

Airport North Precinct Submissions report

July 2016



BLANK PAGE

Roads and Maritime Services

Airport North Precinct Submissions report

July 2016

Prepared by WSP|Parsons Brinckerhoff and Roads and Maritime Services
ABN: 80 078 004 798.

Level 27, Ernst & Young Centre.
680 George Street.
SYDNEY NSW 2000.

Provide Roads and Maritime Services Publication Number]

COPYRIGHT: The concepts and information contained in this document are the property of Roads and Maritime Services NSW (Roads and Maritime). Use or copying of this document in whole or in part without the written permission of Roads and Maritime constitutes an infringement of copyright.

Document controls

Approval and authorisation

Title	
Accepted on behalf of Roads and Maritime NSW by	
Signed	
Dated	

Document status

[The below document status table is for tracking during preparation of the submissions report. It may be modified to fit with the consultant's internal quality control procedures where necessary. It is to be removed from the final version of the submissions report.]

Document status	Date	Prepared by	Reviewed by
Preliminary Draft for review	22/6/2016	B Nixon	E Taylor
Final draft for approval	27/06/2016	E Taylor	E Taylor
Final for approval	29/06/2016	E Taylor	E Taylor

Executive summary

Roads and Maritime Services is proposing to upgrade roads north of Sydney's Kingsford Smith Airport to improve traffic flow and connections to the airport and Port Botany. The Airport North precinct proposal is one of a suite of improvements planned for the roads around Sydney Airport.

The key features of the proposal include:

- Converting the southern sections of Robey Street and O'Riordan Street into one-way roads
- Widening O'Riordan Street to provide six through lanes between Bourke Road and Robey Street
- Reconfiguring the existing traffic lights on O'Riordan Street between Qantas Drive and Bourke Road
- Upgrading the footpath on the eastern side of O'Riordan Street.

The proposal would help increase traffic capacity and reduce congestion along O'Riordan Street and improve access to Sydney Airport domestic terminals.

The assessment of the proposal is documented in the Review of Environmental Factors (REF) prepared for the Airport North Precinct (Roads and Maritime, May 2016). The REF was placed on public display between 23 May and 13 June 2016 for the community and stakeholders to provide their feedback. The REF was displayed at two locations and was also placed on the Roads and Maritime website and made available to view and download. An email was sent to 49 registered stakeholders to advise them of the display period and locations. This included registered community members, businesses, Sydney Airport Corporation Limited (SACL), Botany Bay Council and other agencies. The stakeholder engagement process also included the distribution of 7,200 project update newsletters via letterbox-drop to the area bordered by Qantas Drive, Joyce Drive, Sparks Street, Maloney Street, Dalmeny Avenue, Hayes Road, Doody Street and the Alexandra Canal.

Roads and Maritime accepted submissions until 16 June 2016. A total of nine submissions were received in response to the display of the REF. This included submissions from one government agency (the Sydney Water Corporation (SWC)), the SACL and seven from the local community.

This report summarises the comments raised in the submissions.

Issues raised in submissions

Submissions received raised the below comments. These have been addressed in Chapter 2 of this document.

The issues raised by SWC related primarily to:

- Water and wastewater assets:
 - Presence of assets
 - Approvals, licencing requirements and ongoing consultation
 - Design aspects
 - Project staging to occur to ensure maintaining service to customers
 - Required ongoing access to Sydney Water assets
 - Requirement for ongoing consultation with SWC through the life of the project.
- Stormwater assets:
 - Requirement for ongoing consultation with SWC through the life of the project
 - Design aspects.

The issues raised by SACL related primarily to:

- Construction staging of the work and potential for changes to the current program
- Coordination of construction work with Sydney Airport

- Changes to the design including traffic lane configurations, property adjustments and connection to Sydney Airport facilities
- Construction staging to consider the use of temporary operation of the traffic signals in the area.

The main comments raised by the community related to:

- The impact of the proposal on traffic congestion
- Request for the provision of public transport, particularly bus stops
- Cyclist safety and request for dedicated path facilities for cyclists
- Request from a business on how the proposal will affect their operation
- Coordination with airport egress changes and the proposal design – omission in the map included in the project consultation material
- Request for traffic lights to include countdown display timers
- Lack of footpath on west side of O’Riordan Street which has pedestrian usage
- Construction period pedestrian access.

Additional assessment and environmental management

No changes are proposed that would require additional environmental assessment as a result of the issues raised in submissions.

Two additional safeguards have been included in the environmental management measures and no revisions have been made to the environmental assessment as described in the REF.

Conclusion of this report

The impacts of the proposal are not considered to be significant and the identified impacts will be appropriately managed and mitigated with implementation of the identified management measures.

The proposal meets the project objectives, while effectively minimising environmental impacts and considering community comments.

Contents

Executive summary	5
Contents	7
1 Introduction and background	8
1.1 The proposal.....	8
1.2 REF display	8
1.3 Purpose of the report.....	8
2 Response to issues	10
2.1 Overview of issues raised.....	10
2.2 Traffic, transport and access	11
2.3 Water and wastewater assets	12
2.4 Stormwater assets.....	13
2.5 Construction	14
2.6 Design	15
2.7 Cyclist safety	16
2.8 Property and business impacts	17
2.9 Traffic signals	17
2.10 Pedestrian access	17
3 Environmental management	18
3.1 Environmental management plans (or system)	18
3.2 Summary of safeguards and management measures.....	18
3.3 Licensing and approvals.....	33
4 References.....	34

Appendices

Project Update Newsletter

1 Introduction and background

1.1 The proposal

Roads and Maritime Services is proposing to upgrade roads north of Sydney's Kingsford Smith Airport to improve traffic flow and connections to the airport and Port Botany. The Airport North precinct proposal is one of a suite of improvements planned for the roads around Sydney Airport.

The key features of the proposal include

- Converting the southern sections of Robey Street and O'Riordan Street into one-way roads
- Widening O'Riordan Street to provide six through lanes between Bourke Road and Robey Street
- Reconfiguring the existing traffic lights on O'Riordan Street between Qantas Drive and Bourke Road
- Upgrading the footpath on the eastern side of O'Riordan Street.

The proposal would help increase traffic capacity and reduce congestion along O'Riordan Street and improve access to Sydney Airport domestic terminals.

A more detailed description of the Airport North Precinct proposal is found in Section 3.1 of the Airport North Precinct Review of Environmental Factors (REF) prepared by Roads and Maritime in May 2016.

1.2 REF display

Roads and Maritime prepared a Review of Environmental Factors (REF) to assess the environmental impacts of the proposed work. The REF was publically displayed for 22 days between 23 May and 13 June 2016 at two locations, as detailed in Table 1.1. The REF was placed on the Roads and Maritime project website and made available for download. The display locations and website link were advertised online at rms.nsw.gov.au/airportnorth.

An email was also sent to 49 registered stakeholders to advise them of the display period and locations. This included registered community members, businesses, Sydney Airport Corporation Limited (SACL), Botany Bay Council and other agencies. Project update newsletters (refer Appendix 1) were distributed to 7,200 properties via letterbox-drop to the area bordered by Qantas Drive, Joyce Drive, Sparks Street, Maloney Street, Dalmeny Avenue, Hayes Road, Doody Street and the Alexandra Canal.

Two community information sessions were held on 28 May and 2 June 2016 at Eastlakes Community Hall, 2 Florence Avenue, Eastlakes.

Table 1.1: Display locations

Location	Address
City of Botany Bay Council Administration Centre	141 Coward Street, Mascot
Mascot Library	2 Hatfield Street, Mascot

1.3 Purpose of the report

This submissions report relates to the REF prepared for the Airport North Precinct, and should be read in conjunction with that document.

The REF was placed on public display and submissions relating to the proposal and the REF were received, collated and analysed by Roads and Maritime. This submissions report summarises the issues raised and provides responses to each issue (Chapter 2). The report includes the environmental management measures from the REF and identifies two new required environmental safeguards (Chapter 3).

No project changes are proposed that would require additional environmental assessment. No revisions have been made to the environmental assessment as described in the REF.

2 Response to issues

Roads and Maritime Services received nine submissions, accepted up until the 16 June 2016. Table 2.1 lists the respondents and each respondent's allocated submission number. The table also indicates where the issues from each submission have been addressed in Chapter 2 of this report.

Table 2.1: Respondents

Respondent	Submission No.	Section number where issues are addressed
Individual	1	2.2.1
Individual	2	2.2.2
Individual	3	2.2.1
Sydney Water Corporation (SWC) ¹	4	2.3.1, 2.3.2, 2.3.3, 2.3.4, 2.4.1, 2.4.2
SACL	5	2.5.1, 2.5.2, 2.5.3, 2.6.1, 2.6.2, 2.6.3
Individual	6	2.7
Individual	7	2.8
Individual	8	2.9
Individual	9	2.10, 2.5.3

Note 1: The SWC submission was specifically in response to the State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) consultation activity undertaken during the REF preparation phase as opposed to a submission on the REF exhibition. Issues raised in the submission are however still addressed in this report.

2.1 Overview of issues raised

A total of nine submissions were received in response to the display of the REF. This included a submission from one government agency (the SWC), a submission from Sydney Airport Corporation Limited (SACL) and seven from the community.

Each submission has been examined individually to understand the issues being raised. The issues raised in each submission have been extracted and collated, and corresponding responses to the issues have been provided. Where similar issues have been raised in different submissions, only one response has been provided. The issues raised and Roads and Maritime response to these issues forms the basis of this chapter.

Of the submissions received, four submissions supported the proposal but objected to specific components. One submission was against the proposal and four submissions did not offer a position on the proposal.

The issues raised by SWC related primarily to:

- Water and wastewater assets:
 - Presence of assets
 - Approvals, licencing requirements and ongoing consultation
 - Design aspects

- Project staging to occur to ensure maintaining service to customers
- Required ongoing access to Sydney Water assets
- Requirement for ongoing consultation with SWC through the life of the project.
- Stormwater and surface assets:
 - Requirement for ongoing consultation with SWC through the life of the project
 - Design aspects.

The issues raised by SACL related primarily to:

- Construction staging of the work and potential for changes to the current program
- Coordination of construction work with Sydney Airport
- Changes to the design including traffic lane configurations, property adjustments and connection to Sydney Airport facilities
- Construction staging to consider the use of temporary operation of the traffic signals in the area.

The main comments raised by the community related to:

- The impact of the proposal on traffic congestion
- Request for the provision of public transport, particularly bus stops
- Cyclist safety and request for dedicated path facilities for cyclists
- Request from a business on how the proposal will affect their operation
- Coordination with airport egress changes and the proposal design – omission in the map included in the project consultation materials
- Request for traffic lights to include countdown display timers
- Lack of footpath on west side of O’Riordan Street which has pedestrian usage
- Construction period pedestrian access.

No form letters were received during the submissions period.

2.2 Traffic, transport and access

2.2.1 Congestion

Submission number(s)

- 1 – Individual
- 3 – Individual

Comment description

1. Expressed concern that the proposal would not reduce congestion due to the amount of freight traffic on the road corridor.
2. Expressed concern that improvements to O’Riordan Street would worsen the traffic congestion problems without there being improvements to the roads within Sydney Airport.

Response

1. Traffic modelling is discussed in Section 6.1 of the REF. It is acknowledged that traffic volumes across the network will increase in the future. The traffic modelling predicts that without the proposal, the network would become constrained to the point where average speeds through the area would be reduced by 30 per cent in the AM and PM peak periods. The proposal would increase capacity and improve flow of traffic through the area when compared to the Do Nothing Option. In the PM peak, the proposal would result in the average traffic speed increasing by up to 15%. The traffic modelling has identified that the preferred option for the proposal would best meet the proposal objectives by improving traffic flow through the network for all vehicles, reduce congestion and reduce delay times, when compared to the other options assessed.

Freight traffic management and in particular conversion of freight traffic from roads to rail is outside the scope of this proposal and is an issue being managed by Transport for NSW.

2. There will be further improvements to the internal road network at Sydney Airport to reflect *The Sydney Airport Masterplan 2033* proposal of a new one way road system through the T2/T3 domestic terminals. Roads and Maritime will be coordinating the proposal to accommodate these further improvements to the internal airport road network and help improve traffic flow around the airport.

2.2.2 Public Transport

Submission number(s)

2 - Individual

Comment description

Requested placement of an additional bus stop for the number 400 bus on O’Riordan Street between King and High Streets.

Response

Public transport provision, specifically buses, is discussed in Sections 6.1.2 and 6.1.4 of the REF. The provision of additional bus stops is out of the scope of the current proposal and is an issue being considered by Transport for NSW.

2.3 Water and wastewater assets

2.3.1 Presence of assets

Submission number(s)

4 – SWC

Issue description

Confirmed the presence of assets within and outside of the project area (water and wastewater).

Response

Noted. The details of the main adjustments that would be required are outlined in Section 3.5 and Table 3.8 of the REF. Roads and Maritime has considered the existing location of utilities in the development and design of the proposal.

2.3.2 Approvals, licensing requirements and ongoing consultation

Submission number(s)

4 – SWC

Issue description

1. SWC reserves the right to assess, based on final project layout and construction designs prepared by project team, the impacts on their assets located within the project scope, and the potential needs for adjustments funded by the project to accommodate accessibility of their pipes for operational and maintenance purposes, new pavement locations and changes to structures.
2. Amplification of mains may need to occur to facilitate future growth along the development corridor. This will be assessed as part of adjustment applications.
3. The environmental approval will need to consider the discharge protocols of chlorinated water and trade waste licence requests will need to meet SWC requirements.

Response

Roads and Maritime will continue to work with SWC through the detailed design, construction and operation of the proposal and in relation to any potential impacts on SWC water and wastewater assets. The following comments relate to the particular issue points above:

1. Noted
2. Noted
3. The environmental approval and trade waste licence requirements are noted and will be accorded with by Roads and Maritime.

2.3.3 Design

Submission number

4 – SWC

Issue description

The asset adjustments are being assessed. Preliminary commentary noted that DN150mm water main will need to be diverted to within the proposed footway and has been identified for amplification to a 200 mm main.

Response

Noted. Roads and Maritime will consult with SWC during detailed design to address this.

2.3.4 Staging

Submission number

4 – SWC

Issue description

Staging and timing must be considered during the design and delivery of the project to allow for shut down and reconnection of assets to maintain service to customers.

Response

Roads and Maritime will work with SWC in relation to the staging and timing of work to ensure required maintenance of service to customers.

2.3.5 Access

Submission number

4 – SWC

Issue description

Confirmed the requirement for maintained access to assets during the life of the project.

Response

Access to SWC's assets will be maintained throughout the project and this will be done in consultation with SWC.

2.4 Stormwater assets

2.4.1 Consultation

Submission number

4 – SWC

Issue description

Stormwater and surface water is sound. Consultation with SWC during detailed design, construction and operational stages of the project will be required to ensure that the environmental objectives are met and impacts can be minimised.

Response

Roads and Maritime will continue to work with SWC through the detailed design, construction and operation of the proposal and any potential impacts on SWC stormwater assets.

2.4.2 Design

Submission number

4 – SWC

Issue description

SWC will not grant permission for new stormwater connections or upgrading existing stormwater connections on the upstream (eastern) side of O'Riordan Street.

Response

The stormwater connections and upgrading of existing stormwater connections on the upstream (eastern) side of O'Riordan Street will be revisited in detailed design. Consultation with SWC in relation to this matter will occur at the detailed design stage. This consultation requirement has been included as a new safeguard measure (refer Section 3, Table 3.1).

2.5 Construction

2.5.1 Staging

Submission number

5 – SACL

Issue description

1. Requested that Roads and Maritime bring forward work associated with the conversion of lower Robey Street and lower O'Riordan Street into one-way roads for completion in early 2017.
2. Suggested that the widening of O'Riordan Street between Robey Street and Bourke Road could be commenced as soon as practicable once the one way road is completed.
3. Construction staging should consider the temporary operation of the traffic signals in the area. This includes the temporary reprogramming of SCATS and the maintenance of SCATS detectors.

Response

- 1, 2. Roads and Maritime will investigate possible options to bring forward the construction work. An early commencement date cannot be confirmed, however Roads and Maritime is actively working towards starting work as soon as practically possible. Roads and Maritime will continue to work with SACL to ensure that staging of work is planned to give the best benefit to reducing traffic congestion.
3. Roads and Maritime will consult closely with SACL regarding appropriate temporary traffic management measures, taking into account local conditions and construction activities.

2.5.2 Coordination with Sydney Airport

Submission number

5 – SACL

7 – Individual

Issue description

1. Requested that Roads and Maritime closely coordinate the design and construction management with wider Sydney Airport work in the area.
2. Ensure that operational plans for the airport are done in conjunction with the Roads and Maritime Airport North precinct work. The Roads and Maritime map circulated to the community does not seem to take into consideration the changes made to the egress from the airport on 16 December 2015.

Response

1. Roads and Maritime is working closely with the SACL and will continue to consult regarding airport work, including any general maintenance work, upgrades, other construction projects and day-to-day airport operational aspects that the proposed projects may potentially impact. Roads and Maritime will consult with SACL in relation to potential construction impacts, in particular, in relation to traffic and noise impacts.
2. It is noted that the map circulated to the community did not include the recent changes to the egress from the Airport. Roads and Maritime confirms however that the work has been planned with consideration of the wider precinct work and the proposed design work with this new traffic arrangement.

2.5.3 Pedestrian access

Submission number

9 – Individual

Issue description

Provision of footpaths during construction work; especially for people who walk to the airport for work.

Response

During construction of the proposal temporary pedestrian accesses and pathways would be established and diversionary signage would be provided to advise of the route.

2.6 Design

2.6.1 Traffic lane configuration

Submission number

5 – SACL

Issue description

1. Suggest that the design should be able to accommodate three departure lanes, excluding bus lanes, from O’Riordan Street southbound to Sir Reginald Ansett Drive southbound.
2. Recommend that the design should be updated to reconfigure the southbound lanes on O’Riordan Street, south of Robey Street, to provide three full lanes on the east side of the bridge pier, and two on the west side. The bus lane should develop from the west side lanes.
3. Suggest that the design should include the provision for three lanes from Seventh Street northbound to Robey Street.

Response

The design of the project is discussed in detail in Section 3.1 and 3.2 of the REF. The design of the proposal has been developed to meet the appropriate design standards and criteria and within the existing construction and physical constraints; and then optimised accordingly. The detailed design phase will investigate these issues to optimise the performance of the network. Roads and Maritime will continue to consult with Sydney Airport regarding relevant project issues.

2.6.2 Property adjustments

Submission number

5 – SACL

Issue description

Requested that the design optimises the connection between O’Riordan Street southbound to Robey Street westbound, suggesting that this would remove the need for property adjustments without impeding traffic flow or safety.

Response

To minimise property impacts was one of the objectives of the project (refer to section 2.3 of the REF), and it was used in the selection of the preferred option. Excluding the Do Nothing Option, the proposal was selected as impacting the least number of properties requiring land acquisition (refer to Section 2.4.3.). Property acquisition is discussed and assessed in Sections 3.6 and 6.5 of the REF.

Any refinements which can be made during detailed design to reduce the amount of property adjustment whilst improving the network performance will be seen as a positive by the project and as better meeting the proposal objective.

2.6.3 Connection to Sydney Airport facilities

Submission number

5 – SACL

Issue description

Request that the design should provide a connection to Sydney Airport active transport facilities on the east side of Sir Reginald Ansett Drive and the west side of Robey Street.

Response

Roads and Maritime has considered the strategic need of the project (refer to Chapter 2 of the REF) alongside the objectives of the Airport Masterplan. Roads and Maritime has been working closely with the SACL and has developed the design to best meet the strategic need and objective of the proposal, as well as appropriate design standards and criteria and within the existing construction and physical constraints.

The proposal integrates with the SACL work on the eastern side of Sir Reginald Ansett Drive by providing a wide footpath along the eastern side of O’Riordan Street, however due to physical constraints, the existing width footpath would be maintained on the western side of Robey Street. The proposal therefore provides fit for purpose connections to Sydney Airport active transport facilities given the existing physical constraints.

2.7 Cyclist safety

Submission number

6 – Individual

Issue description

Concerned about the safety of cyclists. The nearby Bourke Road and Coward Street cycleways do not extend towards the airport. Riding past Mascot Station on Bourke Road to High Street and onto the road on O’Riordan Street is a hazardous cycle journey. With the road widening and footpath upgrade there is an additional opportunity to either make the footpath a shared cycle path, or to delineate a cycle lane on the roadway.

Response

The proposal specifically includes cycling provisions along the eastern side of O’Riordan Street to allow people to safely cycle between the airport and the wider cycle network in the area (refer to Section 6.1.3 or the REF). The proposal would provide the north-south link between the existing cycleway on Bourke Road and Sydney Airport domestic terminals. This added capacity is not there at present and would not be implemented if the proposal was not built. As such, the proposal is considered an amenity, safety and travel choice improvement for cyclists in the area. Off-road facilities are being developed and detours will be provided during construction. This is further discussed in section 3.2, 6.1.3 and 6.1.4 of the REF.

Roads and Maritime will work with Transport for NSW to ensure there is a coordinated response to cycling in the area.

2.8 Property and business impacts

Submission number

7 – Individual

Issue description

Concerned that the proposed work could impact upon advertising signage assets, operation, commercial value and amenity.

Response

Business impacts are discussed and assessed in Sections 3.6, 6.4 and 6.5 of the REF. Roads and Maritime will continue to consult with local business owners regarding any relevant business impacts.

2.9 Traffic signals

Submission number

8 – Individual

Issue description

Supports the reconfiguration of the traffic lights, however believes that they should include display timers on each light (similar to traffic lights in China). This allows drivers and pedestrians to know how long they have to wait before it is their turn to proceed.

Response

Countdown timers at traffic lights are used in some countries to inform motorists of the length of time remaining before a traffic light changes between the red or green phase. They may be similarly used to inform pedestrians of the time remaining to complete crossing a road before the opposing traffic light turns green. Countdown timers are used in some countries but are not common in Australia. In NSW countdown timers are only designed to be used for pedestrians due to different roads rules that apply for pedestrian movements compared to vehicle movements at traffic lights. As such some countdown timers are being installed in NSW on pedestrian crossings on a trial basis to assess whether they can be implemented on a more common basis.

The application of countdown timers for vehicles is not an approved standard in NSW due to the disadvantages associated with their use. The most significant disadvantage demonstrated in overseas countries is that vehicles approaching the signalised intersection may accelerate if the timer is reaching zero in an attempt to clear the intersection, risking rear-end collision. This contradicts the NSW road rules which state a driver approaching a yellow (amber) traffic light must stop (if safe to do so). The normal traffic signal operation in Australia is seen as being safer for drivers.

2.10 Pedestrian access

Submission number

9 – Individual

Issue description

Notes that there is currently no foot path on the western side of O'Riordan Street, which is used by travellers from the Holiday inn, Ibis and Stanford hotels.

Response

O'Riordan Street currently has footpaths on both sides of the road. As part of the proposal, footpath upgrades would be carried out on the western side and a new wide footpath on the eastern side of O'Riordan Street. Details are outlined in Sections 3.1, 3.2 and 3.3 of the REF.

3 Environmental management

The REF for the Airport North Precinct identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (Chapter 7 of the REF).

After consideration of the issues raised in the public submissions change to the safeguard and management measures have been required in relation to the design of the stormwater connections and SWC requirements and approval requirements.

Should the proposal proceed, environmental management will be guided by the framework and measures outlined below.

3.1 Environmental management plans (or system)

A number of safeguards and management measures have been identified in order to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposal. Should the proposal proceed, these management measures would be incorporated into the detailed design and applied during the construction and operation of the proposal.

A Project Environmental Management Plan (PEMP) and a Construction Environmental Management Plan (CEMP) will be prepared to describe safeguards and management measures identified. The PEMP and CEMP will provide a framework for establishing how these measures will be implemented and who would be responsible for their implementation.

The plans would be prepared before the proposal is built and they would be reviewed and certified by the Roads and Maritime Environment Branch (Sydney Region), before work starts on site. The CEMP would be a working document, subject to ongoing change and updated as necessary to respond to specific requirements. The CEMP and PEMP would be developed in accordance with the specifications set out in G36 – Environmental Protection (Management System) (Roads and Maritime, 2014b), QA Specification G38 – Soil and Water Management (Soil and Water Plan) (Roads and Maritime, 2014c) and the QA Specification G40 – Clearing and Grubbing (Roads and Maritime, 2014c).

3.2 Summary of safeguards and management measures

The Review of Environmental Factors for the Airport North Precinct identified a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts.

After consideration of the issues raised in the public submissions, the environmental management measures for the project (refer to Chapter 7 of the REF) have been revised to include two additional safeguards (identified in Table 3.1 in underlined text). Should the project proceed, the environmental management measures in Table 3.1 will guide the subsequent phases of the Airport North Precinct development.

Table 3.1: Summary of environmental safeguards and management measures

No.	Environmental safeguards	Responsibility	Timing
General			
1	Perform surveys potholing, 3D modelling and clash detection for the relocated positions of all drainage and utilities before work starts and in consultation with the relevant utility service providers.	Roads and Maritime	Detailed design
2	Incorporate all environmental safeguards within the: <ul style="list-style-type: none"> • Project environmental management plan • Detailed design stage • Contract specifications for the proposal • Contractor's construction environmental management plan. 	Roads and Maritime	Pre-construction
3	<ul style="list-style-type: none"> • Carry out a risk assessment on the proposal in accordance with the Roads and Maritime Services Project Pack and the project management system risk assessment procedures to determine an audit and inspection program for the work. Implement the recommendations of the risk assessment • Review the risk assessment after the initial audit or inspection to evaluate if the level of risk chosen for the proposal is appropriate. • Note: any work resulting from the proposal and as covered by the REF may be subject to environmental audit(s) and/or inspection(s) at any time during their duration. 	Roads and Maritime	Pre-construction/ construction
4	Notify Roads and Maritime at least five working days before starting work.	Contractor	Pre-construction
5	Notify all businesses and residences likely to be affected by the proposal at least five working days before starting work.	Project manager	Pre-construction
6	Provide environmental awareness training to all field personnel and subcontractors.	Contractor	Pre-construction/ construction
<u>7</u>	<u>The environmental approval will consider the discharge protocols of chlorinated water and the trade waste licence request meet SWC requirements.</u>	<u>Contractor</u>	<u>Pre-construction/ construction</u>
<u>8</u>	<u>The stormwater connections will be revisited during detailed design to accommodate Sydney Water Corporation requirements.</u>	<u>Roads and Maritime</u>	<u>Detailed design</u>

No.	Environmental safeguards	Responsibility	Timing
Traffic and transport			
9	<p>Prepare and implement a Traffic Management Plan (TMP) as part of the CEMP. The TMP will be prepared in accordance with the Roads and Maritime Traffic Control at Work Sites Manual (RTA, 2010) and QA Specification G10 Control of Traffic (Roads and Maritime, 2008). The TMP will include:</p> <ul style="list-style-type: none"> • Confirmation of haulage routes • Measures to maintain access to local roads and properties • Site specific traffic control measures (including signage) to manage and regulate traffic movement • Measures to maintain pedestrian and cyclist access • Requirements and methods to consult and inform the local community of impacts on the local road network • Access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads. • A response plan for any construction traffic incident • Consideration of other developments that may be under construction to minimise traffic conflict and congestion that may occur due to the cumulative increase in construction vehicle traffic • Monitoring, review and amendment mechanisms. 	Contractor	Pre-construction
10	Confirm material delivery schedules and programming as part of the work staging to minimise impacts on the local road network.	Contractor	Pre-construction
11	<p>Ensure the work site and site compound:</p> <ul style="list-style-type: none"> • Includes safe 'sight distances' to allow traffic to leave and enter the given areas • Uses temporary painted road lines to provide delineation • Provides suitable intersection layouts where required. 	Contractor	Pre-construction
12	Use advisory signs (implemented ahead of construction) to notify pedestrians about the temporary closure of the footpaths on O'Riordan Street and advise them of diversions.	Contractor	Pre-construction/ Construction
13	<ul style="list-style-type: none"> • Consult local bus operators to confirm and finalise the changes to the bus stop arrangements, including the provision and location of alternative temporary bus stops while the proposal is being built. • Notify the community regarding bus stop removal and temporary bus stop relocations as coordinated and managed under the consultation strategy. Post notifications on the affected bus 	Roads and Maritime	Pre-construction/ construction

No.	Environmental safeguards	Responsibility	Timing
	stops in advance of the work. Post additional information once each work site is established, providing detour information. Ensure there is agreement to minimise the inconvenience to the public in terms of additional walking distance for the reduced number bus stops on O’Riordan Street.		
14	Use designated site access points and haulage routes.	Contractor	Construction
15	Provide additional signs and undertake an additional notification process to forewarn motorists about the change in flow on Robey Street (west) and O’Riordan Street south of the Robey Street intersection.	Roads and Maritime	Pre-operation
Noise and vibration			
16	<p>Prepare and implement a Noise and Vibration Management Plan (NVMP) as part of the CEMP. The NVMP will generally follow the approach in the Interim Construction Noise Guideline (ICNG) (DECC, 2009) and identify:</p> <ul style="list-style-type: none"> • All potential significant noise and vibration generating activities associated with the activity • Feasible and reasonable mitigation measures to be implemented, taking into account Beyond the Pavement: urban design policy, process and principles (Roads and Maritime, 2014) • A monitoring program to assess performance against relevant noise and vibration criteria • Arrangements for consultation with affected neighbours and sensitive receivers, including notification and complaint handling procedures • Contingency measures to be implemented in the event of non-compliance with noise and vibration criteria • A construction staging program incorporating a program of noise and vibration monitoring for sensitive receivers • A process for updating the plan when activities affecting construction noise and vibration change • Identify in toolbox talks where noise and vibration management is required. 	Contractor	Pre-construction
17	<p>Notify all sensitive receivers (eg schools, local residents) at least five days before starting any work with an associated activity that may have an adverse noise or vibration impact. The notification will provide details of:</p> <ul style="list-style-type: none"> • The proposal • The construction period and construction hours • Contact information for project management staff • Complaint and incident reporting • How to obtain further information. 	Contractor	Pre-construction

No.	Environmental safeguards	Responsibility	Timing
18	<p>Ensure all employees, contractors and subcontractors are to receive an induction. The noise component may be covered in toolboxes and should include:</p> <ul style="list-style-type: none"> • All relevant project specific and standard noise mitigation measures as detailed in the construction noise and vibration management plan prepared by the contractor • Relevant licence and approval conditions • Permissible hours of work • Any limitations on high noise generating activities • Location of nearest sensitive receivers • Construction employee parking areas • Designated loading/unloading areas and procedures • Site opening/closing times (including deliveries) • Environmental incident procedures. 	Contractor	Pre-construction
19	Use quieter and less noise emitting construction methods where feasible and reasonable.	Contractor	Construction
20	Maintain all plant and equipment to ensure optimum running conditions, with periodic monitoring.	Contractor	Construction
21	Throttle down or shut down plant used intermittently when not in use where practicable.	Contractor	Construction
22	Fit and use non-tonal reversing beepers (or an equivalent mechanism) on all construction vehicles and mobile plant regularly used onsite for periods of over two months where practicable.	Contractor	Construction
23	Implement a management procedure to deal with vibration complaints. Investigate each complaint and where vibration levels are established as exceeding the set limits introduce appropriate safeguards to mitigate future occurrences.	Contractor	Construction
24	<p>Management measures should be implemented where construction work takes place within the minimum safe working distances of there being a risk for either cosmetic building damage or amenity human comfort impacts. Management measures should also be implemented following any related complaints. These measures need to ensure vibration compliance is achieved.</p> <p>Management measures may include modification of construction methods such as using smaller equipment, establishing safe buffer zones, and if necessary, introducing time restrictions for the most excessive vibration activities.</p>	Contractor	Construction
25	Carry out testing of actual vibration intensive equipment onsite before work starts within the minimum safe working distances (structural damage) of residences. This would be used to determine acceptable buffer distances to the nearest affected receiver locations.	Contractor	Construction
26	Conduct building condition surveys at all residential and other sensitive receivers identified within the construction noise and vibration management plan.	Contractor	Construction
27	Investigate all feasible and reasonable options to mitigate noise impacts for affected receivers in	Roads and	Detailed

No.	Environmental safeguards	Responsibility	Timing
	accordance with the Roads Noise Policy (DECCW, 2001), Noise Criteria Guideline (Roads and Maritime, 2015a) and the Noise Mitigation Guideline (Roads and Maritime, 2016c).	Maritime	Design
28	Limit the work to using up to a two tonne vibratory roller and 18 tonne hydraulic hammer. Ensure that the roller is not used within 15 metres of a building and 20 metres of a heritage-listed item. Ensure that the hammer is not used within 10 metres of a building and 15 metres of a heritage-listed item.	Roads and Maritime/ contractor	Detailed design/pre-construction
29	Consider the site compound layout so that primary noise sources are at a maximum distance from sensitive receivers (primarily residential receivers), with solid structures (sheds and containers) placed between sensitive receivers and noise sources (and as close to the noise sources as is practical).	Roads and Maritime/ contractor	Detailed design/pre-construction
30	Locate fixed plant as far from residences as possible and behind site structures and noise walls, where possible. Plan for the use of less noise/vibration equipment where reasonable and feasible.	Contractor	Construction
31	Allow for attended noise and/or vibration monitoring following a complaint. Report the monitoring results as soon as possible. In the case that exceedances of the management levels are recorded, review the situation and identify means to reduce the impacts to noise and vibration sensitive receivers. This is to include revision to the NVMP where required.	Contractor	Construction
32	Ensure the out-of-hours work complies with Roads and Maritime QA specification G36: Environmental Management (Roads and Maritime, 2014b) with regards to community notification requirements and ENMM Practice Note VII with regards to the required safeguards.	Contractor	Construction
33	Validate the operational noise impacts through monitoring within 12 months of the proposal becoming operational using the methods described in the Noise Criteria Guideline (Roads and Maritime, 2015a).	Roads and Maritime	Operation
Non-Aboriginal heritage			
34	Implement the following controls to ensure the Main Southern Outflow Sewer Line is protected during any ground excavation work taking place locally: <ul style="list-style-type: none"> Promote a work method that removes any risk of physically impacting the sewer where feasible and reasonable Liaise with Sydney Water to determine the protection requirements including physical controls and working practices such as limiting the use of certain plant and equipment close to the sewer line Employ alternative non-destructive excavation methods close to the sewer line where feasible and reasonable such as using high pressure water and vacuum suction Have a qualified archaeologist record any exposed sections of the sewer line. 	Contractor	Pre-construction/ construction

No.	Environmental safeguards	Responsibility	Timing
35	Inform all site personnel of the location and significance of the heritage item during site induction	Contractor	Construction
36	Should any remains of historic heritage be encountered during the proposed work that have not been assessed in the REF, cease work in that location and follow the Roads and Maritime's Unexpected Archaeological Finds procedure (Roads and Maritime, 2012i).	Contractor	Construction
Socioeconomic			
37	Prepare and implement a Communication Plan (CP) as part of the CEMP to help provide timely and accurate information to the community during construction. The CP will include (as a minimum): <ul style="list-style-type: none"> • Mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions • Contact name and number for complaints. Note: the CP will be prepared in accordance with the Community Involvement and Communications Resource Manual (Roads and Maritime, 2008).	Contractor	Pre-construction
38	Record, and promptly attend to, any received construction related complaints in accordance with the Roads and Maritime's Community Involvement Practice Notes and Resource Manual.	Contractor	Construction
39	Aim to source labour, services and goods from the local market where feasible, reasonable and cost effective.	Contractor	Pre-construction/ construction
40	In addition to securing a road occupancy licence, consult with the Council before starting work to discuss temporary lane, road, side road and pedestrian closure. This is to include any proposed detours.	Contractor	Pre-construction/ construction
Land use and property			
41	Work with utility suppliers, businesses, bus operating companies and Botany Bay Council regarding loss of access to kerbside public amenities to identify where certain property should be temporarily relocated.	Roads and Maritime	Detailed design
42	Notify residents and businesses before any utility service interruption and the loss of kerbside amenity, including bus stops. If required, provide alternatives if the service interruption would extend for more than the number of hours agreed with the service providers.	Contractor	Pre-construction
43	Before starting work: <ul style="list-style-type: none"> • Confirm the location of existing utilities and the relocation details following consultation with the affected utility owners • Undertake further assessment if the scope or location of proposed utility relocation work falls outside of the assessed proposal scope and footprint. 	Roads and Maritime Contractor	Pre-construction/ construction

No.	Environmental safeguards	Responsibility	Timing
44	Contact all service providers to determine their emergency access requirements. Include these provisions in the CEMP.	Contractor	Pre-construction/ construction
45	Provide and display signage alerting people to where the amenities have been relocated. Supplement this by notifying the community ahead of the changes.	Contractor	Pre-construction/ construction
Landscape character and visual impacts			
46	<p>Prepare and implement an Urban Design Plan as part of the CEMP to support the final detailed design. The plan will present an integrated urban design for the proposal, providing practical detail on the application of design principles and objectives identified in the environmental assessment. The Plan will include design treatments for:</p> <ul style="list-style-type: none"> • Location and identification of existing vegetation and proposed landscaped areas, including species to be used • Built elements including retaining walls, bridges and noise walls • Pedestrian and cyclist elements including footpath location, paving types and pedestrian crossings • Fixtures such as seating, lighting, fencing and signs • Details of the staging of landscape work taking account of related environmental controls such as erosion and sedimentation controls and drainage • Procedures for monitoring and maintaining landscaped or rehabilitated areas. <p>Note: the Urban Design Plan will be prepared in accordance with relevant guidelines, including:</p> <ul style="list-style-type: none"> • Beyond the Pavement urban design policy, process and principles (Roads and Maritime, 2014) • Landscape Guideline (Roads and Maritime, 2008). 	Roads and Maritime	Detailed design
47	<ul style="list-style-type: none"> • Assess the operational visual impacts against the detailed design • Modify the detailed design to minimise its visual impacts • Consider the use of landscape planting or kerbside treatments to limit the ‘intensification’ of traffic in the available street space • Develop and employ the urban design strategy to achieve its vision, objectives and principles • Use native fast growing species of local provenance that would establish quickly to lessen the long term impact • Work with the affected visual receivers to develop appropriate safeguards and design solutions that best protect their interests • Select materials that would avoid amenity or social value impacts in the area. 	Roads and Maritime	Detailed design

No.	Environmental safeguards	Responsibility	Timing
48	<ul style="list-style-type: none"> Develop a lighting design specification that aims to ensure the height and direction of any relocated lighting pole would not be adjacent to a first or second floor residential properties If there is any identified conflict, consider relocating the lighting pole to avoid any light spill impact If the pole location cannot be relocated aim to minimise light spill and light glare in accordance with the provisions of AS4282-1997 Control of the Obtrusive Effect of Outdoor Lighting. This may require the use of directional lighting, cut-offs or filters. 	Roads and Maritime	Detailed design
49	<ul style="list-style-type: none"> Include additional screening and hoarding to protect the properties adjacent to where the building demolition work is proposed, the final design of which would be confirmed in consultation with the property owner/tenants Adapt the work schedule to minimise visual impacts during peak periods Alter the delivery schedules and general site access and egress provisions to limit visual impacts in key locations Limit any work close to residents and hotels in the evening, at night or at the weekend unless safety critical Position equipment and orientate each work site to avoid setting, context and visual impacts on these receivers. 	Roads and Maritime/ Contractor	Detailed design/ construction
50	<ul style="list-style-type: none"> Implement additional design and visual controls (ie additional planting and screening) close to the newly exposed properties in consultation with the owners and/or residents Review the effectiveness of the visual controls one year, five years and 10 years after they are implemented to ensure they are successful, established and effective Undertake additional investigations upon receiving a complaint or if the above review confirms that the measures have not been successful. 	Roads and Maritime	Detailed design/ operation
51	<ul style="list-style-type: none"> Erect screening and hoardings where feasible and reasonable conscious of needing to access and leave the proposal footprint and maintain traffic and pedestrian traffic Implement a maintenance schedule to ensure the work sites remain clear and tidy, including the key entry and exit points. 	Contractor	Construction
52	<ul style="list-style-type: none"> Screen, shield and cut-off all temporary site lighting to prevent light spill where possible Use directional light sources where possible to reduce lateral light spill Use low luminescence lighting where feasible and reasonable to reduce the lateral light spill Shield the top of all site lighting to prevent any upward light glare Remove any lighting conflict with the general street lighting to prevent the risk of motorists becoming disorientated or distracted 	Contractor	Construction

No.	Environmental safeguards	Responsibility	Timing
	<ul style="list-style-type: none"> Consult with Botany Bay Council to agree the hours when outdoor lighting can be used at night to service the work sites and manage this through the CEMP. 		
Geology, soils and water			
53	Undertake flood modelling to confirm impacts on the stormwater drainage and to surrounding land uses.	Roads and maritime	Detailed design
54	<p>Prepare a Soil and Water Management Plan (SWMP) in accordance with the requirements of Roads and Maritime contract specification G38 prior to the commencement of construction. The SWMP will also address the following:</p> <ul style="list-style-type: none"> Roads and Maritime Code of Practice for Water Management, the Roads and Maritime Erosion and Sedimentation Procedure The NSW Soils and Construction – Managing Urban Stormwater Volume 1 ‘the Blue Book’ (Landcom, 2004) and Volume 2 (DECC, 2008) Roads and Maritime Technical Guideline: Temporary Stormwater Drainage for Road Construction, 2011 Roads and Maritime Technical Guideline: Environmental Management of Construction Site Dewatering, 2011. <p>The SWMP would detail the following as a minimum:</p> <ul style="list-style-type: none"> Identification of catchment and sub-catchment areas, high risk areas and sensitive areas Sizing of each of the above areas and catchment The likely volume of runoff from each road sub-catchment Direction of flow of onsite and offsite water Separation of onsite and offsite water The direction of runoff and drainage points during each stage of construction Dewatering plan which includes process for monitoring, flocculating and dewatering water from site A mapped plan identifying the above Include progressive site specific Erosion and Sedimentation Control Plans (ESCPs). The ESCP is to be updated at least fortnightly A process to routinely monitor the BOM weather forecast Preparation of a wet weather (rain event) plan which includes a process for monitoring potential wet weather and identification of controls to be implemented in the event of wet weather. These controls are to be shown on the ESCPs 	Contractor	Pre-construction/ construction

No.	Environmental safeguards	Responsibility	Timing
	<ul style="list-style-type: none"> Provision of an inspection and maintenance schedule for ongoing maintenance of temporary and permanent erosion and sedimentation controls. 		
55	<p>Prepare a Contaminated Land Management Plan in accordance with the Guideline for the Management of Contamination (Roads and Maritime, 2013). The plan will include, but not be limited to:</p> <ul style="list-style-type: none"> Capture and management of any surface runoff contaminated by exposure to the contaminated land Further investigations required to determine the extent, concentration and type of contamination, as identified in the detailed site investigation Management of the remediation and subsequent validation of the contaminated land, including any certification required Measures to ensure the safety of site personnel and local communities during construction. 	Contractor	Pre-construction/ construction
56	<p>Implement control measures to manage the immediate risks of contamination if contaminated areas are encountered during construction.</p> <p>If there is any visual or odour indications suggesting that contaminant have been encountered cease all work until the nature and extent of the contamination has been confirmed and any necessary site-specific controls or further actions identified in consultation with the Roads and Maritime Environment Manager and/or NSW EPA.</p>	Contractor	Pre-construction/ construction
57	During rehabilitation, stabilise the exposed areas to minimise erosion.	Contractor	Construction
58	Undertake all refuelling of vehicles and equipment in an impervious bunded area at the site compound.	Contractor	Construction
59	Consult with the NSW Office of Water to confirm licensing requirements to work within the Botany Sands aquifer.	Contractor	Construction
60	<p>Develop an Asbestos Management Plan in accordance with NSW EPA Guidelines, How to Manage and Control Asbestos in the Workplace (WorkCover, 2011), and relevant industry codes of practice. The plan is to describe measure to:</p> <ul style="list-style-type: none"> Handle, store and disposal of known asbestos in the telecommunication conduits Identify and manage discovered or suspected asbestos containing materials. 	Contractor	Pre-construction/ construction
61	Design, establish, operate and decommission all stockpiles in accordance with the Stockpile Site Management Procedure (Roads and Maritime, 2011h).	Contractor	Pre-construction/ construction
62	Prepare an Acid Sulphate Soil Management Plan in accordance with the Guidelines for the Management of Acid Sulfate Materials (Roads and Maritime, 2005a) if it is confirmed through further	Contractor	Pre-construction/

No.	Environmental safeguards	Responsibility	Timing
	assessment and sampling that the soils trigger the action criteria in the Acid Sulfate Soil Manual (ASSMAC, 1998). Ensure the plan details the controls needed when undertaking the work such that they would not lead to undue oxidation of the soil and therefore its acidification.		construction
63	Prepare a Flood Management Plan and supporting work method statement while the proposal is being built and outline evacuation procedures. The plan would: <ul style="list-style-type: none"> • Evaluate what flood event would trigger the plan • Include evacuation procedures • Include a map indicating the area that is flood prone and the locations where to evacuate. 	Contractor	Pre-construction/ construction
64	Separate topsoil from the subsoil, unless the material is suspected as being contaminated. In these locations, the spoil would be segregated and tested onsite to determine what further action would be needed. Either this spoil would be cleared for use as 'natural excavated material' or else it would be classified and disposed offsite via a licenced contractor to a licenced waste-management facility.	Contractor	Construction
65	Backfill all excavations sequentially with subsoils placed in the base of the excavation and then overlaid with topsoil before being compacted.	Contractor	Construction
66	Implement controls on the work site exit to minimise soil tracking onto the surrounding roads.	Contractor	Construction
67	Sweep and remove all material deposited onto the surrounding roads at the end of each working shift and before rainfall. Ensure that the no swept material enters the stormwater drains.	Contractor	Construction
68	Keep all work site areas tidy through measures such as sweeping down all active work areas at the end of each work shift.	Contractor	Construction
69	Implement the following additional erosion and sediment controls: <ul style="list-style-type: none"> • Prevent sediment moving offsite and sediment-laden water entering drainage lines or the stormwater system • Reduce runoff rates and capture sediment • Minimise the amount of material transported offsite to surrounding pavement surfaces • Divert clear water around the site. 	Contractor	Construction
70	Routinely check all erosion and sediment controls are maintained and effective. Undertake additional inspections following a rainfall event of 10 millimetres or greater.	Contractor	Construction
71	Undertake all vehicle wash down and/or cement truck washout in a designated bunded area at the site compound and least 50 metres away from surface water drains.	Contractor	Construction
72	Refuel and store all fuels, chemicals and liquids within an impervious bunded, covered area within the site compound sited a minimum of 50 metres away from: <ul style="list-style-type: none"> • Surface water drains 	Contractor	Construction

No.	Environmental safeguards	Responsibility	Timing
	<ul style="list-style-type: none"> • Flooded areas • Slopes above 10 per cent. 		
73	Implement the Environmental Incident Classification and Management Procedure (Roads and Maritime) following an event or incident. Subsequently contact the Roads and Maritime Contractor Manager as soon as it is safe to do so.	Contractor	Construction
Biodiversity			
74	Prepare a Flora and Fauna Management Plan in accordance with Roads and Maritime's Biodiversity Guidelines: Protecting and Managing Biodiversity on RTA Projects (Roads and Maritime, 2011). It will include, but not be limited to: <ul style="list-style-type: none"> • Plans showing areas to be cleared and areas to be protected, including exclusion zones, protected habitat features and revegetation areas • Requirements set out in the Landscape Guideline (Roads and Maritime, 2008) • Preclearing survey requirements • Procedures for unexpected threatened species finds and fauna handling • Protocols to manage weeds and pathogens. 	Contractor	Pre-construction
75	Investigate measures to further avoid and minimise the construction footprint and native vegetation or habitat removal during detailed design and implemented where practicable and feasible.	Contractor	Pre-construction
76	If unexpected flora or fauna are discovered stop work immediately and implement the Roads and Maritime Unexpected Threatened Species Find Procedure in the Biodiversity Guidelines, Guide 1 (pre-clearing process) (Roads and Maritime, 2011).	Contractor	Construction
Waste management and resource use			
77	Prepare and implement a Waste Management Plan (WMP) as part of the CEMP. The WMP will include but not be limited to: <ul style="list-style-type: none"> • Measures to avoid and minimise waste associated with the proposal • Classification of wastes and management options (reuse, recycle, stockpile, disposal) • Statutory approvals required for managing both on and off-site waste, or application of any relevant resource recovery exemptions • Procedures for storage, transport and disposal • Monitoring, record keeping and reporting. Note: the WMP will be prepared taking into account the Environmental Procedure: Management of Wastes on Roads and Maritime Services Land (Roads and Maritime, 2014) and relevant Roads and Maritime Waste Fact Sheets.	Contractor	Construction

No.	Environmental safeguards	Responsibility	Timing
78	The resource management hierarchy will be followed at all times throughout the proposal where there is the need to: <ul style="list-style-type: none"> • Avoid resource consumption • Recover recyclable materials for reuse • Dispose material unable to be recycled. 	Contractor	Construction
79	Neutralise and dispose of any acid sulphate soil at a licensed waste facility.	Contractor	Construction
80	Do not dispose of reuse construction waste on to other land.	Contractor	Construction
81	Do not burn waste onsite.	Contractor	Construction
82	Do not leave waste material onsite once the work is completed.	Contractor	Construction
83	Reuse the cleared vegetation onsite or dispose of it at a facility licensed to receive garden organics materials.	Contractor	Construction
84	Send all disposed materials to a suitably licenced waste management/landfill facility.	Contractor	Construction
Air quality			
85	Prepare and implement an Air Quality Management Plan (AQMP) as part of the CEMP. The AQMP will include, but not be limited to: <ul style="list-style-type: none"> • Potential sources of air pollution • Air quality management objectives consistent with any relevant published EPA and/or OEH guidelines • Mitigation and suppression measures to be implemented • Methods to manage work during strong winds or other adverse weather conditions • A progressive rehabilitation strategy for exposed surfaces. 	Contractor	Pre-Construction
86	Maintain plant and machinery in accordance with manufacturer's specification.	Contractor	Construction
87	Keep smoky emissions within the standards and regulations under the NSW <i>Protection of the Environment Operations Act 1997</i> (as amended) such that no vehicle shall have continuous smoky emissions for more than 10 seconds.	Contractor	Construction
88	Do not leave vehicles running when idle.	Contractor	Construction
89	Cover any material transported in trucks appropriately to reduce dust generation.	Contractor	Construction
90	Use measures including watering or covering exposed areas would to minimise or prevent dust generation.	Contractor	Construction
91	Undertake visual inspections for dust generation at all times. Cease work when high levels of airborne dust cannot be controlled.	Contractor	Construction

No.	Environmental safeguards	Responsibility	Timing
Greenhouse gas and climate change			
92	Ensure the detailed design considers opportunities to reduce construction material quantities where possible.	Roads and Maritime	Detailed design
93	Adopt the latest pavement design to ensure resilience against extreme temperature and rainfall events, where possible. Consider pedestrian shading in the urban design.	Roads and Maritime	Detailed design
94	Use recycled materials where possible and failing that use materials with a high recycled content.	Contractor	Pre-construction/ construction
95	Use biofuels or lower emission fuels in the site equipment (eg e10) where feasible and reasonable.	Contractor	Construction
96	Purchase materials with low embodied energies where practical in accordance with Road and Maritime purchasing policy, where possible.	Contractor	Construction
97	Aim to reduce the proposal's transport footprint (haul distance) by purchasing materials and disposing of waste locally.	Contractor	Construction
Aboriginal heritage			
98	Stop all work if Aboriginal heritage items are uncovered. Immediately contact the regional environment officer and Roads and Maritime's Aboriginal cultural heritage advisor. Follow the steps in the Roads and Maritime Standard Management Procedure: Unexpected Archaeological Finds (Roads and Maritime, 2012j).	Contractor	Construction
Cumulative impacts			
99	Consult with other developers to obtain information about project timeframes and impacts. Identify and implement appropriate safeguards and management measures to minimise cumulative impacts.	Roads and Maritime Contractor	Pre-construction/ construction
100	Consult with other developers and the bus companies before starting work to manage the interfaces of the proposal's staging and programming in combination with the other projects occurring in the area, include Airport East Precinct to ensure impacts are minimised.	Roads and Maritime	Pre-construction
101	Prepare all environmental management plans (including but not limited to the Construction Noise and Vibration Management Plan and Traffic Management Plan) to consider other developments in the area, including Airport East Precinct project construction.	Contractor	Pre-construction

3.3 Licensing and approvals

Before starting work Roads and Maritime would need to obtain a road occupancy licence from the Transport Management Centre and possibly a separate licence from Botany Bay Council to work on the various side streets.

4 References

Roads and Maritime May 2016, *Airport North Precinct Review of Environmental Factors*, Sydney

Appendix 1

Project Update Newsletter



rms.nsw.gov.au



contactus@rms.nsw.gov.au



Customer feedback
Roads and Maritime
Locked Bag 928,
North Sydney NSW 2059