inducted and provided with ongoing training.	All Contractors	EIS Table 28-11
AQ_10	Making equipment readily available on-site to clean up spillages as soon as reasonably practicable after the event	Pre-construction Construction	Equipment will be stocked at different locations across the site. It will be restocked as it is used.	All Contractors	EIS Table 28-11
DUST IMPACTS FROM EARTHWORKS					
AQ_11	Vegetation clearing will be staged where possible to minimise the area and time that surfaces are exposed. Minimise stockpiling of material. Stockpiles will be located away from sensitive receivers where practicable.	Pre-construction Construction	Vegetation clearing will be scheduled ahead of time and will be done in combination with the location of sensitive receivers. Appendix A - Dust management and vehicle and equipment emissions Plan	All Contractors	EIS Table 28-11
AQ_12	Exposed surfaces with no scheduled work will be treated to minimise dust generation. Exposed surfaces will be stabilised progressively using the most practical site-specific methods, including watering and geo-fabrics for short-term exposure and emulation spray, spray grass, soil compaction and revegetation for longer term exposed areas or final finishes. Revegetate earthworks and exposed areas or soil stockpiles as soon as practical.	Pre-construction Construction	Surface treatment details to be included on the ECM for the work. This could include the use of hessian, mulches or tackifiers to cover exposed areas as soon as possible after completion of earthworks where it is not possible to re-vegetate or cover with topsoil. Temporary areas that are not disturbed or used (>10 days) are to be stabilised to managed dust. All personnel will be inducted and provided with ongoing training. Appendix A - Dust management and vehicle and equipment emissions Plan	All Contractors	EIS Table 28-11

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
DUST IMPACTS FROM OTHER MAIN CONSTRUCTION WORKS					
AQ_13	Avoiding scabbling (roughening of concrete surfaces) where practicable.	Pre-construction Construction	Construction works will be scheduled ahead of undertaking the works.	All Contractors	EIS Table 28-11
AQ_14	Storing sand and other aggregates in bunded areas and not allowing them to dry out unless required for purposes.	Pre-construction Construction	Storage areas will be determined in combination with the site layout design and documented on the ECM	All Contractors	EIS Table 28-11
AQ_15	Delivering bulk cement and other fine powder materials in enclosed tankers and storing them in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	Pre-construction Construction	Deliveries will be organised and scheduled ahead of time. Training will be provided to all drivers and delivery personnel.	All Contractors	EIS Table 28-11
AQ_16	Sealing and appropriately storing bags of any fine powder materials.	Pre-construction Construction	Storage and handling will be documented on the ECM. All personnel will be inducted and provided with ongoing training.	All Contractors	EIS Table 28-11
AQ_17	Construction activities will be modified, reduced or controlled during high or unfavourable wind conditions if they have a potential to increase off-site dust generation.	Construction	Meteorological conditions will be continuously monitored.	All Contractors	Good practice
DUST TRACK OUT					
AQ_18	Using water-assisted dust sweeper(s) on the access and local roads to remove, as necessary, any material tracked out of the site. This may require the sweeper to be continuously in use.	Construction	Access roads and sweeper requirements documented on the ECM. All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	EIS Table 28-11

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
AQ_19	Avoiding dry sweeping of large areas.	Construction	All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	EIS Table 28-11
AQ_20	Sealing high use haul roads and regularly inspecting and making necessary repairs to the surface as soon as reasonably practicable.	Construction	Haul roads and maintenance requirements documented as applicable on the ECM. All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	EIS Table 28-11
AQ_21	Recording all inspections of haul routes and any subsequent action in a site logbook.	Construction	Recorded in site diary. All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	EIS Table 28-11
AQ_22	Regularly cleaning and damping down hard surfaced haul routes with fixed or mobile sprinkler systems or mobile water bowsers.	Construction	Haul roads/surfaces and maintenance requirements documented as applicable on the ECM. All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	EIS Table 28-11
AQ_23	Implementing a wheel washing system (with rumble grids to dislodge accumulated dust and mud) prior to leaving the site.	Construction	This will be determined in combination with the site design layout and detailed on the ECM.	All Contractors	EIS Table 28-11
AQ_24	Providing an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.	Construction	This will be determined in combination with the site design layout and detailed on the ECM.	All Contractors	EIS Table 28-11
AQ_25	Locating site access points as far as practicable from sensitive receptors.	Construction	This will be determined in combination with the site design layout and detailed on the ECM.	All Contractors	EIS Table 28-11

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
AQ_26	Hardstand areas and surrounding public roads will be cleaned, as required, using methods including brooms, bobcat attachments or street sweepers.	Construction	Maintenance requirements will be shown on relevant ECMs. All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	Good practice
AQ_27	Measures implemented to minimise dust, soil or mud from being deposited by vehicles on public roads. This will be achieved by implementing mitigation measures such as stabilised site access (rumble grids, concrete and/or large aggregate) at entry/exit points. Manual cleaning will also be carried out where appropriate. In the event of any spillage or tracking, the spilt material will be removed immediately and in accordance with the environmental incident classification and reporting procedure.	Construction	Applicable management measures will be shown on ECMs. All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	Good Practice
AQ_28	Vehicle movement will be confined to designated haul roads and areas. These roads will have speed limits of 40 km/h to reduce dust generation. Reduced speed limit may be implemented where dust generation persists.	Construction	A traffic management plan will be prepared to comply with this.	All Contractors	Good Practice
AQ_29	All loaded haulage trucks will be covered where there is a risk of release of dust or other materials on public roads.	Construction	All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	Good Practice
VEHICLE AND EQUIPMENT EMISSIONS					
AQ_30	All vehicles will be switched off when not in operation. Where practical lower	Construction	Dust Management and Vehicle and Equipment Emissions Plan (Appendix A)	All Contractors	EIS Table 28-11

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
	vibration generating items of excavation plant and equipment shall be used.		All personnel will undertake inductions and reiterated through ongoing site training.		
AQ_31	Engines of plant parked next to residents will be switched off when not in operation.	Construction	Dust Management and Vehicle and Equipment Emissions Plan (Appendix A). All personnel will undertake inductions and reiterated through ongoing site training.	All Contractors	EIS Table 28-11
AQ_32	Avoid the use of diesel- or petrol-powered generators and instead use mains electricity or battery powered equipment, where practicable.	Construction	Dust Management and Vehicle and Equipment Emissions Plan (Appendix A). Construction equipment will be ordered before the works are to be undertaken to ensure the appropriate equipment is available.	All Contractors	EIS Table 28-11
AQ_33	Implement measures to support and encourage sustainable travel for construction workers to and from the airport site, including public transport, shuttle busses, cycling, walking, and car-sharing.	Construction	Induction training Toolbox talks to encourage sustainable travel to and from the site.	All Contractors	EIS Table 28-11
AQ_34	Daily monitoring of vehicle and plant is to be undertaken as a pre-start inspection.	Construction	Before any vehicles / plant enter the construction site, they must provide confirmation of their daily pre-start inspection.	All Contractors	Good Practice
AQ_35	Exhaust systems of construction plant, vehicles and machinery will be maintained in accordance with manufacturer's specifications to ensure that excessive visible exhaust emissions do not persist under normal operational loads of the plant and machinery.	Construction	Before any vehicles / plant enter the construction site, they have to provide confirmation of their daily pre-start inspection.	All Contractors	Good Practice

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
AQ_36	Periodic visual checks will be undertaken to ensure ongoing compliance, typically weekly. Where practicable, vehicles will be fitted with pollution reduction devices	Construction	Before any vehicles / plant enter the construction site, they must provide confirmation of their daily pre-start inspection.	All Contractors	Good Practice
AQ_37	Material brought to site will be in bulk from the suppliers, where practicable.	Construction	Construction material will be ordered before the works are to be undertaken to ensure the appropriate equipment is available.	All Contractors	Good Practice
AQ_38	Material will be sourced from local suppliers, where practicable.	Construction	Material will be ordered before the works are to be undertaken to ensure the local suppliers are available.	All Contractors	Good Practice
AQ_39	No use of ozone-depleting substances is to occur.	Construction	Procurement processes and checks during inspections. Ensure that the relevant providers of goods and services do not use ozone depleting substances.	All Contractors	Legal requirement
AQ_40	Develop and implement a construction logistics plan to manage the sustainable delivery of goods and materials to the airport site.	Construction	Construction Logistics Plan	All Contractors	EIS Table 28-11
APRON PAVEMENT PRODUCTION – MATERIAL STOCKPILES					
AQ_41	Aggregates to be bulk stored in bays/bunkers with a design that minimises windblown dust and particulate matter. Stockpile areas will have barriers installed accordingly.	Construction	Storage areas will be determined in combination with the site layout design and documented on the ECM	Terminal	Good Practice
AQ_42	Material will be kept inside of the open ends of any bays/bunkers at a distance that minimises dust generation and	Construction	This will be determined in combination with the site design layout and detailed on the ECM.	Terminal	Good Practice

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
	windblown particulate matter (i.e. a minimum of 0.5m)				
AQ_43	Where temporary holding of aggregate occurs (e.g. conveyor transfer points, overhead storage hoppers) these holding bins will be enclosed by a minimum of three walls	Construction	This will be determined in combination with the site design layout and detailed on the ECM.	Terminal	Good Practice
AQ_44	Minimal volumes of materials will be stockpiled if the site will be unattended for an extended period to eliminate the risk of dust generation	Construction	Information will be provided in inductions and reiterated through ongoing site toolboxes and training.	Terminal	Good Practice
AQ_45	Sand and aggregates will be delivered and dumped in such a way to minimise dust generation. Stockpile locations to be in proximity of plant to minimise transfer distance. Water to be added to loads (as req) to assist with dust minimisation during the tipping process.	Construction	All personnel will undertake delivery driver inductions and reiterated through ongoing site supervision.	Terminal	Good Practice
APRON PAVEMENT PRODUCTION – BATCH PLANT OPERATION					
AQ_46	Cement silos, hatches, inspection points and duct work for all equipment to be rain and dust-tight.	Construction	Before plant mobilises to construction site, contractor must provide confirmation of compliance.	Terminal	Good Practice
AQ_47	Machinery /piping /ducting that will come into contact with cementitious material is to be designed to withstand long term exposure to this material.	Construction	Before plant mobilises to construction site, contractor must provide confirmation of compliance.	Terminal All contractors with relevant scope	Good Practice
AQ_48	Failsafe systems installed to stop the flow of cement/fly ash in an emergency.	Construction	Before plant mobilises to construction site, contractor must provide confirmation of compliance.	Terminal All contractors with relevant scope	Good Practice
AQ_49	All emergencies overfill or high-level equipment/systems maintained,	Construction	Before plant mobilises to construction site, contractor must provide confirmation of compliance.	Terminal	Good Practice

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
	regularly tested and operational at all times.			All contractors with relevant scope	
AQ_50	Daily checklists completed prior to starting of the plants for checking the belts, silo and water flow. Regular maintenance is also conducted on the batch plant and pug mill on days the plant is not producing.	Construction	Daily pre-start inspection checklist	Terminal All contractors with relevant scope	Good Practice
AQ_51	The access track and material delivery area are sealed, therefore there is no risk of mud being tracked onto the road network from delivery trucks. Access track and sealed roads will be maintained using the road sweeper and watercarts.	Construction	Access roads and sweeper requirements documented on the ECM. All personnel will undertake inductions and reiterated through ongoing site training.	Terminal All contractors with relevant scope	Good Practice
AQ_52	BMD to continually monitor the PPZ area particularly during high wind events for any potential dust periods. Potential areas of dust generation will be addressed with a watercart.	Construction	Routine inspections. All personnel will undertake inductions and reiterated through ongoing site training.	Terminal All contractors with relevant scope	Good Practice
AQ_53	Posted Speed limits of 40KM/HR in the PPZ delivery zones and 20KM/hr speed zones in and around the batch plant and pug mill to be enforced.	Construction	Implementation of Vehicle Management Plan All personnel will undertake inductions and reiterated through ongoing site training.	Terminal All contractors with relevant scope	Good Practice
General Civil, Pavements and Building works					
AQ_54	Sprayers/misters would be provided on aggregate storage bins to minimise dust generation	Construction	Sprayer / misters to be installed on aggregate storage bins as required by ECM.	ACP Stage 1 Cargo Works All contractors with relevant scope	Good Practice
AQ_55	Batch plant would have filters fitted to cement silos	Construction	Filters to be installed before plant becomes operational.	ACP	Good Practice

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
				Stage 1 Cargo Works All contractors with relevant scope	
AQ_56	Minimise disturbance areas of revegetated/landscaped areas by previous contractors	Construction	This will be determined in combination with the site design layout and detailed on the ECM.	ACP Stage 1 Cargo Works All contractors with relevant scope	Good Practice
AQ_57	Seal construction access roads for all high-volume movements with construction site speed limits set	Construction	Haul roads/surfaces and maintenance requirements documented as applicable on the ECM. All personnel will undertake inductions and reiterated through ongoing site training	ACP Stage 1 Cargo Works All contractors with relevant scope	Good Practice
AQ_58	Ensure adequate resourcing of construction water carts for supply of dust suppression and earthworks water throughout construction, focused on using captured stormwater from within temporary construction basins and/or modified detention basins	Construction	Construction Management Plan Site inspection Air quality monitoring	ACP Stage 1 Cargo Works All contractors with relevant scope	Good Practice
AQ_59	Capture cementitious run off within batch plant footprints and pugmills for re-use in dust suppression on access roads and stockpiles	Construction	This will be determined in combination with the site design layout and detailed on the ECM. Dewatering Permit	ACP Stage 1 Cargo Works All contractors with relevant scope	Good Practice

ID	Measure / Requirement	When to implement	How to implement	Responsibility	Reference
BEC: Bulk Earthworks Contract MI: Material Importation All Contractors: BEC, MI, TSS, ACP, LCB, M12, Utilities, ancillary developments, other building activities, aviation support facilities and other contractors as delegated by WSA					
AQ_60	Develop and implement specific Environmental Work Method Statements (EWMS) for the establishment and operation of concrete batch plants, pugmills and asphalt batch plants with specific controls for the management of cement and other dust generating materials	Construction	Approval and implementation of EWMS	ACP Stage 1 Cargo Works All contractors with relevant scope	Good Practice
AQ_61	Establish and operate asphalt batch plants in accordance with an approved EWMS with specific control measures to protect air quality, e.g. cyclone and baghouse/scrubbers	Construction	Construction Management Plan Site inspection	ACP All contractors with relevant scope	Good Practice
AQ_62	Apply an environmental monitoring framework consistent with the requirements of the Airports (Environment Protection) Regulations 1997 (AEPR) and the prescribed plans.	Construction	ACP CEMF and EWMS Monthly Report	ACP Stage 1 Cargo Works All contractors with relevant scope	Good Practice
WELDING					
AQ_63	Exhaust fans will be directed away from the community and will be directed to well ventilated areas	Construction	EWMS	Fuel Farm and Fuel Ring Main Contractors All contractors with relevant scope	Good Practice

8. Air Quality Management

All Contractors must:

- Plan and carry out all its construction activities to avoid where practicable, the generation of dust and vehicle emissions. Contractor must employ reasonably practicable measures to minimise the emission of dust and other air pollutants during the Contractor's Activities; and
- Employ reasonably practicable construction methods / measures that will keep the air pollution, including dust to a minimum.

8.1. Air Quality Criteria

The air quality criteria applicable for use as identified in the EIS are principally those defined in the NSW EPA Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, which accounts for various pollutant criteria and averaging period from multiple sources, including the NEPM-AAQ and NERDDC. They are summarised in **Table 14**. Where relevant, AEPR criteria is also listed.

Table 14: Air Quality Monitoring Criteria Applicable to the Airport

Pollutant	Criterion[(a)]	Averaging period	Source
Total suspended particulate matter (TSP)	90 µg/m^3	1 year	NSW EPA, AEPR
Particulate matter < 10 µm (PM_{10})	50 µg/m^3	24 hours(c)	NSW EPA, NEPM-AAQ
	25 µg/m^3	1 year	NSW EPA, NEPM-AAQ
Particulate matter < 2.5 µm ($PM_{2.5}$)	25 µg/m^3	24 hours	NEPM-AAQ
	20 µg/m^3 (by 2025)	24 hours	NEPM-AAQ
	8 µg/m^3	1 year	NEPM-AAQ
	7 µg/m^3 (by 2025)	1 year	NEPM-AAQ
Deposited dust – Incremental	2 g/m^2/month	Annual	NERDDC
Deposited dust – Cumulative	4 g/m^2/month	Annual	NERDDC

ppm = parts per million; pphm = parts per hundred million; µg/m^3 = micrograms per cubic metre; mg/m^3 = milligrams per cubic metre.

NERDDC 1988, Air Pollution from Surface Coal Mining: Measurement, Modelling and Community Perception, Project No. 921, National Energy Research Development and Demonstration Council, Canberra

Any verified exceedance of the above criteria will be reported to the Infrastructure Department in accordance with Section 10.4.

8.2. Earthworks

The EIS predicted dust impacts during earthworks will be at or below the air quality assessment criteria for each of the reported air quality parameters, both incrementally because of the Project, and cumulatively when assessed with background concentrations and modelled inputs of other projects. The assessment found that while the predicted concentrations remain low at all offsite residential receptors, the nature of the plume spread for the 24-hour and annual averaging periods is highest to the north-east and south-west of the Airport Site, consistent with the prevailing winds measured at Badgerys Creek.

Refer to Appendix A Dust Management and Vehicle and Equipment Emissions Plan for more information.

8.3. TSS Works

The EIS predicted dust impacts during the construction of the Terminal and Specialty Services (TSS) Works are forecast to be below the air quality assessment criteria for each of the reported air quality parameters. Dust impacts would be below the assessment criteria for both incremental impacts because of the project and cumulative impacts when assessed with the background concentrations and modelled inputs of adjacent projects.

Refer to Appendix A Dust Management and Vehicle and Equipment Emissions Plan for more information.

8.4. LCB Works

The EIS assessed predicted dust impacts during bulk earthworks and construction of aviation infrastructure. The LCB Works are included within the construction of aviation infrastructure. The EIS predicted dust impacts during this construction phase to be below the air quality assessment criteria for each of the reported air quality parameters. Dust impacts would be below the assessment criteria for both incremental impacts because of the project and cumulative impacts when assessed with the background concentrations and modelled inputs of adjacent projects.

Refer to Appendix A Dust Management and Vehicle and Equipment Emissions Plan for more information.

8.5. ACP Works

The EIS predicted dust impacts during the construction of the ACP Works that are forecast to be below the air quality assessment criteria for each of the reported air quality parameters. Dust impacts would be below the assessment criteria for both incremental impacts because of the project and cumulative impacts when assessed with the background concentrations and modelled inputs of adjacent projects.

Refer to Appendix A Dust Management and Vehicle and Equipment Emissions Plan for more information.

The EIS also reported that odour from the asphalt plant would be below the relevant criteria at all sensitive residential receptors. The contour plot in Figure G-17 (Vol 4 Appendix F of the EIS) shows that the highest odour concentrations would largely be limited within the Airport Site. The two odour unit contour (which is the adopted impact assessment criterion) spreads outside of the Airport Site a short distance to the north. This area is currently unoccupied and therefore it is expected that there would be no adverse odour impacts to sensitive receptors from the asphalt batching plant.

8.6. M12 on Airport Works

Works are included within the construction of aviation infrastructure and are expected to have negligible impact to overall air quality. Standard measures such as use of water carts and stabilisation of areas not being worked for greater than 10 days will be sufficient to manage any potential impacts.

8.7. Stage 1 Cargo Works

The EIS predicted dust impacts during the construction of the Stage 1 Cargo Works that are forecast to be below the air quality assessment criteria for each of the reported air quality parameters. Dust impacts would be below the assessment criteria for both incremental impacts because of the project and cumulative impacts when assessed with the background concentrations and modelled inputs of adjacent projects.

8.8. Other Activities

As the project progresses, additional works such as Standalone Facilities, other Commonwealth Agency buildings and Commercial developments will proceed.

Works will include three facilities for Commonwealth agencies intended to provide the required boarder control functions at the WSI for the Australian Federal Police (AFP), Australian Border Force (ABF) and the Department of Agriculture, Fisheries and Forestry (DAFF). These three facilities are command centre, intended to house administrative functions, canine facility, and cargo examination facility. The construction of these facilities is not expected to generate dust.

The final stage of works packages include activities associated with the testing and commissioning of elements and systems to form a fully functional integrated airport. This phase of works is termed Operational Readiness, Activation and Transition (ORAT) in the Construction Plan. ORAT requires extensive safety and security scenario testing which is not likely to cause dust impacts.

8.9. Construction Greenhouse Gas Emissions

The EIS reported that the two main sources of greenhouse gas emissions will be the operation of construction equipment and vegetation clearing. Greenhouse gas emissions generated during construction of the Stage 1 Airport Development are presented below in **Tables 15-20**. As above, the greenhouse gas emissions calculations were based on the entire scope of construction activities.

Table 15: Summary of greenhouse gas emissions for Bulk Earthworks

Scope	Source	Fuel type	Quantity	Emissions (t CO_2-e)
1	Earthmoving Equipment	Diesel	35 ML	61,814
1	Vegetation clearing	N/A	73.5 kt	134,873
Total				**196,687**

Table 16: Summary of greenhouse gas emissions for TSS Works

Scope	Source	Fuel type	Quantity	Emissions (t CO_2-e)
1	Generators & Construction Equipment	Diesel	4 ML	10,880
2	Grid Energy	Electricity	2 GWh	1,660
Total				**12,500**

Table 17: Summary of greenhouse gas emissions for LCB Works

Scope	Source	Fuel type	Quantity	Emissions (t CO_2-e)
1	Generators & Construction Equipment	Diesel	3.5 ML	9,362
2	Grid Energy	Electricity	3.2 GWh	2,656
Total				**12,018**

Table 18: Summary of greenhouse gas emissions for ACP Works

Scope	Source	Fuel type	Quantity	Emissions (t CO_2-e)
1	Fuel for plant and equipment	Diesel	4,580 KL	12,357
1	Fuel for plant and equipment	Unleaded petrol	27,813 L	64
2	Electricity generation	Electricity	2,500 (MwH)	2025
Total				**14,446**

Table 19: Summary of greenhouse gas emissions for M12 Works

Scope	Source	Emissions (t CO2-e)
1	Construction works (3% of total M12)	6,650
Total		**6,650**

Table 20: Summary of greenhouse gas emissions for Stage 1 Cargo Works

Scope	Source	Fuel type	Quantity	Emissions (t CO_2-e)
1	Fuel	Diesel	3, 900 KL	10, 452
1	Fuel	Unleaded petrol	15, 000 L	35
2	Electricity	Electricity	42,348 (kwH)	30
Total				**10,517**

The EIS states that when calculating the emissions from construction equipment, it was assumed the construction of the aviation infrastructure used as much fuel as during Bulk Earthworks. Further, it was assumed that during the commissioning phase, no fuel was used from construction equipment and that this would be supplied via permanent grid energy. Further, it was assumed that during the commissioning phase, no fuel was used from construction equipment and that this would be supplied via permanent grid energy. This assumption will be validated with works being planned to provide power from the grid for commissioning phase.

The Stage 1 Airport Development construction activities covered by this CEMP and described in the Construction Plan are expected to generate smaller impacts consistent with the reduced scale of the works compared to the overall construction phase. The same level of mitigation measures and controls will apply as indicated further below in Section 7 of this CEMP.

9. Roles and Responsibilities

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

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

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

10. Environmental Inspection, Monitoring, Auditing and Reporting

Monitoring, inspection, auditing and reporting will be undertaken to measure the effectiveness and outcomes of the implementation of the Air Quality CEMP and to facilitate continuous improvement of waste and resource management.

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

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

10.1. Environmental Inspections

10.1.1. WSA Environmental Inspections

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

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

- Observation of dust generation from specific construction activities including those from vehicle tracking and excavation works;
- Observation of excessive visible exhaust emission from plant and machinery under normal operational loads;
- The presence / generation of any odours associated with the work activities; and
- Plant and machinery left idling whilst unused for extended periods of time (i.e. 30 mins).

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

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

10.1.2. Contractor Environmental Inspections

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

More frequent site inspections by the person accountable for air quality and dust issues will be conducted onsite when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

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

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

10.1.3. Pre-start Inspection

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

The Foreman will undertake the pre-works inspection and record the findings.

10.2. Air Quality Monitoring

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

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

Specific air quality monitoring requirements, including timing and responsibilities, are included in **Table 21**.

Table21: Air Quality Monitoring Requirements

Reference	Requirement*	Timing	Responsibility
AQ_M_01	Monitoring will be conducted at suitable locations for PM_{10} and $PM_{2.5}$ (real time) dust deposition. This will be determined in consultation with the NSW EPA for the WSA	Pre-construction and during construction	WSA Environment Manager All Contractors

Reference	Requirement*	Timing	Responsibility
	monitoring locations. Contractors will determine monitoring locations based on work fronts and may involve hand-held monitors to assess package influence on project wide cumulative air quality impacts. Phone and /or email alerts will be delivered to the relevant personnel.		
AQ_M_02	Weather data at the premises, including rainfall measured and recorded in millimetres per 24-hour period at the same time each day from the time that the site office is established	As required	All Contractors
AQ_M_03	Baseline monitoring conducted, prior to commencement of Main Construction Works. Ongoing monitoring to continue to be undertaken as per Section 10.2.1	October 2017 – September 2018 During construction	WSA Environment Manager
AQ_M_04	Regular site inspections, at a minimum weekly, will be undertaken to monitor compliance with the dust management plan. Inspection results will be recorded included in the monthly report.	During construction	WSA Environment Manager All contractors
AQ_M_05	Daily visual inspection and during high wind events. Records to be kept on a daily basis	Pre-construction and during construction	All Contractors

10.2.1. Stage 1 Airport Development Air Quality Monitoring Program

Air quality monitoring has been undertaken since October 2017 up until the present at the Airport Site for the purpose of obtaining air quality data. Baseline air monitoring quality data includes monitoring from the EIS and before September 2018 when EEW started. Details of the methodology and sampling locations (Air Quality Monitoring Program) are provided in the sections below.

WSA will continue to implement the Air Quality Monitoring Program on a monthly basis in addition to any contractor specific monitoring as detailed in Section 10.2.3. Air quality monitoring sites and monitoring network are adequate for the current scope of works. Monitoring has been undertaken confirming existing mitigation measures are adequate.

The monitoring data will be represented in monthly reports. This will provide a basis to assess the data against the targets and allow for a simple process in identifying any exceedances. If exceedances are encountered additional measures will be put in place including:

- Review and modify work practices as appropriate;
- Using additional water carts;
- Using adhesive polymer to bind the top surface layer;
- Reducing speeds of site plant; and
- Shutting down earthwork operations where required.

All environmental monitoring equipment will be calibrated as required by the manufacturer's specifications. Certificate of calibration currency can be made available upon request, with specific details to be provided in the annual reporting (refer to Section 10.4).

Dust Deposition

Deposited matter refers to any dust that falls out of suspension in the atmosphere. Deposited dust is measured in accordance with AS/NZS 3580.10.1:2016 - Methods for sampling and analysis of ambient air Method 10.1: Determination of particulate matter—Deposited matter—Gravimetric method. A five-litre gauge with a 150 mm funnel is placed on a two-metre high stand. The gauge is left onsite for approximately one (1) month (30 days +/- two days) and then the sample is sent to a laboratory for analysis. The number of insoluble solids over the monitoring period are reported by the laboratory.

Particulate Concentration

Real time particle counters sample real time $PM_{2.5}$ and PM_{10}. The units adopt two methods for measuring particulate mass concentration: particle counting and gravimetric analysis. The units measure the particulate concentration through 90º Mie scattering principle.

Air Quality Monitoring Station Locations

The location of the air-monitoring stations is provided overleaf in Figure 3.
During testing and commissioning of the airport the location of the air quality monitors will be reviewed and may change to reflect potential risks associated with airport operations.

10.2.2. Additional Monitoring for Adverse Weather

Additional inspections may be required during adverse weather conditions, such as dry periods (greater than one month) and high winds (greater than 30km/hr). Real time and forecasted weather conditions (from BOM) along with real – time monitors (>5 monitors on the site at any one time) will be continuously monitored during the project, particularly prior to weekends. Where required, adjustment to work practices will be made during these periods (e.g. reduction in activities, deployment of additional water carts.).

All monitoring equipment will be calibrated as required by the manufacturer's specifications. Certificate of calibration currency can be made available upon request, with specific details to be provided in the annual reporting (refer to Section 10.4).

10.2.3. Contractors Air Quality Monitoring Program

Real time monitoring will be conducted by each contractor at suitable locations for PM_{10}, $PM_{2.5}$, dust deposition. The system adopted must also provide for phone and/or email alerts to be delivered to the relevant personnel.

Contractors, in consultation with WSA, will determine monitoring locations based on work fronts and may involve handheld monitors and/ or dust deposition gauges to assess package influence on project wide cumulative air quality impacts. The monitoring will aid in understanding internal site sources only and will not form part of the monthly compliance report unless additional information is required.

Daily recorded observations of weather and associated site impact to air quality will be kept by each Contractor such that comparisons can be made between interfacing work packages to allow for an assessment of respective contributions to project wide impacts.

Contractors are to provide WSA with the results of all air quality monitoring undertaken and advise of compliance with criteria

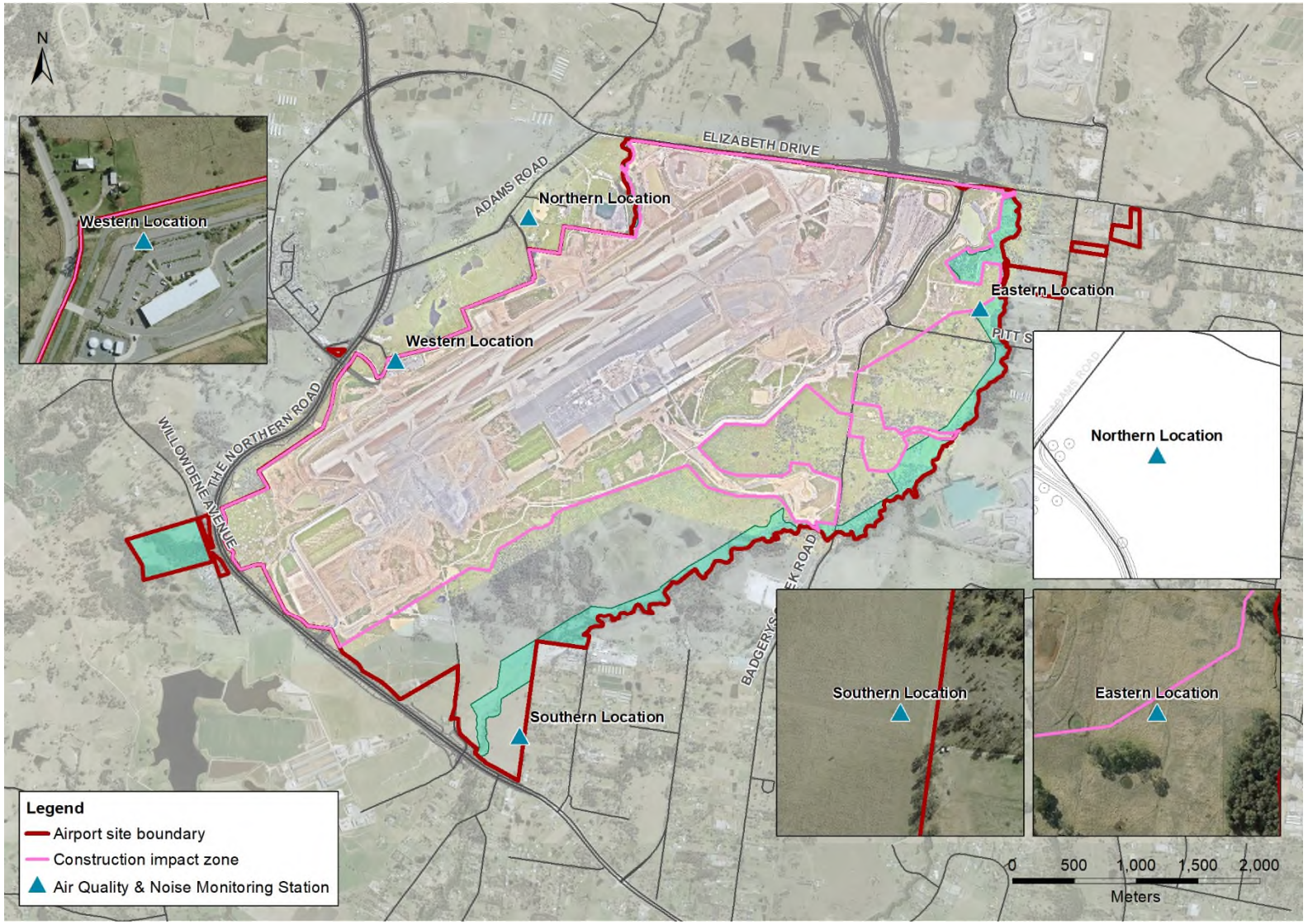

Figure 3: Air Monitoring Locations

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10.3. Environmental Auditing

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

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

10.4. Environmental Reporting

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

In addition, a summary of reporting requirements required under this Air Quality CEMP (including environmental reporting requirements under the Airport Plan specific to this Air Quality CEMP is provided below in **Table 22**.

Table 2022: Air Quality Reporting and Record Keeping

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 this Air Quality CEMP. In accordance with Condition 47(2), WSA 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.	Annually	WSA Environment Manager
Annual Reporting (required under s6.02(3) of the AEPR)	Annual reporting under AEPR Section 6.03 which includes information from 6.02(3)	Annually	WSA Environment Manager
Complaints reporting	Recording of complaints and stakeholder interactions in accordance with Community and Stakeholder Management Plan.	As required	WSA Environment Manager WSA Community and Stakeholder Manager All Contractors
Environmental Site Register (required under the 6.02(3) of the AEPR)	Environmental Site Register to be kept and maintained to include written record of environmental conditions of the Airport and its environmental management generally. The register is to include the results of monitoring required under section 10.2 and a record of any exceptional incidents that cause excessive pollution and the action taken to resolve the situation.	As required	All
General environmental inspection	Inspection of environmental management controls on site and sighting of site documentation as required by the contractor's CEMP.	Weekly	WSA

Action	Scope	Timing / Frequency	Responsibility
General environmental inspection	Inspection of environmental management controls and site documentation for contractor works (as required by the contractor's CEMP).	As per Contractor environmental management system (at least weekly)	All Contractors
Greenhouse gas emissions (NGER)	Refer to Sustainability Plan when approved. In the absence of an approved Sustainability Plan, NGERS will be reported in the Annual Report.	Annually	WSA Environment Manager
Monitoring compliance reporting	Undertaking monitoring as required by this Air Quality CEMP. Contractors are to provide WSA with a monthly summary of all air quality monitoring undertaken and advise of compliance with criteria. Monitoring will be undertaken against the criteria outlined in Section 10.2	Monthly	All Contractors
NEPM	Compliance with the air quality criteria as detailed in Section 8.1 (including the relevant NEPM requirements) will be included as part of the Annual Report.	Annually	WSA Environment Manager
Pollution and or excessive noise reporting	In accordance with the AEPR, WSA must give an airport environment officer for the airport, within 14 days, a written report if monitoring results indicate pollution, or excessive noise, occurring as a result of the undertaking of the works associated with the Stage 1 Airport Development. The trigger for a 'pollution event' is provided in the relevant schedules of the AEPR.	As required	WSA
Post-rainfall inspection	Inspection of environmental controls following a rainfall event exceeding 20 mm in any 24-hour period.	Within 24 hours of the rainfall event (excluding Sundays and public holidays)	All Contractors
Reporting pollution incidents	For the management and reporting requirements of all environmental incidents, refer to section 6 of the SEMF. Report pollution incidents resulting in offsite impacts to the NSW EPA – refer to WSA Environmental Non-conformance Classification and Reporting Procedure.	As required	All
Reporting of non-conformances and improvement opportunities	The management and reporting requirements of environmental non-conformances and improvement opportunities will be in accordance with Section 8 of the SEMF.	As required	WSA All Contractors
Shut-down inspections	Inspection of contractor works including status of environmental controls prior to shut-down of site for an extended period (i.e. more than 2 days).	Prior to site shut-down	All Contractors

10.5. Review of Approved Plans

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

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

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

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

10.6. Environmental Incidents and Complaints Management

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

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

11. Competence, Training and Awareness

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

All employees, contractors and utility staff conducting, work activities on site shall be required to undertake a site induction (or visitors induction) that includes construction air quality risks and mitigation measures. The induction training should include: requirements of this CEMP, relevant regulations, incidents and non conformance responses, location of sensitive receptors, complaints management etc.

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

12. References

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

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

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

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

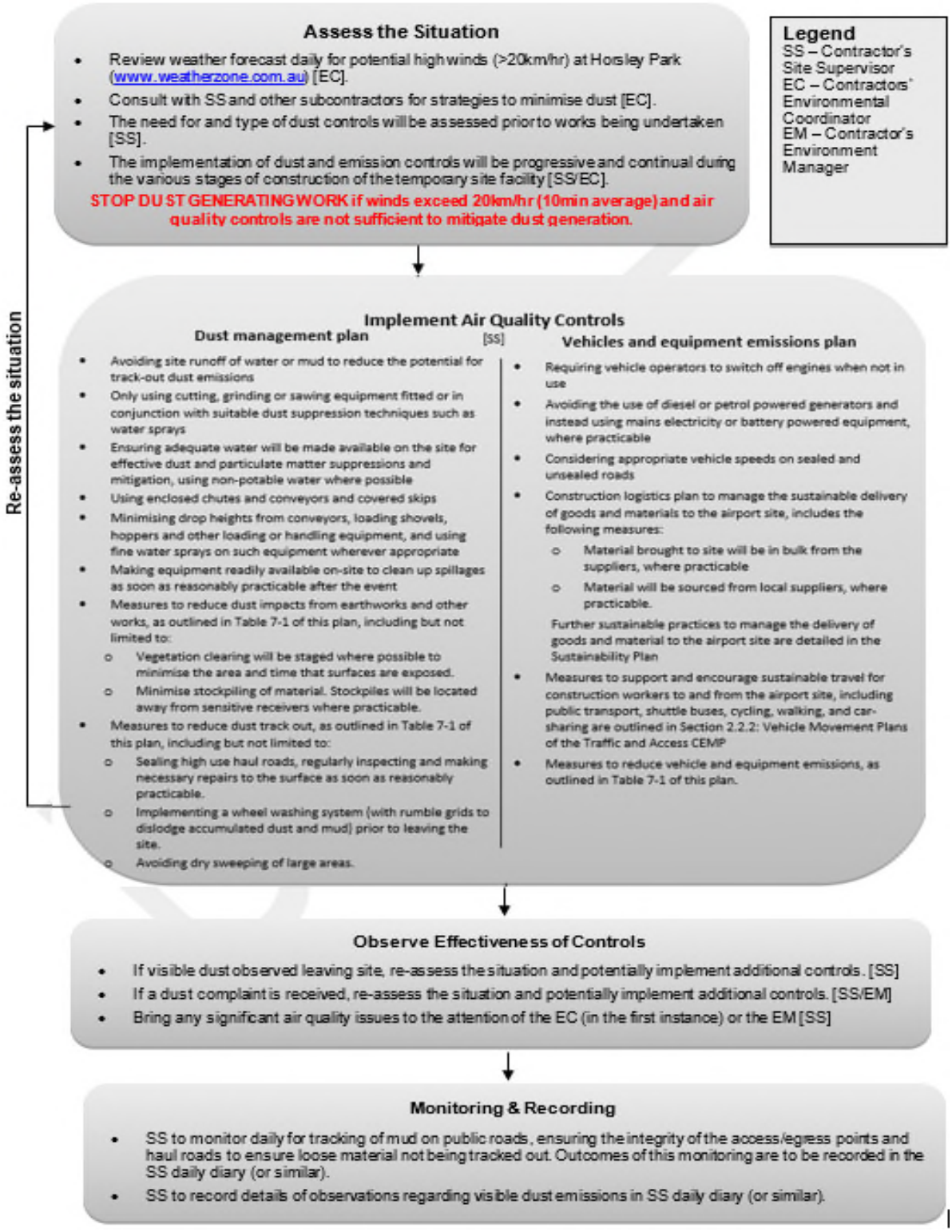
NERDDC 1988, Air Pollution from Surface Coal Mining: Measurement, Modelling and Community Perception, Project No. 921, National Energy Research Development and Demonstration Council, Canberra

NSW Department of Environment and Conservation (DEC) (now NSW Department of Planning and Environment), 2005. *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW*

NSW Office of Environment and Heritage (OEH), 2016. *Clean Air for NSW Consultation Paper*

Appendix A

Dust Management, Vehicle and Equipment Emissions Plan



Objectives

- To describe the minimum mandatory requirements for the management of air quality associated with construction activities.

Training

- All personnel are to undertake Project inductions identifying their environmental and compliance obligations under the Conditions for the Project.
- Obligations and responsibilities relevant to air quality management will also be included in daily pre-start or activity-specific pre-start briefings, toolbox talks or targeted environmental training as appropriate.

Standards and Guidelines

- Air Quality Construction Environmental Management Plan (AQCEMP)
- NSW EPA Local Government Air Quality Toolkit, Visual Guide: Dust from urban construction sites

Air Quality Management

The following are mitigation and management measures to address impacts on air quality from dust and vehicle and equipment emissions.

Dust Management

- Avoiding site runoff of water or mud to reduce the potential for track-out dust emissions;
- Only using cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays;
- Ensuring adequate water will be made available on the site for effective dust and particulate matter suppressions and mitigation, using non-potable water where possible;
- Using enclosed chutes and conveyors and covered skips;
- Minimising drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment, and using fine water sprays on such equipment wherever appropriate;
- Making equipment readily available on-site to clean up spillages as soon as reasonably practicable after the event;
- Measures to reduce dust impacts from earthworks and other works, as outlined in Table 7-1 of this plan, including but not limited to:
  - Vegetation clearing will be staged where possible to minimise the area and time that surfaces are exposed; and
  - Minimise stockpiling of material. Stockpiles will be located away from sensitive receivers where practicable.
- Measures to reduce dust tracking out, as outlined in **Table 12 and 13** of this plan, including but not limited to:
  - Sealing high use haul roads, regularly inspecting and making necessary repairs to the surface as soon as reasonably practicable;
  - Implementing a wheel washing system (with rumble grids to dislodge accumulated dust and mud) prior to leaving the site; and
  - Avoiding dry sweeping of large areas.

Vehicle and Equipment Emissions

- Requiring vehicle operators to switch off engines when not in use;
- Avoiding the use of diesel- or petrol-powered generators and instead using mains electricity or battery powered equipment, where practicable;
- Considering appropriate vehicle speeds on sealed and unsealed roads;
- Construction logistics plan to manage the sustainable delivery of goods and materials to the airport site, includes the following measures:

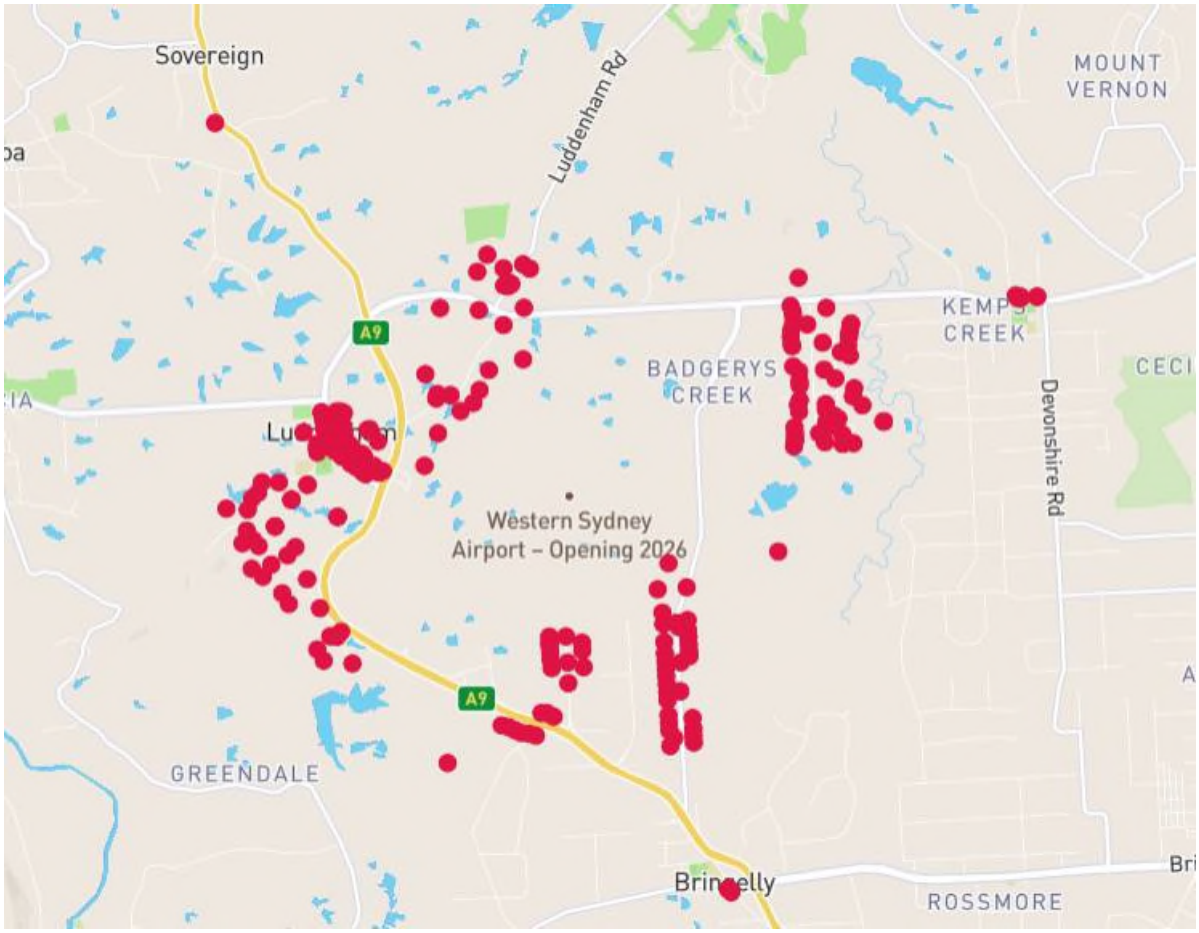
- Material brought to site will be in bulk from the suppliers, where practicable; and
- Material will be sourced from local suppliers, where practicable.

Further sustainable practices to manage the delivery of goods and material to the airport site are detailed in the Sustainability Plan.

- Measures to support and encourage sustainable travel for construction workers to and from the airport site, such as public transport, shuttle buses, cycling, walking, and car-sharing are outlined in Section 2.2.2 of the Traffic and Access CEMP; and
- Measures to reduce vehicle and equipment emissions, as outlined in **Table 13** of this plan.

Appendix B

Sensitive Receptors



Id	Privacy	Address	Suburb	State	Post Code
3027	No Restrictions	137 Willowdene Avenue	Luddenham	NSW	2745
3029	No Restrictions	45 Willowdene Avenue	Luddenham	NSW	2745
3031	No Restrictions	38 Jamison Street	Luddenham	NSW	2745
3032	No Restrictions	40 Jamison street	Luddenham	NSW	2745
3033	No Restrictions	2550 Elizabeth Drive	Luddenham	NSW	2745
3034	No Restrictions	2620 Elizabeth Drive	Luddenham	NSW	2745
3035	No Restrictions	889 Luddenham Road	Luddenham	NSW	2745
3037	No Restrictions	887 Luddenham Road	Luddenham	NSW	2745
3038	No Restrictions	869 Luddenham Road	Luddenham	NSW	2745
3039	No Restrictions	869A Luddenham Road	Luddenham	NSW	2745
3040	No Restrictions	846 Luddenham Road	Luddenham	NSW	2745
3041	No Restrictions	882 Luddenham Road	Luddenham	NSW	2745
3042	No Restrictions	892 Luddenham Road	Luddenham	NSW	2745
3044	No Restrictions	2172 The Northern Road	Luddenham	NSW	2745

Id	Privacy	Address	Suburb	State	Post Code
3045	No Restrictions	2166 The Northern Road	Luddenham	NSW	2745
3046	No Restrictions	9 Blaxland Avenue	Luddenham	NSW	2745
3047	No Restrictions	11 Blaxland Avenue	Luddenham	NSW	2745
3048	No Restrictions	13 Blaxland Avenue	Luddenham	NSW	2745
3049	No Restrictions	15 Blaxland Avenue	Luddenham	NSW	2745
3050	No Restrictions	17 Blaxland Avenue	Luddenham	NSW	2745
3051	No Restrictions	19 Blaxland Avenue	Luddenham	NSW	2745
3052	No Restrictions	21 Blaxland Avenue	Luddenham	NSW	2745
3053	No Restrictions	23 Blaxland Avenue	Luddenham	NSW	2745
3054	No Restrictions	25 Blaxland Avenue	Luddenham	NSW	2745
3056	No Restrictions	27 Blaxland Avenue	Luddenham	NSW	2745
3057	No Restrictions	29 Blaxland Avenue	Luddenham	NSW	2745
3058	No Restrictions	31 Blaxland Avenue	Luddenham	NSW	2745
3059	No Restrictions	33 Blaxland Avenue	Luddenham	NSW	2745
3060	No Restrictions	35 Blaxland Avenue	Luddenham	NSW	2745
3061	No Restrictions	37 Blaxland Avenue	Luddenham	NSW	2745
3062	No Restrictions	39 Blaxland Avenue	Luddenham	NSW	2745
3063	No Restrictions	41 Blaxland Avenue	Luddenham	NSW	2745
3064	No Restrictions	43 Blaxland Avenue	Luddenham	NSW	2745
3065	No Restrictions	45 Blaxland Avenue	Luddenham	NSW	2745
3066	No Restrictions	28 Blaxland Avenue	Luddenham	NSW	2745
3067	No Restrictions	30 Blaxland Avenue	Luddenham	NSW	2745
3068	No Restrictions	22 Blaxland Avenue	Luddenham	NSW	2745
3069	No Restrictions	18 Blaxland Avenue	Luddenham	NSW	2745
3070	No Restrictions	14 Blaxland Avenue	Luddenham	NSW	2745
3071	No Restrictions	16 Blaxland Avenue	Luddenham	NSW	2745
3072	No Restrictions	12 Blaxland Avenue	Luddenham	NSW	2745
3073	No Restrictions	10 Blaxland Avenue	Luddenham	NSW	2745
3074	No Restrictions	1 Michael Avenue	Luddenham	NSW	2745
2386	No Restrictions	7 Wade Close	Luddenham	NSW	2745
2385	No Restrictions	4 Wade Close	Luddenham	NSW	2745
2384	No Restrictions	3 Wade Close	Luddenham	NSW	2745
2383	No Restrictions	10 Wade Close	Luddenham	NSW	2745
2382	No Restrictions	6 Wade Close	Luddenham	NSW	2745
2381	No Restrictions	5 Wade Close	Luddenham	NSW	2745
2379	No Restrictions	2150 The Northern Road	Luddenham	NSW	2745
2378	No Restrictions	2150A The Northern Road	Luddenham	NSW	2745
2377	No Restrictions	2146 The Northern Road	Luddenham	NSW	2745
2387	No Restrictions	8 Wade Close	Luddenham	NSW	2745
2388	No Restrictions	9 Jamison Street	Luddenham	NSW	2745
2389	No Restrictions	11 Jamison Street	Luddenham	NSW	2745
2394	No Restrictions	260 Willowdene Avenue	Luddenham	NSW	2745
2395	No Restrictions	295 Willowdene Avenue	Luddenham	NSW	2745
2483	No Restrictions	2179 Elizabeth Drive	Luddenham	NSW	2745

Id	Privacy	Address	Suburb	State	Post Code
2514	No Restrictions	1197 The Northern Road	Bringelly	NSW	2556
2515	No Restrictions	8/45-51 Wentworth Rd	Bringelly	NSW	2556
2516	No Restrictions	8/1197 The Northern Road	Bringelly	NSW	2556
2631	No Restrictions	6/2130 The Northern Road	Luddenham	NSW	2745
2632	No Restrictions	2130 The Northern Road	Luddenham	NSW	2745
2829	No Restrictions	6/1197 The Northern Rd	Bringelly	NSW	2553
2837	No Restrictions	3/1197 The Northern Road	Bringelly	NSW	2556
2955	No Restrictions	200 Lawson Road	Badgerys Creek	NSW	2555
3006	No Restrictions	435 Willowdene Avenue	Luddenham	NSW	2745
3007	No Restrictions	163 Adams Road	Luddenham	NSW	2745
3008	No Restrictions	160 Martin Road	Badgerys Creek	NSW	2555
3009	No Restrictions	260 Martin Road	Badgerys Creek	NSW	2555
3010	No Restrictions	217 Martin Road	Badgerys Creek	NSW	2555
3011	No Restrictions	211 Martin Road	Badgerys Creek	NSW	2555
3012	No Restrictions	195 Martin Road	Badgerys creek	NSW	2555
3013	No Restrictions	2 Willowdene Avenue	Luddenham	NSW	2745
3014	No Restrictions	80 Willowdene Avenue	Luddenham	NSW	2745
3015	No Restrictions	120 Willowdene Avenue	Luddenham	NSW	2745
3016	No Restrictions	160 Willowdene Avenue	Luddenham	NSW	2745
3017	No Restrictions	200 Willowdene Avenue	Luddenham	NSW	2745
3018	No Restrictions	220A Willowdene Avenue	Luddenham	NSW	2745
3019	No Restrictions	230 Willowdene Avenue	Luddenham	NSW	2745
3020	No Restrictions	230A Willowdene Avenue	Luddenham	NSW	2745
3021	No Restrictions	235A Willowdene Avenue	Luddenham	NSW	2745
3023	No Restrictions	215 Willowdene Avenue	Luddenham	NSW	2745
3024	No Restrictions	165A Willowdene Avenue	Luddenham	NSW	2745
3025	No Restrictions	164 Willowdene Avenue	Luddenham	NSW	2745
3026	No Restrictions	135 Willowdene Avenue	Luddenham	NSW	2745
3121	No Restrictions	7 Ethan close	Luddenham	NSW	2745
3122	No Restrictions	5 Ethan close	Luddenham	NSW	2745
3123	No Restrictions	3 Ethan close	Luddenham	NSW	2745
3124	No Restrictions	2010 The Northern Road	Luddenham	NSW	2745
3125	No Restrictions	2208 The Northern Road	Luddenham	NSW	2745
3126	No Restrictions	2206 The Northern Road	Luddenham	NSW	2745
3127	No Restrictions	2204 The Northern Road	Luddenham		2745
3128	No Restrictions	2202 The Northern Road	Luddenham	NSW	2745
3129	No Restrictions	2200 The Northern Road	Luddenham	NSW	2745
3130	No Restrictions	2198 The Northern Road	Luddenham		2745
3131	No Restrictions	2196 The Northern Road	Luddenham	NSW	2745
3132	No Restrictions	2194 The Northern Road	Luddenham	NSW	2745
3133	No Restrictions	2190 The Northern Road	Luddenham	NSW	2745
3134	No Restrictions	2188 The Northern Road	Luddenham	NSW	2745
3135	No Restrictions	2186 The Northern Road	Luddenham		2745
3136	No Restrictions	2184 The Northern Road	Luddenham	NSW	2745

Id	Privacy	Address	Suburb	State	Post Code
3138	No Restrictions	4/2182 The Northern Road	Luddenham		2745
3139	No Restrictions	2/2182 The Northern Road	Luddenham	NSW	2745
3140	No Restrictions	1/2182 The Northern Road	Luddenham	NSW	2745
3302	No Restrictions	136G Mersey Road	Bringelly		2556
3303	No Restrictions	136H Mersey Road	Bringelly		2556
3304	No Restrictions	132 Mersey Road	Bringelly		2556
3305	No Restrictions	122 Mersey Road	Bringelly		2556
3306	No Restrictions	130 Mersey Road	Bringelly		2556
3307	No Restrictions	120 Mersey Road	Bringelly		2556
3309	No Restrictions	110A Mersey Road	Bringelly		2556
3312	No Restrictions	306 Badgerys Creek Road	Badgerys Creek		
3580	No Restrictions	Mersey road	Bringelly		2556
5555	No Restrictions	Lot 1 Campbell Street	Luddenham	NSW	2745
5556	No Restrictions	56 Campbell Street	Luddenham	NSW	2745
5558	No Restrictions	58 Campbell Street	Luddenham	NSW	2745
5559	No Restrictions	60 Campbell Street	Luddenham	NSW	2745
5561	No Restrictions	64 Campbell Street	Luddenham	NSW	2745
5562	No Restrictions	68 Campbell Street	Luddenham	NSW	2745
5564	No Restrictions	10A Willowdene Avenue	Luddenham	NSW	2745
5565	No Restrictions	220 Willodene Avenue	Luddenham	NSW	2745
5569	No Restrictions	1655 The Northern Road	Bringelly	NSW	2556
5570	No Restrictions	1635 The Northern Road	Bringelly	NSW	2556
5571	No Restrictions	2 Dwyer Road	Bringelly	NSW	2556
5572	No Restrictions	1615 The Northern Road	Bringelly	NSW	2556
5573	No Restrictions	1592 The Northern Road	Bringelly	NSW	2556
5574	No Restrictions	1582 The Northern Road	Bringelly	NSW	2556
5575	No Restrictions	3 Jamison Street	Luddenham	NSW	2745
3075	No Restrictions	3 Michael Avenue	Luddenham	NSW	2745
3077	No Restrictions	7 Michael Avenue	Luddenham	NSW	2745
3078	No Restrictions	9 Michael Avenue	Luddenham	NSW	2745
3079	No Restrictions	11 Michael Avenue	Luddenham	NSW	2745
3080	No Restrictions	13 Michael Avenue	Luddenham	NSW	2745
3081	No Restrictions	15 Michael Avenue	Luddenham	NSW	2745
3082	No Restrictions	17 Michael Avenue	Luddenham	NSW	2745
3083	No Restrictions	19 Michael Avenue	Luddenham	NSW	2745
3085	No Restrictions	10 Michael Avenue	Luddenham	NSW	2745
3086	No Restrictions	8 Michael Avenue	Luddenham	NSW	2745
3087	No Restrictions	6 Michael Avenue	Luddenham	NSW	2745
3088	No Restrictions	4 Michael Avenue	Luddenham	NSW	2745
3089	No Restrictions	2 Michael Avenue	Luddenham	NSW	2745
3090	No Restrictions	1 Hawkins Avenue	Luddenham	NSW	2745
3091	No Restrictions	2 Hawkins Avenue	Luddenham	NSW	2745
3092	No Restrictions	3 Hawkins Avenue	Luddenham	NSW	2745
3093	No Restrictions	4 Hawkins Avenue	Luddenham	NSW	2745

Id	Privacy	Address	Suburb	State	Post Code
3094	No Restrictions	6 Hawkins Avenue	Luddenham	NSW	2745
3095	No Restrictions	8 Hawkins Avenue	Luddenham	NSW	2745
3096	No Restrictions	10 Hawkins Avenue	Luddenham	NSW	2745
3097	No Restrictions	26 Hawkins Avenue	Luddenham	NSW	2745
3098	No Restrictions	20 Hawkins Avenue	Luddenham	NSW	2745
3099	No Restrictions	18 Hawkins Avenue	Luddenham	NSW	2745
3100	No Restrictions	14 Hawkins Avenue	Luddenham	NSW	2745
3101	No Restrictions	5 Hawkins Avenue	Luddenham	NSW	2745
3102	No Restrictions	7 Hawkins Avenue	Luddenham	NSW	2745
3103	No Restrictions	9 Hawkins Avenue	Luddenham	NSW	2745
3104	No Restrictions	11 Hawkins Avenue	Luddenham	NSW	2745
3105	No Restrictions	13 Hawkins Avenue	Luddenham	NSW	2745
3106	No Restrictions	15 Hawkins Avenue	Luddenham	NSW	2745
3107	No Restrictions	17 Hawkins Avenue	Luddenham	NSW	2745
3108	No Restrictions	24 Hawkins Avenue	Luddenham	NSW	2745
3109	No Restrictions	22 Hawkins Avenue	Luddenham	NSW	2745
3110	No Restrictions	16 Hawkins Avenue	Luddenham	NSW	2745
3111	No Restrictions	12 Hawkins Avenue	Luddenham	NSW	2745
3112	No Restrictions	21 Jamison Street	Luddenham	NSW	2745
3113	No Restrictions	25 Jamison Street	Luddenham	NSW	2745
3114	No Restrictions	2 Ethan close	Luddenham	NSW	2745
3115	No Restrictions	4 Ethan close	Luddenham	NSW	2745
3116	No Restrictions	6 Ethan close	Luddenham	NSW	2745
3117	No Restrictions	8 Ethan close	Luddenham	NSW	2745
3118	No Restrictions	10 Ethan close	Luddenham	NSW	2745
3119	No Restrictions	12 Ethan close	Luddenham	NSW	2745
3120	No Restrictions	16 Ethan close	Luddenham	NSW	2745
586	No Restrictions	105-115 Adams Road	LUDDENHAM	NSW	2745
589	No Restrictions	2 Jamison Street	LUDDENHAM	NSW	2745
1560	No Restrictions	1463 Elizabeth Drive	KEMPS CREEK	NSW	2178
699	No Restrictions	151 Adams Road	Luddenham	NSW	
701	No Restrictions	1970 Elizabeth Drive	BADGERYS CREEK	NSW	2555
703	No Restrictions	40 Martin Road	Badgerys Creek	NSW	2555
706	No Restrictions	170 Martin Road	BADGERYS CREEK	NSW	2555
1475	No Restrictions	2178 The Northern Road	LUDDENHAM	NSW	2745
707	No Restrictions	165 Martin Road	Badgerys Creek	NSW	2555
1370	No Restrictions	Lot 5/1443 Elizabeth Dr	KEMPS CREEK	NSW	2178
708	No Restrictions	150 Martin Road	BADGERYS CREEK	NSW	2555
1269	No Restrictions	1443 Elizabeth drive	KEMPS CREEK	NSW	2178
709	No Restrictions	115 Martin Road	BADGERYS CREEK	NSW	2555
1010	No Restrictions	345 Badgerys Creek Road	BADGERYS CREEK	NSW	2555

Id	Privacy	Address	Suburb	State	Post Code
1009	No Restrictions	335 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
1007	No Restrictions	260 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
1006	No Restrictions	230 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
1005	No Restrictions	190 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
1004	No Restrictions	158 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
1002	No Restrictions	145 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
1001	No Restrictions	130 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
1000	No Restrictions	110 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
999	No Restrictions	100 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
997	No Restrictions	475 Badgerys Creek Road		NSW	2555
971	No Restrictions	270 Badgerys Creek Road	BADGERYS CREEK	NSW	2556
785	No Restrictions	4/2170 The Northern Road,	Luddenham	NSW	2745
810	No Restrictions	355 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
949	No Restrictions	1/1455-1463 Elizabeth Drive	KEMPS CREEK	NSW	2178
947	No Restrictions	1465-1467 Elizabeth Drive	KEMPS CREEK	NSW	2178
811	No Restrictions	355a Badgerys Creek Road	BADGERYS CREEK	NSW	2555
812	No Restrictions	325 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
813	No Restrictions	220 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
814	No Restrictions	305 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
830	No Restrictions	155 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
829	No Restrictions	120 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
828	No Restrictions	175 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
827	No Restrictions	195 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
826	No Restrictions	140 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
825	No Restrictions	205 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
824	No Restrictions	152 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
823	No Restrictions	235 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
822	No Restrictions	162 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
821	No Restrictions	180 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
820	No Restrictions	200 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
819	No Restrictions	293 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
815	No Restrictions	315 Badgerys Creek Road	BADGERYS CREEK	NSW	2555

Id	Privacy	Address	Suburb	State	Post Code
816	No Restrictions	210 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
365	No Restrictions	3059 Northern Road	Luddenham	NSW	2745
366	No Restrictions	3057 Northern Road	Luddenham	NSW	2745
369	No Restrictions	3051 Northern Road	Luddenham	NSW	2745
370	No Restrictions	3047 Northern Road	Luddenham	NSW	2745
2227	No Restrictions	7 Jamison Street	LUDDENHAM	NSW	
2226	No Restrictions	5 Jamison Street	LUDDENHAM	NSW	
2225	No Restrictions	1 Jamison Street	LUDDENHAM	NSW	
2224	No Restrictions	23 Jamison Street	LUDDENHAM	NSW	2745
2222	No Restrictions	18 Jamison Street	LUDDENHAM	NSW	
371	No Restrictions	3045 Northern Road	Luddenham	NSW	2745
2220	No Restrictions	14 Jamison Street	LUDDENHAM	NSW	
2219	No Restrictions	12 Jamison Street	LUDDENHAM	NSW	2745
372	No Restrictions	3043 Northern Road	Luddenham	NSW	2745
373	No Restrictions	3039 Northern Road	Luddenham	NSW	2745
375	No Restrictions	3035 Northern Road	Luddenham	NSW	2745
2218	No Restrictions	6 Jamison Street	LUDDENHAM	NSW	
376	No Restrictions	19 Northern Road	Luddenham	NSW	2745
2216	No Restrictions	2156 The Northern Road	LUDDENHAM	NSW	2745
379	No Restrictions	65 Adams Road	Luddenham	NSW	2745
2215	No Restrictions	2154 The Northern Road	Luddenham	NSW	2745
2212	No Restrictions	2144 The Northern Road	LUDDENHAM	NSW	2745
387	No Restrictions	265 Adams Road	Luddenham	NSW	2745
393	No Restrictions	892 Luddenham Road	Luddenham	NSW	2745
399	No Restrictions	2111 Elizabeth Drive	Luddenham	NSW	2745
2185	No Restrictions	375 Willowdene Avenue	LUDDENHAM	NSW	2745
404	No Restrictions	2-1953 Elizabeth Drive	Luddenham	NSW	2745
410	No Restrictions	15 Lawson Road	Badgerys Creek	NSW	2555
2176	No Restrictions	150 Mersey Road	BRINGELLY	NSW	2555
413	No Restrictions	65 Lawson Road	Badgerys Creek	NSW	2555
422	No Restrictions	155 Lawson Road	Badgerys Creek	NSW	2555
1866	No Restrictions	235 Willowdene Avenue	Luddenham	NSW	2745
428	No Restrictions	160 Lawson Road	Badgerys Creek	NSW	2555
434	No Restrictions	210 Lawson Road	Badgerys Creek	NSW	2555
1854	No Restrictions	55 Lawson Road	BADGERYS CREEK	NSW	2555
443	No Restrictions	60 Martin Road	Badgerys Creek	NSW	2555
446	No Restrictions	65 Martin Road	Badgerys Creek	NSW	2555
1850	No Restrictions	125 Lawson Road	BADGERYS CREEK	NSW	2555
460	No Restrictions	80 Martin Road	Badgerys Creek	NSW	2555
461	No Restrictions	90 Martin Road	Badgerys Creek	NSW	2555
463	No Restrictions	186 Martin Road	Badgerys Creek	NSW	2555
559	No Restrictions	2/2140 The Northern Road	LUDDENHAM	NSW	2745

Id	Privacy	Address	Suburb	State	Post Code
563	No Restrictions	6/2140 The Northern Road,	Luddenham	NSW	2745
576	No Restrictions	14 Eaton Road	LUDDENHAM	NSW	2745
584	No Restrictions	15 Adams Road	LUDDENHAM	NSW	2745
2933	No Restrictions	35 Lawson Road	Badgerys Creek	NSW	2555
2859	No Restrictions	260 Willowdene Avenue	Ludenham	NSW	2745
1844	No Restrictions	195 Lawson Road	BADGERYS CREEK	NSW	2555
403	No Restrictions	1745 (Lot 3) Elizabeth Drive	Luddenham	NSW	2745
3249	No Restrictions	1602 The Northern Road			
2830	No Restrictions	4/1153 The Northern Road	Bringelly	NSW	2553
378	No Restrictions	50-80 Adams Road	Luddenham	NSW	2745
784	No Restrictions	3/2140 The Northern Road	Luddenham	NSW	2745
3272		1645 The Northern Road	Bringelly	NSW	
2175	No Restrictions	145 Mersey Road	BRINGELLY	NSW	2556
1584	No Restrictions	4/1455 Elizabeth Drive	KEMPS CREEK	NSW	2178
3319	No Restrictions	1675 The Northern Road	Bringelly	NSW	2556
696	No Restrictions	2140 The Northern Road	Luddenham	NSW	2745
2182	No Restrictions	460 Willowdene Avenue	LUDDENHAM	NSW	2745
389	No Restrictions	185 Adams Road (7 Anton Road)	Luddenham	NSW	2745
1855	No Restrictions	45 Lawson Road	BADGERYS CREEK	NSW	2555
430	No Restrictions	190 Lawson Road	Badgerys Creek	NSW	2555
711	No Restrictions	50 Martin Road	BADGERYS CREEK	NSW	2555
368	No Restrictions	3053 Northern Road	Luddenham	NSW	2745
421	No Restrictions	145 Lawson Road	Badgerys Creek	NSW	2555
950	No Restrictions	175 Badgerys Creek Rd	BRINGELLY	NSW	2556
377	No Restrictions	Lot 3 Adams Road	Luddenham	NSW	2745
557	No Restrictions	70 Eaton Road	LUDDENHAM	NSW	2745
575	No Restrictions	18 Eaton Road	LUDDENHAM	NSW	2745
1371	No Restrictions	9 Elizabeth drive	KEMPS CREEK	NSW	2178
1843	No Restrictions	205 Lawson Road	BADGERYS CREEK	NSW	2555
2249	No Restrictions	125 Mersey Road	Bringelly	NSW	2556
1841	No Restrictions	235 Lawson Road	BADGERYS CREEK	NSW	2555
1754	No Restrictions	150 Lawson Road	BADGERYS CREEK	NSW	2555
2373	No Restrictions	330 Willowdene Avenue	Luddenham	NSW	2745
923	No Restrictions	1/2130 Northern Road, Luddenham	LUDDENHAM	NSW	2745
964	No Restrictions	175 Badgerys Creek Road	BADGERYS CREEK	NSW	
388	No Restrictions	275 Adams Road	Luddenham	NSW	2745
601	No Restrictions	12 Eaton Road	LUDDENHAM	NSW	2745
1489	No Restrictions	210 Martin Road	BADGERYS CREEK	NSW	2555
416	No Restrictions	87 Lawson Road	Badgerys Creek	NSW	2555
1852	No Restrictions	83 Lawson Road	BADGERYS CREEK	NSW	2555

Id	Privacy	Address	Suburb	State	Post Code
788	No Restrictions	Lot 10, 140 Adams Road	Luddenham	NSW	2745
817	No Restrictions	297 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
2722	No Restrictions	325 Willowdene Avenue	Luddenham	NSW	2745
2180	No Restrictions	510 Willowdene Avenue	LUDDENHAM	NSW	2745
2209	No Restrictions	320 Badgerys Creek Road	BADGERYS CREEK	NSW	2555
1853	No Restrictions	75 Lawson Road	BADGERYS CREEK	NSW	2555
2250	No Restrictions	135 Mersey Road	BRINGELLY	NSW	2556
3222	No Restrictions	161 Adams Road	Luddenham	NSW	2745
418	No Restrictions	115 Lawson Road	Badgerys Creek	NSW	2555
3326	No Restrictions	180 Adams Road	Luddenham	NSW	
3232	No Restrictions	180 Adams Road	Luddenham	NSW	2745
698	No Restrictions	205 Adams Road	Luddenham	NSW	2745
448	No Restrictions	210 Martin Road	Badgerys Creek	NSW	2555
789	No Restrictions	125-135 Adams Road	Luddenham	NSW	2745
602	No Restrictions	16 Eaton Road	LUDDENHAM	NSW	2745
1366	No Restrictions	1745 Elizabeth Drive	Badgerys Creek	NSW	
3235	No Restrictions	510 Willowdene Ave	Luddenham	NSW	2745
2838	No Restrictions	1/1193 The Northern Road	Bringelly	NSW	2553
944	No Restrictions	325 Badgerys Creek Road	BRINGELLY	NSW	2556
2639	No Restrictions	50 Willowdene Avenue	Luddenham	NSW	2745
2638	No Restrictions	50 Willowdene Avenue	Luddenham	NSW	2745
1486	No Restrictions	50 Willowdene Ave	LUDDENHAM	NSW	2745
429	No Restrictions	180 Lawson Road	Badgerys Creek	NSW	2555
581	No Restrictions	16 Adams Road	LUDDENHAM	NSW	2745
2184	No Restrictions	405 Willowdene Avenue	LUDDENHAM	NSW	2745
2248	No Restrictions	101-107 Mersey Road	BRINGELLY	NSW	2556
1721	No Restrictions	30 Martin Road	BADGERYS CREEK	NSW	2555
1035	No Restrictions	30 Martin Road	BADGERYS CREEK	NSW	2556
407	No Restrictions	5 Lawson Road	Badgerys Creek	NSW	2555
713	No Restrictions	7,2130 Northern Road	LUDDENHAM	NSW	2745
439	No Restrictions	255 Lawson Road	Badgerys Creek	NSW	2555
3233	No Restrictions	475 Badgerys Creek Road	Badgerys Creek	NSW	2555
1975	No Restrictions	1675 The Northern Road	Bringelly	NSW	2556
1490	No Restrictions	210 Martin Road	BADGERYS CREEK	NSW	2555
590	No Restrictions	2215 Northern Road	LUDDENHAM	NSW	2745
361	No Restrictions	3069 Northern Road	Luddenham	NSW	2745
447	No Restrictions	100-110 Martin Road	Badgerys Creek	NSW	2555
3036	No Restrictions	300 Badgerys creek road	Badgerys Creek	NSW	2556
579	No Restrictions	7 Adams Road	LUDDENHAM	NSW	2745
3308	No Restrictions	110 Mersey Road	Bringelly	NSW	2556
2576	No Restrictions	115 Mersey Road	BRINGELLY	NSW	2556

Id	Privacy	Address	Suburb	State	Post Code
3161	No Restrictions	1783 Elizabeth Drive	Luddenham	NSW	2745
857	No Restrictions	185 Lawson Road	BADGERYS CREEK	NSW	2555
1561	No Restrictions	Lot 10 1455 Elizabeth Drive	KEMPS CREEK	NSW	2178
2194	No Restrictions	2215 The Northern Road	LUDDENHAM	NSW	2745
1842	No Restrictions	225 Lawson Road	BADGERYS CREEK	NSW	2555
710	No Restrictions	85 Martin Road	BADGERYS CREEK	NSW	2555
1557	No Restrictions	210 Martin Road	BADGERYS CREEK	NSW	2555
840	No Restrictions	1 Anton Road	LUDDENHAM	NSW	2745
2187	No Restrictions	350 Willowdene Avenue	LUDDENHAM	NSW	2745
438	No Restrictions	245b Lawson Road	Badgerys Creek	NSW	2555
1840	No Restrictions	245 Lawson Road	BADGERYS CREEK	NSW	2555
1857	No Restrictions	25 Lawson Road	BADGERYS CREEK	NSW	2555
3137	No Restrictions	3/2182 The Northern Road	Luddenham	NSW	2745
582	No Restrictions	18 Adams Road	LUDDENHAM	NSW	2745
382	No Restrictions	180 Adams Road	Luddenham	NSW	2745