



Air Quality Management Plan

**Shared Path Bridge over Newcastle
Road, Jesmond**

1630

INTEGRATED MANAGEMENT SYSTEM

Sub-Plan Details			
Type of Document:	Air Quality Management - Sub-Plan		
Sub-Plan Name:	Air Quality Management Plan		
Issue N°.	3.0		
Issue Date:	22/11/2019		
Next Review Date:	22/11/2020		
Sub-Plan Developed By:	██████████		
Project / Facility Details			
Project Name:	Shared Path Bridge over Newcastle Road, Jesmond		
Project Number:	1630		
Address of Project:	Newcastle Road, Jesmond NSW		
Principal Contractor:	Daracon		
Principal Contractor Address:	██		
Project Client:	Roads and Maritime Services NSW		
Sub-Plan Review Control			
Issue N°.	Description of Changes to the Plan	Date	
1.0	Initial Issue	18/09/2019	
2.0	Resubmission following review by RMS	01/11/2019	
3.0	Update to consultation log	22/11/2019	
Document Template Revision Control			
Issue N°.	Description of Changes to the Template	Date	
1.0	Initial Approval	29/08/2017	
Sub-Plan Approval			
Approval	Name	Position	Signature
Document Owner:	██████████	Environmental Site Representative	██████████
Document Approver:	██████████	Project Manager	██████████
Sub-Plan Issue Control			
Insert document-controlled copy number if printed and/or issued externally:	003		

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1 INTRODUCTION

This Air Quality Management Plan (AQMP) forms part of the Construction Environmental Management Process Plan (CEMPP) for the Shared Path Bridge (SPB) over Newcastle Road, Jesmond that is being delivered as early works for the Newcastle Inner City Bypass (NICB) between Rankin Park and Jesmond (RP2J).

1.1 PURPOSE

This AQMP has been developed with specific information to allow for effective management and control of air quality. This plan has been developed taking into consideration the Integrated Project Management Plan (IPMP), Daracon's Legal and Other Requirements including but not limited to relevant Acts, Regulations, Codes of Practice and Industry Standards / Guidelines.

In addition, the framework for this plan has been prepared to align with the Daracon Management System (DMS), AS/NZS & ISO Standards and Client requirements where applicable.

The purpose of the Air Quality Management Plan is to;

- Ensure that dust emissions from construction is minimised and appropriately controlled;
- Ensure that air quality impacts on surrounding residents, businesses etc are minimised;
- Keep the local community and regulators informed of activities where required and respond quickly and effectively to issues or complaints;
- Where required, carry out regular monitoring to ensure compliance against air quality criteria; and
- Adequately manage and mitigate potential air quality impacts from the construction and/or operational activities.

1.2 SCOPE

The project involves the construction of a new shared path bridge over Newcastle Road and associated works at Jesmond, within the City of Newcastle (CoN) Local Government Area (LGA).

The scope of work required for the project involves the following specific activities:

- Site Establishment
- Vegetation clearing, including riparian vegetation, and topsoil stripping
- Earthworks, including excavation or filling
- Transportation of cut or fill materials
- Site access
- Drainage works
- Stockpiling of topsoil, vegetation and other construction materials
- Movement of heavy vehicles across exposed ground
- A new shared path bridge over Newcastle Road west of Steel Street;
- Ramps, stairs and retaining structures providing access to the new shared path bridge;

- Relocation of existing utilities including overhead electricity and underground water mains;
- Roadworks in Coles Street and Jesmond park to connect the new bridge to existing facilities;
- Roadworks for minor widening on the northern side of Newcastle road west of Steel Street;
- Removal of the existing mid-block pedestrian crossing and removal of the existing bus shelter and
- Miscellaneous works including erosion and sedimentation control, utility adjustments, the construction of earthworks, drainage, kerbs and/or gutters, pavement, safety barriers, concrete paving for the shared path, footpaths and driveways, pavement markings and vegetation works.

Other operations will be undertaken by Daracon that are considered normal in delivery of the above activities. Additional activities may also be realised at the request of the Client throughout the duration of the project.

See [Figure 1](#) outlining the Shared Path Bridge (SPB) Project Location on the following page.

FIGURE 1 – SHARED PATH BRIDGE PROJECT LOCATION



1.3 CONSULTATION

1.3.1 CONSULTATION FOR PREPARATION OF THE AQMP

This CAQMP has been developed in consultation with the CoN as required by CoA A9(a). In accordance with CoA A5, the evidence of the consultation undertaken for the preparation of the CAQMP, documented in the following table.

1.3.2 CONSULTATION LOG

TABLE 1 - CONSULTATION LOG

Department	Contact	Date	Correspondence Type	Description
CoN	[REDACTED]	13 June 2019	Email	Nil comments
Environmental Representative	[REDACTED]	16 August 2019	Email	Draft plan submitted 13/8/19 and found to satisfy requirements. Updated by Daracon and resubmitted 8/11/19.

1.3.3 ONGOING CONSULTATION DURING CONSTRUCTION

Ongoing consultation between Roads and Maritime and Daracon, stakeholders, the community and NCC regarding the management of air quality impacts will be undertaken during the construction of the SPB as required. The process for consultation is documented in the Construction Community Liaison Management Plan (CCLMP), which includes the key principals contained within the RP2J Community Communication Strategy (CCS) developed by Roads and Maritime.

2 OBJECTIVES AND TARGETS

2.1 OBJECTIVES

The key objective of the AQMP is to ensure that air quality impacts due to construction of the SPB are minimised and managed appropriately. To achieve this objective, Daracon will:

- identify sensitive receivers and ensure appropriate environmental controls and procedures are implemented during construction activities
- minimise and manage potential air quality / dust impacts from the construction of the SPB.

2.2 TARGETS

Targets for the management of air quality impacts during construction of the SPB include:

- Ensure appropriate measures are implemented to address the requirements of the conditions of approval and the revised environmental management measures
- Minimal complaints from the community or stakeholders
- Ensure training on air quality management is provided to all construction personnel through site inductions
- Aim to achieve compliance of mobile non-road diesel plant and equipment with the relevant United States Environmental Protection Agency, European Union standards or approved equivalent emission standards.

3 SUB-PLAN REFERENCE DOCUMENTS

Daracon will comply with all legislation, standards and guidelines and project approvals, as nominated within [Section 3](#) of this AQMP.

3.1 LEGISLATION

- *Environmental Planning and Assessment Act 1979 (EP&A Act)*
- *Protection of the Environment Operations Act 1997 (POEO Act)*
- *Protection of the Environment Operations (Clean Air) Regulation 2010*
- *Protection of the Environment Operations (General) Regulation 2009, Part 5.4 Air pollution.*

3.2 STANDARDS, CODES OR GUIDELINES

- National Environment Protection Councils (NEPC) – National Environment Protection Measure (NEPM) for Ambient Air Quality Guidelines
- Approved Methods for Modelling and Assessment of Air Pollutants in NSW (NSW Environment Protection Authority (EPA), 2016)
- Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (Department of Environment and Conservation (DEC), 2006)

3.3 CLIENT DOCUMENTS

The following Client documents have been identified as being important to ensure Daracon deliver the project safely, with minimal environmental impact and to specification.

TABLE 2 – CLIENT DOCUMENTS

Client Document Number and Name	
Document Number	Document Name
	Newcastle Inner City Bypass – Rankin Park to Jesmond Environmental Impact Statement (GHD, November 2016)
	Submissions and Preferred Infrastructure Report – Newcastle Inner City Bypass, Rankin Park to Jesmond (GHD, March 2018)
	NSW Department of Planning & Environment Minister’s Conditions of Approval (Feb 2019)
	Department of the Environment and Energy (DoEE) - Commonwealth Controlled Action Approval (April 2019)
QA Specification G1	Job Specific Requirements
QA Specification G36	Environmental Protection
QA Specification G38	Soil and Water Management
QA Specification G40	Clearing and Grubbing
QA Specification G10	Traffic Management
QA Specification G22	Work Health and Safety (Construction and Maintenance Works)
QA Specification Q6	Quality Management System (Type 6)

Where there are changes to the above document references, communication of changes that are applicable to this project will be communicated to all workers using a suitable means of communication as prescribed within this Sub-Plan.

3.4 PROJECT APPROVALS AND/OR LICENSING

The following approvals have been obtained by Roads and Maritime:

- EPBC Decision Notice dated October 2015 (confirming the RP2J project is a controlled action).
- Project Approval under Part 5.2 of the EP&A Act – SSI 6888 granted by the minister for planning on 15 February 2019.

All necessary licences, permits and approvals required for Daracon's contracted works will be obtained and maintained as required throughout the life of the Project. Inspection and monitoring programs completed as part of this plan will ensure the control measures outlined in any of the above approvals, licenses or permits are complied with at all times.

3.5 HOLDPOINTS

There are no specific hold points relevant to the AQMP.

4 CONDITIONS OF APPROVAL

The Rankin Park to Jesmond Project proposal was subject to assessment and approval under the EP&A Act. The EPBC Act conditions directly reflect the EP&A Act conditions of approval. Subsequently, the NSW infrastructure Conditions of Approval (CoA) listed below in Table 3, detail the Commonwealth and State CoA's relevant to the AQMP;

TABLE 3 – COA RELEVANT TO THE AQMP

CoA	Requirement	Reference
E1	In addition to the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1, all reasonably practicable measures must be implemented to minimise the emission of dust and other air pollutants during the construction of the SSI.	Clause 7

5 EXISTING ENVIRONMENT

The following section summaries the existing air quality conditions within and adjacent to the SPB site, based on information provided in the EIS.

The SPB project boundary and location of residential receivers in the vicinity of the SPB are indicated on the sensitive area maps, refer [Appendix 1](#) and [Appendix 2](#).

5.1 SURROUNDING RECEIVERS

The SPB is situated in the residential suburb of Jesmond within the CoN local government area (LGA). The SPB will be constructed over Newcastle Road with primarily low-density residential land use to the north, east and west and parkland to the south (Jesmond Park).

Approximate distance from the Project to sensitive receivers are outlined below in Table 4, with the closest receivers 12m from the Project and ancillary sites.

TABLE 4 – DISTANCE TO SENSITIVE RECEIVERS

Description	Distance to Receivers (m)	
	Nearest	Typical
Residences in Coles Street	12	12 - 15
Residences in Kiah Avenue	43	>70
Residences in Steel Street	57	>60
Residences in Robinson Avenue	100	115
Jesmond Park Uniting Church	19	-
Zara's House – Refugee Women and Children's Centre	80	-
Jesmond Park	0	100

5.2 AMBIENT AIR QUALITY

As reported in the EIS, Newcastle local government area fulfils the Air Quality NEPM (NEPC 1998) standards.

Industrial, domestic and transportation are considered to be the major contributors to air emissions in Newcastle and surrounding area.

NSW EPA maintain air quality monitoring stations at Wallsend, 2.5km and Mayfield, 4km respective to the Project. The Wallsend monitoring station is classified as the most accurate for the Project and indicates concentrations of NO₂ and PM₁₀. Over the past five years, a review of published data indicates conforming CO and NO₂ records however, PM₁₀ concentrations exceeded the 24-hour criteria for one day in 2010 and 2012, seven days in 2013 and two days in 2014, however these results are believed to be associated with pollution events such as bush fire smoke and dust storms.

The primary source of existing air emissions in the vicinity of the SPB is particulate matter and exhaust emissions generated from vehicles. Newcastle Road carries most of the traffic in the vicinity of the SPB.

5.3 WIND CONDITIONS

Local wind conditions as detailed in the EIS. The SPB project is located approximately 10km east of the Automatic Weather Station (AWS) at Newcastle, Nobbys Head, ID: 061055. Wind data from this station has been adopted as representative of conditions at the SPB site, although wind speeds recorded at Nobbys Head are likely to be higher due to the coastal exposure of the site, particularly for winds with an easterly component.

Annual average wind rose (refer [Appendix 3](#)) demonstrates the following features;

- major wind incidences occur from the northwest and south, with lesser components from the east and southeast
- north-easterly and south-easterly winds is lowest
- strong winds (> six metres per second) occurs mostly from the south, south-east and north-west
- light winds (0.5 to three metres per second) mostly occur from the north, northwest and westerly directions.

5.4 SOIL CHARACTERISTICS

The existing soils environment for the RP2J project is described in the EIS.

The *1:100,000 Soil Landscape Sheet of the Newcastle Region (DLWC, 1995)* depicts that the dominant soil landscape in the vicinity of the SPB is the residual Beresfield (erosional) landscape. Dominant soils in these landscapes include brownish black pedal loam (topsoil), bleached hard setting loamy sand to sandy clay loam (topsoil) and pedal yellowish-brown clay (subsoil). Water erosion hazard, seasonal waterlogging on lower slopes and localised high run-on, mine subsidence, foundation hazard, shallow soils, very strongly acidic soils of low fertility and rock outcrops limit the Beresfield soil landscapes.

6 ENVIRONMENTAL ASPECTS AND IMPACTS

6.1 CONSTRUCTION ACTIVITIES

Emissions to the atmosphere during construction of the SPB that could result in adverse impacts to air quality are typically divided into two categories:

- Dust and particulates
- Gaseous emissions.

Key aspects of the SPB construction that could result in dust emissions include:

- Earthworks, particularly during site establishment
- Establishment and operation of ancillary facilities and compounds
- Demolition activities
- Vegetation clearing and grubbing
- Detailed excavation
- Pavement/shared path construction
- Landscaping and finishing works
- Bridge piling and associate concrete works for preparation
- Bridge bearing preparation and installation
- Steel bridge superstructure installation
- Topsoil / material handling including stripping, stockpiling, material loading and material haulage
- Wind erosion of exposed areas and temporary stockpiles
- Tracking of dirt onto roads.

Air emissions, other than dust, which may be generated by construction activities include:

- Vehicle and plant exhaust emissions, which may be excessive if vehicles and plant are poorly maintained.
- Odours / gases released during:
 - excavations of organic or contaminated materials
 - utilities works (e.g. opening of sewer pipes)
 - concrete works curing processes
 - sealing works

6.2 FACTORS LIKELY TO AFFECT DUST GENERATION AND IMPACTS

In addition to the inherent risks of specific construction activities creating the potential to generate dust, a number of other environmental factors also affect the likelihood of dust emissions, including:

- wind direction – determining whether dust and suspended particles are transported towards sensitive receivers
- wind speed - governs the potential suspension and drift resistance of particles

- soil type - more erodible soil types have an increased soil or dust erosion potential
- soil moisture – increased soil moisture reduces soil or dust erosion potential
- rainfall or dew – rainfall or heavy dew that wets the surface of the soil and reduces the risk of dust generation
- evaporation – dries out the surface of the soil and leads to increased risk of dust generation
- exposed surfaces - during construction non-vegetated surfaces will be exposed prior to revegetation, which is a key factor influencing dust emissions.

6.3 IMPACTS

All phases of construction have the potential to increase airborne particulate matter and cause nuisance impacts while construction is in close proximity to sensitive receivers. The air quality impact depends on the contributing factors, the nature, extent and magnitude of each factor and their interaction within the natural environment.

Air quality impacts throughout construction are predominately associated with the generation of dust, as it may settle on surrounding properties and could result in health impacts to residence. Dust generation are anticipated to be a minor contribution to air quality impacts throughout the duration of SPB, with the implementation of management measures to assist, particularly minimising the impact of sensitive receivers.

Construction activities that involve handling, disturbance and material management have the greatest potential risks to adversely impact upon local ambient air quality, while concrete demolition, cutting and machinery exhaust fumes may also contribute to the activities of impact.

The primary issues, that need to be managed associated with the phases of construction, are identified below:

Potential air quality impacts attributable to construction include:

- temporary increase in air emissions from dust and products of combustion (from equipment operations)
- temporary increased windborne dust emanating from disturbed/exposed surfaces
- increased dust and debris arising from haulage of materials during construction
- odours arising from uncovered contaminated and/or hazardous materials
- deposition of dust on surfaces where it may cause damage and/or lead to a need for increased cleaning or repair
- aesthetic effects that arise from visible airborne dust plumes and from deposits of dust on surfaces
- need for increased maintenance of air filtering systems (e.g. air conditioners etc)
- potential adverse health effects including eye, nose and throat irritation from excessive inhalation of fine particles
- impacts on water quality and/or vegetation health from dust deposition

- impacts on residential sensitive receivers, including impacts on living areas, swimming pools and general amenities
- dust deposition impacts on sensitive agricultural receivers
- complaints from the public relating to dust or odours.

Overall, potential air quality impacts during construction are expected to be short-term and minor, provided the safeguards and management measures identified in [Section 7](#) are implemented.

7 ENVIRONMENTAL MITIGATION AND MANAGEMENT MEASURES

In accordance with the SPIR / EIS, the following environmental management measures have been developed to minimise potential impacts on Air Quality Management. Relative management measures applicable to the AQMP during construction are identified below;

TABLE 5 – ENVIRONMENTAL MANAGEMENT MEASURES

No.	Environmental Safeguards	Daracon Reference	Responsibility	Timing
AQ01	<p>The Construction Environmental Management Plan will include measures for the management of air emissions including;</p> <ul style="list-style-type: none"> • Air quality management objectives • Potential sources and impacts of air emissions • Sensitive receivers • Hours of Work • Mitigation measures to minimise air quality impacts to sensitive receivers and the environment • Consideration of high winds in dry weather • Suitable buffer zone separation distance from temporary fixed plant to off-site sensitive receivers (minimum 100 metres for batching plants where possible) • A monitoring program to assess compliance with identified objectives • Contingency plans to be implemented in the event of non-compliances and/or complaints about air quality 	<p>Clause 2.1 Clause 5 and 6 Clause 5.1 Appendix 1 Appendix 2 CEMPP Clause 5.9 Clause 7 Clause 8.5.1 Not Relevant to SPB Construction Clause 8.5 Clause 8.8</p>	Daracon	Pre-Construction / Construction
AQ02	The following mitigation measures will be used on-site and included as part of the Construction Environmental Management Plan:	Clause 7	Daracon ESR	Construction

<ul style="list-style-type: none"> • Areas of exposed surfaces are to be minimised through construction site planning and programming • Areas disturbed by construction activities will be progressively stabilised and rehabilitated • Locating stockpiled material as far as possible from sensitive receivers • All stockpiles will be designed, established, operated and decommissioned in accordance with RMS <i>Stockpile Site Management Guidelines</i> (RMS, 2011) and RMS G38, including establishment of suitable cover crop or provisions of other covering over topsoil stockpiles that will be in place for longer than ten weeks • Dust screens will be erected around and/or spraying of stockpiles with suitable stabilising agents • Dust suppression measures, such as the use of water carts or soil binders approved by the Roads and Maritime, will be used on any unsealed surfaces, earthwork formations and roads, accesses, site compound/storage areas and other exposed areas, • Sealed roads at access points will be watered-down regularly to minimise the re-suspension of dust on sealed roads • Imposing work vehicle speed limits and designating specific routes for haulage and access • Construction activities which would generate dust would be avoided or modified during high wind periods where possible • All trucks will be covered when transporting materials to and from the site • All construction equipment will be maintained and operated in accordance with manufacturer specifications • Mud and debris will be removed from the wheels and bodies of haulage equipment before it enters public roads or other sealed pavements by means of facilities such as truck wash downs and wheel washes • Controls will be implemented at entry and exit points to the site facilities and stockpile areas to minimise the tracking of materials onto the road pavement • Any spoil or dirt tracked onto the road pavement will be removed to minimise dust generation from such materials • Dust generating activities will be stopped in the event that wind speeds reach a level where dust cannot be adequately controlled by water or other means until the dust hazard is eliminated or has been reduced to an acceptable level • Dust control equipment will be maintained so that this equipment is available when required, including periods of dust generating activities or high wind speed • Topsoil stripped areas with no scheduled activities will be treated within two weeks to prevent dust generation • Engines of plant and vehicles will be switched off when not in use 			
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	<ul style="list-style-type: none"> • Tailgates and covering loads that are to be carried on public roads will be secured (prior to transportation) to prevent spillage and loss of construction materials or waste and to prevent emission of odours • Worker amenities will be located in a suitable location that would not expose local residential properties or commercial premises to bad odour, minimising omission of smoke and odours from worker amenities; and • No burning off of waste materials. 			
G36 S4.4.2	<p>Implement strategies to minimise air emissions from off road diesel equipment and plant.</p> <p>Aim to achieve compliance with mobile non-road diesel plant and equipment used for construction with the relevant United States Environmental Protection Agency, European Union (EU) standards or approved equivalent emission standards.</p>	Clause 8.9.1 RWMP	Daracon ESR	Pre- Construction Construction

7.1 AIR QUALITY ENVIRONMENTAL MITIGATION MEASURES

A range of EMMs are identified in the EIS and SPIR, the conditions of approval and relevant Roads and Maritime documents. Specific measures and requirements to address air quality impacts are outlined in [Table 5](#).

Prior to commencing, and during construction, of the SPB Daracon will:

- identify all dust-sensitive receptors which could be affected by dust generated from construction activities (refer [Table 4](#) and Sensitive area maps, [Appendix 1](#) and [Appendix 2](#))
- determine potential risks due to air quality impacts (refer [Section 6.3](#))
- implement all EMMs identified in [Table 5](#) to achieve the air and dust management objectives identified in [Section 2](#) of this AQMP.

8 COMPLIANCE MANAGEMENT

8.1 ROLES AND RESPONSIBILITIES

The organisational structure and roles and responsibilities for Daracon personnel are provided within the IPMP (refer IPMP – Appendix 2). The roles and responsibilities specific to the construction of the SPB are provided within IPMP, which displays the organisational chart for the project (refer IPMP – Appendix 1).

8.2 COMMUNICAITON

Communication with stakeholders and the community is detailed within the Construction Community Liaison Management Plan (CCLMP), which includes the key aspects identified within the Community Communication Strategy (CCS) developed by RMS.

Air Quality management information will be communicated to the community and stakeholders in accordance with the principles and procedures outlined in the CCLMP.

8.3 COMPLAINTS MANAGEMENT

The management of complaints for the SPB will be in accordance with the Construction Community Liaison Management Plan (CCLMP), which includes the key aspects identified within the Complaints Management System (CMS) developed by RMS.

8.4 TRAINING

To ensure the effective implementation of this AQMP, personnel will undergo training relating to air quality management issues, this training will include;

- AQMP requirements, including ESCP's and PIRMP
- Incident Response , management and reporting
- Site inductions
- Location of sensitive receivers
- Environmentally Safe Work Methods (EWMS)
- Tool Box Talks – focused on environmental aspects

For further details on training refer to section 8 of the IPMP, and section 5.5 of the CEMPP.

8.5 MONITORING AND INSPECTION

8.5.1 MONITORING

Monitoring required for this AQMP will include;

- daily monitoring of weather data
- daily odour monitoring
- daily visual surveillance
- daily visual monitoring of emissions from mobile non-road diesel plant and equipment.

If air/dust monitoring indicates that mitigation measures are not fully effective or if dust complaints are received during construction, Daracon will determine if additional air/dust mitigation controls are needed, amend the mitigation strategies in the AQMP accordingly and promptly implement the additional air/dust mitigation controls.

If deemed necessary, Dust Deposition Gauges (DDG) shall be installed in accordance with the EPA *Approved Methods for Sampling and Analysis of Air Pollutants in NSW* at nominated locations . These shall be changed over monthly and taken to a NATA accredited laboratory for analysis. Monitoring data will include reporting of insoluble solids in accordance with the EPA publication *“Approved Methods for the Modelling and Assessment of Air Pollutants in NSW”*.

The results will be reviewed and recorded by the Environmental Site Representative. The results shall be compared against the impact assessment criteria in [Table 6](#) for each of the locations over the construction period.

TABLE 6 – IMPACT ASSESSMENT CRITERIA

Pollutant	Averaging period	Criteria ⁽¹⁾
PM ₁₀ ⁽²⁾	24 hours	50 µg/m ³
	Annual	30 µg/m ³
Total Suspended Particulates	Annual	90 µg/m ³
Deposited Dust	Annual (rolling 12-month average)	2 g/m ² /month (increment)
		4 g/m ² /month (total)

(1) Total Impact (incremental impact plus background)

(2) Airborne particulate matter

µg/m³– micrograms per cubic metre

g/m²/month – grams per square metre per month

8.5.2 INSPECTIONS

Regular inspections of sensitive areas and activities will occur for the duration of the SPB construction. The Site Supervisor and Environmental Site Representative will undertake a visual inspection of changing wind and dust conditions. Additionally, on a weekly basis they will report meteorological conditions and air quality on the Environmental Inspection Report IM-REP-0503-001 and the actions undertaken to control the conditions.

TABLE 7 – AIR QUALITY INSPECTIONS

Inspection	Frequency	Responsibility
Visual surveillance for dust emissions of mud tracking	Daily	ESR / Site Supervisor
Site inspection for visible dust emissions, dust deposits on surfaces, no continuous visible vehicle/plant/equipment emissions for >10s (POEO (Clean Air) Regulation 2010)	Weekly	ESR / Site Supervisor
Haul Road integrity	Weekly	ESR / Site Supervisor
Plant / equipment inspections including maintenance and emissions	As required / prior to use	ESR / Site Supervisor

8.6 INCIDENTS

Incidents will be managed in accordance with Section 9 of the IPMP and Section 6.11 of the CEMPP.

8.7 AUDITING

Audits (both internal and external) will be undertaken to assess the effectiveness of the Air Quality management measures, compliance with this AQMP, conditions of approval and other relevant approvals, licenses and guidelines. Audit requirements are detailed in Section 11.4 of the IPMP and Section 5.9 of the CEMPP.

8.8 NON-CONFORMANCES

A non-conformance is the failure or refusal to comply with the requirements of project system documentation, including this AQMP. Non-conformances may be identified through auditing and review processes (Section 11.4 of the IPMP and section 5.9 of the CEMPP), monitoring and inspection processes (Section 11 of the IPMP) or incident management (Section 9 of the IPMP and Section 6.11 of the CEMPP).

8.9 REPORTING

Reporting requirements and responsibilities are documented in Section 5.11 of the IPMP and Section 5.11 of the CEMPP.

Reporting on air quality will also include;

- Weekly Environmental Inspection Reports
- Plant Emission Data
- Dust Gauge Data (if required)

Monthly reports will be provided which will include air and weather monitoring details, which will highlight any trends and exceedances of the criteria and analysis of a likely dust source. If monitoring results are in exceedance the project team will review AQM strategies and implement additional air/dust mitigation controls.

8.9.1 AIR EMISSIONS PERFORMANCE REQUIREMENTS OF MOBILE NON-ROAD DIESEL PLANT AND EQUIPMENT

Daracon will report on the conformity, of mobile non-road diesel plant and equipment used for the construction of the SPB with the relevant United States Environmental Protection Agency, European Union (EU) standards or approved equivalent emission standards. The reports will be submitted to Roads and Maritime:

- before 31 July, for the reporting period ending 30 June for the previous 12 months
- at Actual Completion Date, for the final reporting period.

Daracon will prepare a report in accordance with the GREP “Clean Air data management tool” which is available at: <http://www.rms.nsw.gov.au/documents/about/environment/grep-clean-air-data-management-tool.xlsm>. The types of diesel plant and equipment that are to be included or excluded from the report are given in this document.

9 REVIEW AND IMPROVEMENT

9.1 CONTINUOUS IMPROVEMENT

Continuous improvement of this CAQMP will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement. The continuous improvement process will be designed to:

- identify areas of opportunity for improvement of air quality management and performance
- identify environmental risks not already included in the risk register
- determine the cause or causes of non-conformances and deficiencies
- develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies
- verify the effectiveness of the corrective and preventative actions
- document any changes in procedures resulting from process improvement
- make comparisons with objectives and targets.

9.2 AQMP UPDATE AND AMENDMENT

The processes described in Section 11 of the IPMP may result in the need to update or revise this CAQMP. This will occur as needed.

Any revisions and/or changes to the AQMP will be distributed to all relevant stakeholders in accordance with the approved document control procedure detailed in Section 13 of the IPMP.

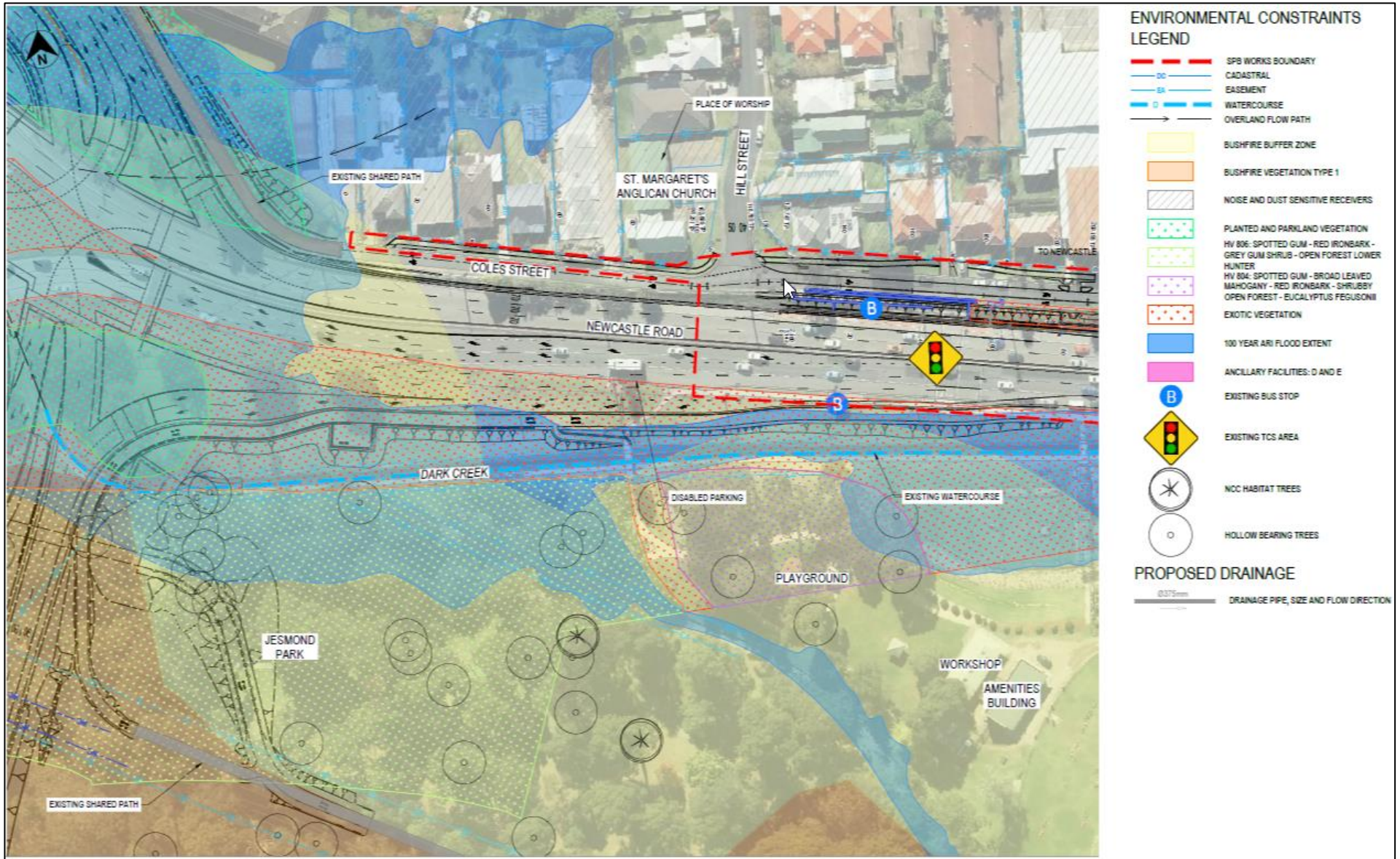
10 DEFINITIONS

All terms referenced within this plan are included within [REG.00001](#) *Definitions & Glossary of Terms Register*.

11 ASSOCIATED DOCUMENTS AND PROCEDURES

Approved Forms, Process Flowcharts, Registers and/or other documents referenced within the body of, or those that are associated with this plan, are accessible and made available for all Daracon personnel via the following link: <https://dms.daracon.com.au/>

APPENDIX 1 Sensitive Area Map: 1



APPENDIX 2 Sensitive Area Map: 2



APPENDIX 3 Annual Wind Rose: Nobby's Head (2001-12)

