

# **WestConnex New M5**

## **Ambient Air Quality Goal Protocol**

Condition E15

Revision 3  
Date revised 07/02/2019

## Revision history

This document interfaces with the New M5 Operation Air Quality Management Plan, within the Operational Environmental Management Plan (OEMP), which together describe the proposed overall management system for the O&M Services.

The latest revision of this document is available on Contract Workspace. If any unsigned hard copies of this document are printed, they are valid only on the day of printing.

The revision number is included at the bottom of each page. When revisions occur, the entire document will be issued with the revision number updated accordingly.

Appendices to this plan may be revised independently of this plan.

Rev No	Revised by	Reviewed and Approved by:	Date	Description/Summary of Changes
0.1	████	████████	11/12/2018	Initial issue for internal review and approval
0.2	████	████████	12/12/2018	AQCCC Comments added
0.3	████	████████	12/12/2018	Version Control Adjustment
0.4	████	████████	19.12.2018	Response to consultation (refer Consultation Table in separate document)
1	██████████	████████	20.12.2018	Update to address RMS comments and finalization for submission to DP&E
2	██████████	████████	21.01.2019	Update to address DP&E comments
3	██████████	████████	07.02.2019	Update to address DP&E editorial corrections

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## Glossary

Term Used	Explanation
AM-1	Ambient monitoring – guide for the siting of sampling units
AM-2	Ambient monitoring – guide for measurement of horizontal wind for air quality applications
AM-4	Ambient monitoring – meteorological guidance for regulatory modelling applications
AM-6	Ambient monitoring – Carbon monoxide
AM-12	Ambient monitoring – Nitrogen oxides
AGR	Above-goal reading (ambient monitoring only)
AQCCC	Air Quality Community Consultative Committee
Background levels	Existing concentrations of pollutants in the ambient air
CO	Carbon Monoxide
CoA	Minister's Conditions of Approval
DP&E	NSW Department of Planning and Environment
EMT	Emergency Management Team
EPA	NSW Environment Protection Authority
Minister, the	Minister for Planning
NATA	National Association of Testing Authorities, Australia
NEPM	National Environment Protection (Ambient Air Quality) Measure 2016
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Oxides of Nitrogen
O&M	Operations and Maintenance
O&M Contractor	the contractor engaged to deliver the operations and maintenance contract for the New M5 project.
OAQMP	Operation Air Quality Management Plan
OEH	NSW Office of Environment and Heritage
OEMP	Operation Environmental Management Plan
PM <sub>10</sub>	Particulate matter (10 micrometres or less in diameter)
PM <sub>2.5</sub>	Particulate matter (2.5 micrometres or less in diameter)
Project Company	WCX M5 PT Pty Ltd (ACN 608 798 465) in its personal capacity and its capacity as trustee of the WCX M5 Project Trust (ABN 73 899 615 977)
Project, the	WestConnex New M5 Project

Term Used	Explanation
Reasonable and Feasible	Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. Feasible relates to engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account mitigation benefits and cost of mitigation versus benefits provided, community expectations and nature and extent of potential improvements.
Relevant council(s)	Canterbury Bankstown, Bayside Council, Georges River Council, Inner West Council, City of Sydney as applicable
RMS, Roads and Maritime	Roads and Maritime Services - the Proponent for the New M5 Project Roads and Maritime has engaged the Project Company to deliver the new M5 project.
Secretary	Secretary of the Department of Planning and Environment
Secretary's approval	A written approval from the Secretary (or delegate).
SMC	Sydney Motorway Corporation Pty Limited (SMC) (ABN 601 507 591) is a special purpose entity that has been created by the NSW Government to manage the delivery of WestConnex. For the purposes this New M5 Motorway Ambient Air Quality Goal Protocol, WCX M5 PT Pty Ltd will act on behalf of Sydney Motorway Corporation Pty Limited (SMC).
SSI	State Significant Infrastructure

# 1 Introduction

## 1.1 Purpose and Overview

This Ambient Air Quality Goal Protocol has been developed to satisfy the requirements of condition E15 of the Conditions of Approval (CoA) for the WestConnex New M5 project (the project).

Condition E15 requires that an Ambient Air Quality Goal Protocol (Protocol) be prepared for the evaluation of a potential measurement that exceeds the ambient air quality goals. The Protocol is to include a form and process for notifying the measurement that exceeds the goal; the form and contents for reporting the measurement; and the process for appointing an independent person to prepare a Report on Above-Goal Recording.

## 1.2 Environmental Management System

The O&M Contractor will utilise an Integrated Management System for environmental management. The O&M Contractor's environmental management system (EMS) has been certified as complying with AS/NZS ISO 14001.

The EMS includes the Operation Environmental Management Plan (OEMP) which provides the detail of how the environmental aspects of the project will be managed during the operational phase. The OEMP provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled.

This Ambient Air Quality Goal Protocol forms part of the management system documents which are to be implemented on WestConnex New M5. It is to be read in conjunction with the other management system documents including the OEMP, the Operation Air Quality Management Plan and the E23 Reporting system for in-tunnel, ambient and ventilation outlet limits.

## 1.3 Consultation

In accordance with condition E15, the Ambient Air Quality Goal Protocol must be prepared in consultation with the WestConnex New M5 Air Quality Community Consultative Committee (AQCCC).

The AQCCC were consulted during the preparation of this document.

A document titled 'Consultation for the New M5 Ambient Air Quality Goal Protocol' has been prepared separately to this document to provide detail relating to the consultation received and where feedback has been addressed (if applicable) within this Ambient Air Quality Goal Protocol.

## 2 Environmental Obligations

Legislative obligations relating to air quality, including ambient air quality, are detailed within the Operation Air Quality Management Plan (E31(h)(i)).

### 2.1 Conditions of Approval

Conditions of the Infrastructure Approval for WestConnex New M5 that are relevant to the Ambient Air Quality Goal Protocol (Protocol) are provided in the table following.

A cross-reference is included to indicate where each condition is addressed in this Protocol or other project management documents.

Table 2-1 Conditions of Approval

CoA Ref	Requirement	Reference
<b>A16</b>	The Proponent must notify the Secretary (using the contact name and phone number notified by the Department from time to time) of any incident (other than those relating to the Protection of the Environment Operations Act 1997) with actual, or potential, significant off-site impacts on people or the biophysical environment immediately of becoming aware of the incident on weekdays, or the following business day on weekends, public holidays and site shutdown. The Proponent must provide full written details of the incident to the Secretary within seven days of the date on which the incident occurred.	See Flowchart
<b>E14</b>	Should ambient monitoring of air pollutants exceed the following goals, the provisions of conditions E15, E16 and E17 will apply: CO – 8 hour rolling average of 9.0 ppm (NEPM); NO <sub>2</sub> – One hour average of 0.12 ppm (245 µg/m <sup>3</sup> ) (NEPM); PM <sub>10</sub> – 24 hour average of 50 µg/m <sup>3</sup> (NEPM); PM <sub>2.5</sub> – 24 hour average of 25 µg/m <sup>3</sup> (NEPM); PM <sub>10</sub> – annual average of 25 µg/m <sup>3</sup> (NEPM); and PM <sub>2.5</sub> – annual average of 8 µg/m <sup>3</sup> (NEPM). <i>Note: The notification and reporting obligations under conditions E15, E16 and E17 relating to ambient monitoring will begin at the commencement of operation of the SSI. The first annual average concentrations for PM<sub>10</sub> and PM<sub>2.5</sub> must be calculated on the first day the project been in operation for 12 months and on a rolling basis thereafter.</i> <sup>1</sup>	Section 3
<b>E15</b>	In addition to the general reporting requirements specified in condition E23, the Proponent must prepare an Ambient Air Quality Goal Protocol for the evaluation of a potential measurement that exceeds the goals. The Ambient Air Quality Goal Protocol must be developed by the Proponent in consultation with the AQCCC and submitted to the Secretary for approval at least 12 months prior to the commencement of operation of the SSI. The Ambient Air Quality Goal Protocol must include: a) the form of and process for providing a Notification of Above-Goal Recording subject to condition E16;(refer following) b) the form and contents of a Report on Above-Goal Recording, subject to condition E17 (refer following); and c) a process for appointing an independent person/organisation to prepare the Report on Above-Goal Recording. The process must include - i) approval of the independent person/organisation by the Secretary prior to preparation of the report, and ii) the appointment of the independent person/organisation at least one month prior to the commencement of operation, or at some other time prior to preparation of the report with the agreement of the Secretary.	This document The evaluation occurs by Section 5.2 and 5.3  Section 5 and Appendix A1 Section 5 and Appendix A2 Section 6 Section 6 Section 6
<b>E16</b>	The Ambient Air Quality Goal Protocol must provide a Notification of Above-Goal Recording if ambient monitoring of air pollutants records an exceedance of the	Section 5, Section 5.1.2 and Section 3

<sup>1</sup> New M5 Modification 2 approved 30 August 2017.



	<p>goals in condition E14. The Notification of Above-Goal Recording is to be submitted within 24 hours of the recording, to the Secretary, EPA and NSW Health. The Notification of Above-Goal Recording must detail:</p> <ul style="list-style-type: none"> <li>a) the nature of the event;</li> <li>b) the concentration level that occurred;</li> <li>c) the duration of the event;</li> <li>d) the measures employed to minimise the concentration levels; and</li> <li>e) the Proponent’s commitment to prepare and submit a Report on Above-Goal Recording in accordance with condition E17.</li> </ul>	
<b>E17</b>	<p>Within 20 working days of any Notification of Above-Goal Recording, the Proponent must prepare and submit to the Secretary a Report on Above-Goal Recording that details the cause and major contributor of the exceedance and the options available to prevent recurrence.</p> <p>Where the operation of the tunnel is identified to be a significant contributor to the recorded above-goal reading, the Report on Above-Goal Recording must include consideration of improvements to the tunnel air quality management system so as to achieve compliance with the ambient air quality goals, including but not limited to installation of the additional ventilation management facilities allowed for under condition B5, and discussion of whether those improvements are feasible and reasonable.</p> <p>The Proponent must comply with any requirements arising from the Secretary’s review of the Report on Above-Goal Recording.</p>	Section 5.3 Appendix A2
<b>E22</b>	<p>Conditions E4, E5, E6, E14 and E19 do not apply in an emergency, as defined in the OEMP required by condition E31 (g).</p> <p>The Proponent must, as soon as reasonably practicable, notify the Secretary and the EPA of any such discharge.</p>	Refer to Section 3.1
<b>E23</b>	<p>The Proponent must develop and implement a reporting system for in-tunnel, ambient and ventilation outlet limits in consultation with the EPA. The reporting system must be approved by the Secretary and fully implemented and operational prior to operation. Minimum analytical reporting requirements for air pollution monitoring stations must be as specified in the Approved Methods of Modelling and Assessment of Air Pollutants in NSW (EPA 2007, or as updated).</p>	A reporting system for in-tunnel, ventilation outlet and ambient air quality limits will be developed in consultation with EPA.

## 2.2 Revised environmental management measures

The revised environmental management measures (REMMs) relevant to ambient air quality monitoring during the operations and maintenance of the Asset are included in the table following:

Table 2-2 Revised environmental management measures relevant to ambient air quality monitoring

REMM	Relevant requirement	Reference
No ref no.	<p>Environmental management measures that are available for improving tunnel-related air quality are categorised as follows:</p> <ul style="list-style-type: none"> <li>• Tunnel design</li> <li>• Ventilation design and control</li> <li>• Air treatment systems</li> <li>• Emission controls and other measures</li> <li>• Monitoring.</li> </ul> <p>Refer to Section 10.10.2 of the EIS for detailed discussion of these categories.</p>	N/A

### 3 Ambient Air Quality Goals

The ambient air quality criteria for WestConnex New M5 are defined in condition E14 and are provided below in the table following:

Table 3-1 Ambient air quality criteria (condition E14)

Parameter	Concentration limit	Units of measure	Averaging period	Source
CO	9.0	ppm	Rolling 8-hour	NEPM
NO <sub>2</sub>	0.12 (245 µg/m <sup>3</sup> )	ppm	1 hour	NEPM
PM <sub>10</sub>	50	µg/m <sup>3</sup>	24 hour	NEPM
PM <sub>2.5</sub>	25	µg/m <sup>3</sup>	24 hour	NEPM
PM <sub>10</sub>	25	µg/m <sup>3</sup>	1 year	NEPM
PM <sub>2.5</sub>	8	µg/m <sup>3</sup>	1 year	NEPM

*\*Note: The notification and reporting obligations under conditions E15, E16 and E17 relating to ambient monitoring will begin at the commencement of operation of the SSI. The first annual average concentrations for PM10 and PM2.5 must be calculated on the first day the project been in operation for 12 months and on a rolling basis thereafter.*

In accordance with condition E14, should ambient monitoring of air pollutants exceed the goals listed in Table 3-1, conditions E15, E16 and E17 apply and notification and reporting of the above-goal reading shall occur as required.

For the reporting of above-goal readings of the annual average (1-year averaging period), the first annual average result will not be available until at least 12 months following the commencement of operation. As the first annual average result will not be available until this time, any notifications or reports of above-goal readings of the annual average will also not be available until at least 12 months following the commencement of operation.

#### 3.1 Emergency discharge

In accordance with condition E22, the air quality criteria identified in Table 3-1 do not apply in an emergency situation (refer also CoA A16). An 'emergency' has been defined in Section 8.2 of the OEMP.

In the event of an emergency situation that results in discharge(s) that exceed the nominated criteria, the Secretary and the EPA would be notified.

## 4 Monitoring

### 4.1 Monitoring methodologies

The O&M Contractor will monitor the pollutants and parameters, using the sampling method, units of measures and frequency specified in the table following:

Table 4-1 - Ambient Air Monitoring Methodologies

Pollutant	Units of Measurement	Averaging Period	Frequency	Method
NO	pphm	1-hour	Continuous	AM-12
NO <sub>2</sub>	pphm	1-hour	Continuous	AM-12
NO <sub>x</sub>	pphm	1-hour	Continuous	AM-12
PM <sub>10</sub>	µg/m <sup>3</sup>	24 hour	Continuous	AS 3580.9.8-2008 <sup>2</sup>
PM <sub>2.5</sub> <sup>5</sup>	µg/m <sup>3</sup>	24 hour	Continuous	AS 3580.9.13-2013 <sup>3</sup>
CO	ppm	1-hour, 8 hour	Continuous	AM-6
Parameter <sup>4</sup>	Units of measure	Averaging period	Frequency	Method <sup>1</sup>
Wind speed @10 m	m/s	1-hour	Continuous	AM-2 & AM-4
Wind direction @ 10 m	°	1-hour	Continuous	AM-2 & AM-4
Sigma Theta @ 10 m	°	1-hour	Continuous	AM-2 & AM-4
Temperature @ 2 m	K	1-hour	Continuous	AM-4
Temperature @ 10 m	K	1-hour	Continuous	AM-4
Other	Units of measure	Averaging period	Frequency	Method <sup>1</sup>
Siting	N/A	N/A	N/A	AM-1 & AM-4

#### TABLE NOTES

1. Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA, 2007) or as otherwise agreed to in writing by the Secretary in consultation with the EPA.
2. AS3580.9.8-2008, Methods for the Sampling and Analysis of Ambient Air – Determination of Suspended Particulate Matter – PM<sub>10</sub> Continuous Direct Mass Method using Tapered Element Oscillating Microbalance Analyser (Standards Australia, 2008).
3. AS3580.9.12:2013, Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM<sub>2.5</sub> beta attenuation monitors. This alternate methodology was approved by the Secretary on 8 September 2017 in consultation with the EPA.
4. TBD - location for meteorological monitoring station(s) to be representative of weather conditions likely to occur in the vicinity of the northern and southern ventilation outlets.
5. Use of tapered element oscillating microbalance monitor was approved by the Secretary on 8 September 2017 in consultation with the EPA.

The ambient air quality monitoring stations were established and are operated by Ecotech Pty Ltd. Ecotech Pty Ltd were approved by the Secretary on 7 November 2018 (after satisfactory consultation with the EPA and AQCCC) as being an organisation sufficiently skilled and accredited by the National Association of Testing Authorities Australia to supply and operate the air quality monitoring station as required under condition E11.

Ambient monitoring of pollutants for the purposes of notification and reporting obligations under conditions E15, E16 and E17 will begin at the commencement of operation. As such, the first annual average of pollutants will be available 12 months following the commencement of operations.

## 4.2 Monitoring Locations

Ambient air quality monitoring occurs at eight monitoring locations. These are described in the table following and shown in Figure 1 to Figure 3.

Table 4-2 - Monitoring Locations and Standards

Figure	Reference	Location	Condition E10 criteria	Landowner
1	K7	New M5 MOC1, Kingsgrove	E10(a)	Roads and Maritime Services
1	K9	Vacant lot between Kingsgrove Road & Forrester Reserve, Kingsgrove	E10(a)	Roads and Maritime Services
2	A3	49 West Botany Street, Arncliffe	E10(b)	Roads and Maritime Services
2	A5	13 Eve Street, Arncliffe	E10(b)	Roads and Maritime Services
3	S5	Campbell Street, between Church Street and Princes Highway, St Peters	E10(c)	Roads and Maritime Services
3	S7	St Peters Interchange site, adjacent to Burrows Road	E10(c)	Roads and Maritime Services
3	S1	St Peters Public School	E10(d)	Department of Education
4	S3	Barton Park, near Bestic Street	E10(e)	Roads and Maritime Services



Figure 1 - Ambient Air Quality monitoring stations to be located near Kingsgrove ventilation outlet, E10(a)



Figure 2 - Ambient Air quality monitoring stations to be located near Arncliffe ventilation outlet, E10(b)



Figure 3 - Ambient air quality monitoring stations to be located at near St Peter's Ventilation outlet, E10(c+d)

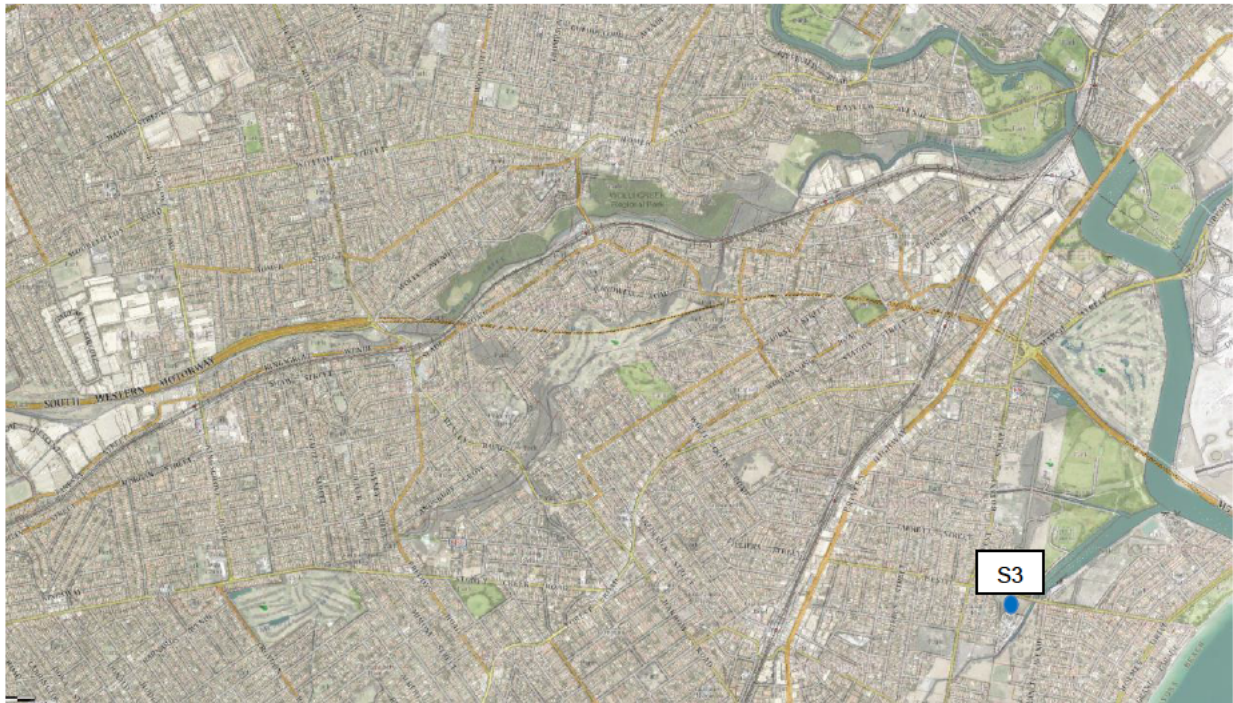


Figure 4 - Ambient air quality monitoring stations to be located away from any of the locations at E10(a-d), E10(e)

## 5 Notification and reporting of above-goal readings

The key steps in notification and reporting of above-goal readings are detailed within Figure 5-1 and include:

1. Notify the above-goal reading
2. Investigate the above-goal reading
3. Report the above-goal reading

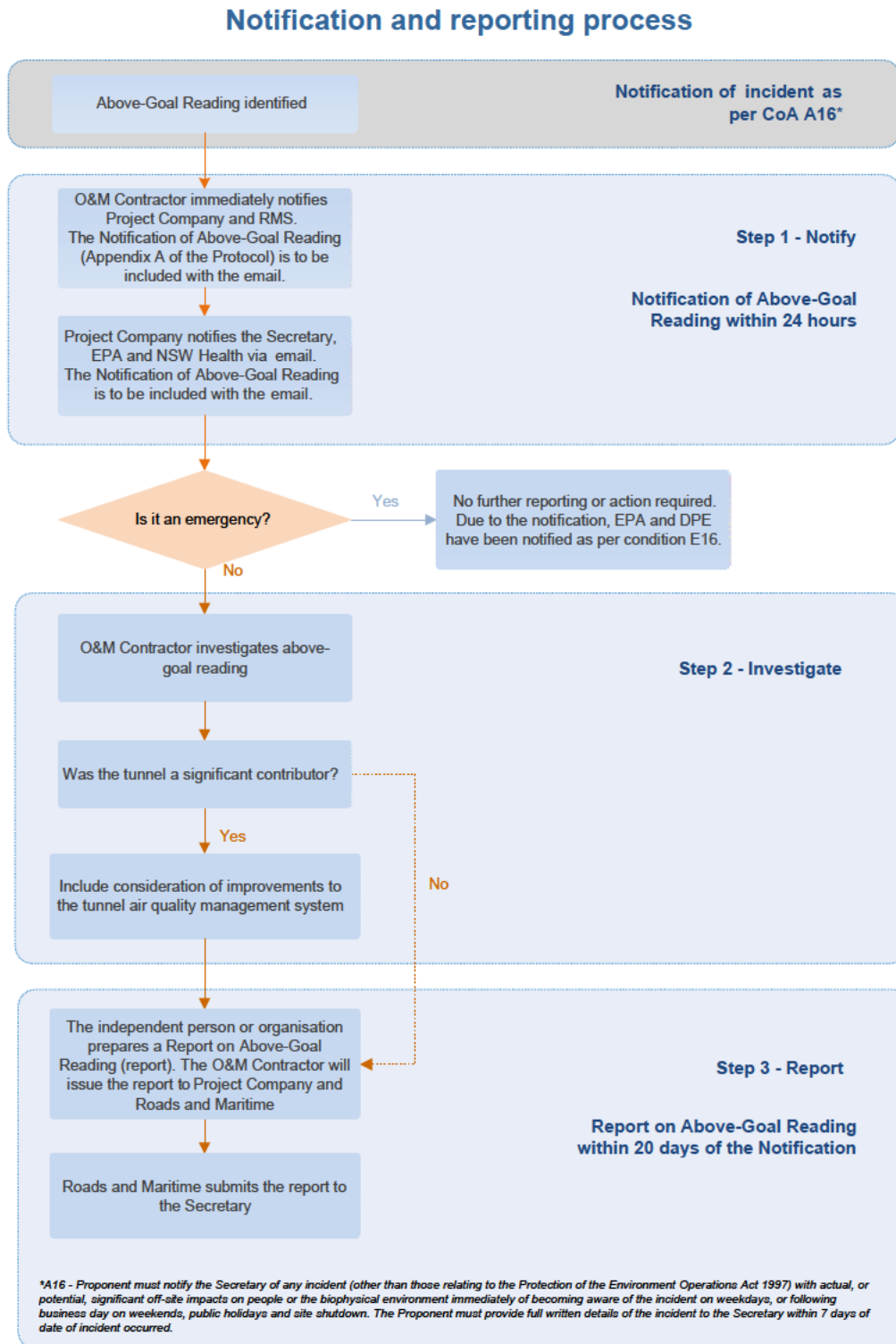


Figure 5 - Notification and reporting process for above goal readings

## 5.1 Notify the above-goal reading

When an exceedance of the air quality goals detailed within condition E14 occurs, it will be reported as an 'incident' in accordance with the requirements of CoA A16 and then the steps within Section 5.1.1 and 5.1.2 will be followed.

### 5.1.1 Notifying Project Company and Roads and Maritime

Upon identification of an above-goal reading, the O&M Contractor will immediately notify Project Company and Roads and Maritime Services.

The email notification included in section 5.1.2 will be provided along with the completed form within Appendix A.

### 5.1.2 Notifying the Secretary, EPA and NSW Health

Project Company will notify the Secretary, EPA and NSW Health. Following consultation with the AQCCC, the councils that sit on the AQCCC will be notified. The notification is to be provided within 24 hours of the reading.

#### Form of Notification

After the 'incident' notification as per CoA A16, the form of notification will be via email with the Notification of Above-Goal Reading form (Appendix A) attached or included with the email. As required by condition E16, the Notification of Above-Goal Reading form will provide details of:

- (a) the nature of the event;
- (b) the concentration levels that occurred;
- (c) the duration of the event;
- (d) measures employed to minimise the concentration levels;
- (e) the Proponent's commitment to prepare a Report on Above-Goal Reading in accordance with condition E17.

The sample content of the email is indicated in Figure 6.

The screenshot shows an email composition window. On the left is a 'Send' button. The header fields are: 'From' (with a dropdown arrow), 'To...' (empty), 'Cc..' (empty), and 'Subject' (containing 'WestConnex New M5 - Ambient Air Quality Above-Goal Notification - MCoA E16'). The main body of the email contains the following text:

The calculated <condition> concentration has exceeded the <level> at one or more of the following stations:

- <Monitoring location> <date> <time> <concentration>

This notification only contains unvalidated data.

Figure 6 - Sample content of the email notification



An example of an email which would be issued is provided below:

Send	From ▼	
	To...	
	Cc...	
Subject		WestConnex New M5 - Ambient Air Quality Above-Goal Notification - MCoA E16
<p>The calculated 24 hour average PM<sub>10</sub> concentration has exceeded the 50 µg/m<sup>3</sup> limit at one or more of the following stations:</p> <ul style="list-style-type: none"> <li>• 13 Eve Street, Arncliffe   20/05/2020 15:00 54</li> </ul> <p>This notification only contains unvalidated data.</p>		

Figure 7 - An example of an email for issue. The completed form within Appendix A will be included.

The Notification of Above-Goal Reading form within Appendix A will be attached or included with the email notification.

### 5.1.3 Contact details for notification

The table below provides the contact details for those stakeholders that will be notified.

Table 5-1 - Contact details for stakeholders that are to be notified

Organisation	Contact Position	Telephone	Email
Department of Planning & Environment	Secretary of the Department	TBA	TBA
	Director Infrastructure Management		
	Director Compliance (Post Approvals)		
EPA	Duty Officer		info@environment.nsw.gov.au
NSW Health	Director, Environmental Health		
RMS	TBA	TBA	TBA prior to commencement of operation
Project Company	TBA	TBA	TBA prior to commencement of operation
City of Sydney			
Canterbury Bankstown			
Bayside Council			
Georges			

It is the responsibility of the organisations detailed above to contact the O&M Contractor, in writing to O&M Manager (MCC) (refer Appendix C) should their contact details change

## 5.2 Investigate the above-goal reading

To determine whether an Above-Goal Reading is attributable to external phenomena or events or emissions from the New M5 Motorway tunnel outlets, the below investigations will be undertaken.

### 5.2.1 Validate Results

Within 2 days of the above-goal reading, the data will be quality validated.

If the data validity checks confirm that the recorded Above-Goal Reading was not valid and was due to an instrument fault or data error, the independent person will complete the Report for Above-Goal Reading (Appendix B) and will submit this document to Project Company and Roads and Maritime. Roads and Maritime will submit the report to Department of Planning and Environment.

A copy will also be placed on the WestConnex website.

If the data validity checks confirm that the recorded Above-Goal Reading was valid, the O&M Contractor will proceed to section 5.2.2.

### 5.2.2 Assess whether an emergency occurred

Should the investigation determine that an emergency occurred (as defined in Section 3.1), no further reporting shall occur.

It is considered that notification of the above-goal reading to DPE and EPA has occurred in accordance with condition E17 through submission of the Notification of Above-Goal Reading.

A written record of the result of the investigation (ie that it is an emergency) is to be retained by the O&M Contractor and Project Company and RMS are to be advised of the finding.

### 5.2.3 Further investigation of valid results

If the investigation confirms that the data is valid, and an emergency does not appear to have occurred, further investigations will be undertaken, and the O&M Contractor will request the independent person/organisation prepare a Report on Above-Goal Reading.

Further investigations of the potential cause may include the below steps.

#### Sydney-wide events

Obtain data for other ambient air quality monitoring stations in the Sydney Basin from the EPA for concurrent monitoring periods to determine whether the exceedance is a Sydney-wide event. This would include information from other projects' AQM stations such as the M4 East, M4-M5 Link and NorthConnex.

If the monitored exceedance is widespread, it is likely that there was an external cause. In this instance, the O&M Contractor will contact relevant authorities such as the Bureau of Meteorology and State Emergency Services to determine if a regional event has occurred consistent with the recorded exceedance.

### Locally specific events

If the exceedance is not widespread throughout the Sydney basin, a local cause is possible and supplementary investigations should be undertaken, such as consulting with relevant stakeholders such as (for example) EPA or relevant Councils, with the aim of establishing whether a specific localised source may have affected one or more monitoring stations. Localised activity (e.g. rubbish burning or unusually high emissions from an industrial premise (with unfavourable weather conditions)) may adversely affect the readings.

### Monitoring equipment calibration

In the circumstance where the investigations are unable to identify a logical cause of the exceedance, further investigations may be undertaken to investigate whether the monitoring equipment is calibrated and functioning effectively.

### Assessment of outlet emissions

A review of the ventilation outlet emissions data will be checked to determine whether emissions are higher or considerably different to emissions over previous periods, with similar traffic conditions within the tunnel.

### Assessment of background data

An assessment against background data (or pre-operational data) may also occur.

## 5.3 Report on Above Goal Reading

If the investigation confirms that there was not an emergency, the O&M Contractor will request the independent person/organisation (once approved) to prepare a Report on Above-Goal Reading.

The Report on Above-Goal Reading (Report) (Appendix B) will detail the cause and major contributor of the exceedance and options available to prevent recurrence.

Where the operation of the tunnel is identified as a significant contributor to the recorded Above-Goal reading, the Report on Above-Goal Reading must include consideration of improvements to the Air Quality Management System so as to achieve compliance with the ambient air quality goals, including but not limited to installation of the additional ventilation management facilities allowed for under condition B5 and discussion of whether or not those improvements are reasonable and feasible.

The Report will be submitted within 20 working days of any Notification of Above-Goal Reading and the Proponent will comply with any requirements arising from the Secretary's review of the Report.

## 6 Process of Appointing Independent Person / Organisation

### 6.1 Definition of an independent person / organisation

The Australian Securities and Investment Commission (ASIC) *Regulatory Guide 112 Independence of Experts (March 2011)* states that an expert must not be associated with certain interested parties, and must disclose certain interests and relationships, when preparing reports<sup>2</sup>.

Any disclosures should be contained within the report/s, relate to relationships or interests existing at the time of preparation of the report or existing in the previous two years and be timely, prominent, specific and meaningful.<sup>3</sup>

### 6.2 Definition of an Independent Person / Organisation

Whilst it does not define an independent *organisation* in itself, ASIC's RG 112.23 states that in identifying relationships and interests that may affect, or may be perceived to affect, the expert's ability to prepare an independent report, the expert should not only identify relationships with, and interests of, the expert but also of:

- (a) the expert's associates;
- (b) those directors and senior employees who are principally responsible for preparing and issuing the expert report; and
- (c) the spouse, children and associates of the directors and senior employees who are principally responsible for preparing and issuing the expert report.

The O & M Contractor will adhere to ASIC's interpretation of independence, and whether or not an 'expert' is an individual or an organisation will largely depend on the nature, scale and complexity of the expert's business and the circumstances of the expert's engagement, as well as the requirements of the report.

Appropriately qualified independent persons/organisations will be identified prior to selection on the basis of merit.

### 6.3 Selection on the basis of merit

In selecting an appropriate expert, ASIC states<sup>4</sup> relevant factors are likely to include:

- (d) Whether the expert has adequate resources (which may include access to appropriate third-party specialists) to perform the necessary work
- (e) The qualifications of the expert and whether the expert has the requisite level of technical expertise (including whether the expert meets the requirements of any relevant industry codes)
- (f) The experience of the expert. For example, a commissioning party may ask what comparable transactions the expert has given an opinion on and whether that experience is relevant to the current transaction
- (g) Whether the expert can meet the timeframe required for the report to be produced, and
- (h) Whether there are any independence issues

### 6.4 Appointment Process

The process for appointing an independent person/organisation to prepare a Report for Above-Goal Reading is as follows:

<sup>2</sup> RG 112.7 *Regulatory Guide 112 Independence of Experts (March 2011) Part (a)*

<sup>3</sup> RG 112.31 – 112.35 *Regulatory Guide 112 Independence of Experts (March 2011)*

<sup>4</sup> RG 112.40 *Regulatory Guide 112 Independence of Experts (March 2011)*

1. Identify appropriately qualified independent persons/organisations.
2. Select independent person/organisation on the basis of merit (refer above).
3. Ensure that any pre-engagement discussions do not compromise the expert's independence. For example, these discussions should not deal with how the expert proposes to evaluate the transaction or the merits of the transaction.<sup>5</sup>
4. Seek written approval from the Secretary. Nomination and consultation with Project Company and Roads and Maritime.
5. Before commencing work, an expert should obtain written terms of engagement<sup>6</sup> from the commissioning party that:
  - (a) set out the scope and purpose of the report
  - (b) set out the facts of the proposal and relevant data
  - (c) recognise the expert's right to refuse to give an opinion or report at all if it is not given the information and explanations it requires to prepare the report
  - (d) give the expert the same access to the commissioning party's records as the auditor of the commissioning party; and
  - (e) set out the fee.
6. Ensure appointment of the independent person/organisation is prior to commencement of operation, or at some time prior to preparation of the report with agreement of the Secretary.

The process for appointing an independent person/organisation to prepare the Report on Above-Goal Reading is as follows:

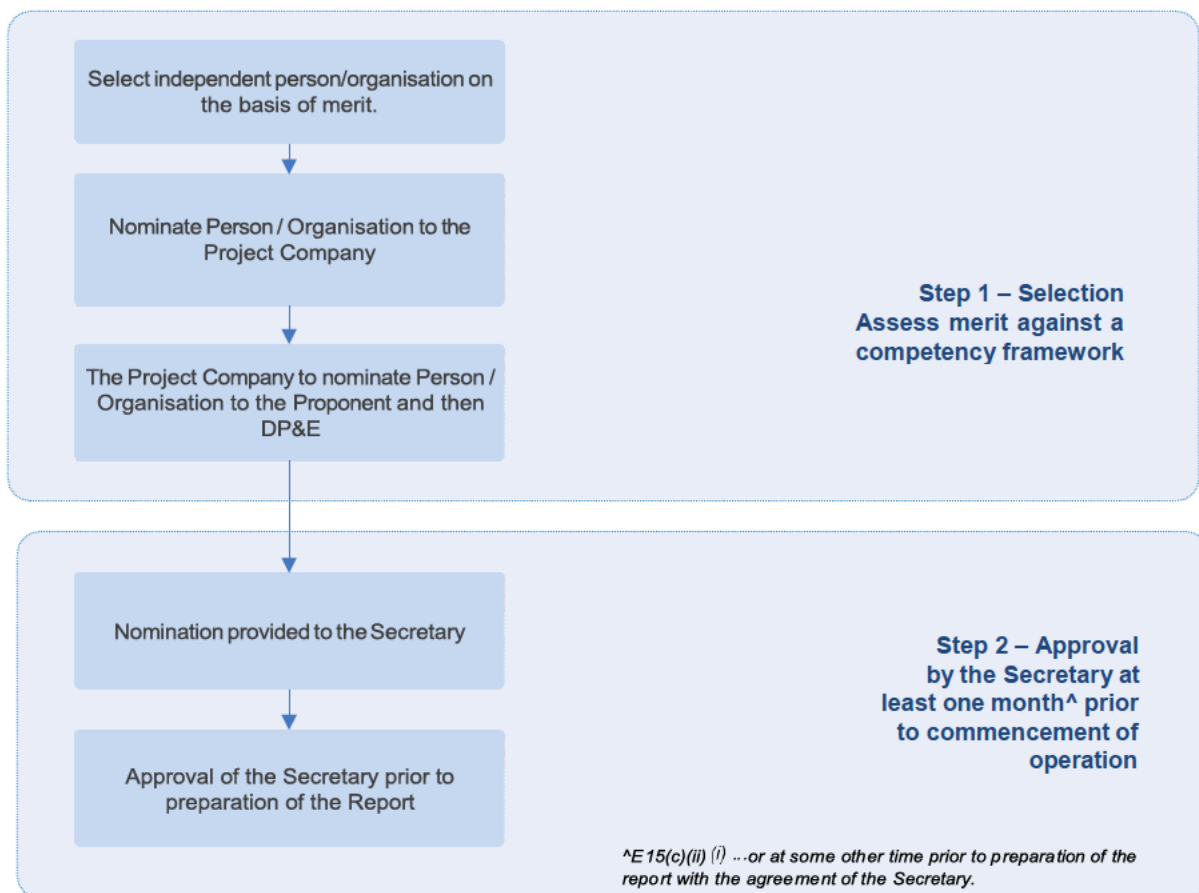


Figure 8 - Process of Appointment

<sup>5</sup> RG 112.41 Regulatory Guide 112 Independence of Experts (March 2011)  
<sup>6</sup> RG 112.42 Regulatory Guide 112 Independence of Experts (March 2011)

The independent person or organisation shall not prepare a Report on Above-Goal Recording until approval has been received for their appointment by the Secretary.

It is noted where the Secretary's approval or agreement is required under a condition of this approval, the Secretary will endeavour to provide a response within one month of receiving an approval or agreement request. The Secretary may ask for additional information if the approval or agreement request is considered incomplete. When further information is requested, the time taken for the Proponent to respond in writing will be added to the one-month period. The Secretary may ask for additional information where a document is required to be submitted to the Secretary and the document is considered incomplete or not fully addressing the requirements of a condition.

It is unknown if or when the requirement to prepare a Notification of Above-Goal Recording and subsequent Report on Above-Goal Recording could be triggered once the project becomes operational. Given the timeframes involved to receive approval from the Secretary as outlined above, the independent person/organisation will be appointed prior to project operation. This will ensure the Report on Above-Goal Recording can be submitted to the Secretary within 20 working days of any Notification of Above-Goal Recording if ambient monitoring of air pollutants records an exceedance of the goals in condition E14.

Once an appropriately qualified independent person/organisation has been approved by the Secretary, this independent person/organisation will prepare all Reports on Above-Goal Recordings. Should for any reason the project need to appoint a new appropriately qualified independent person/organisation, then the appointment process outlined in this section shall be applied again.

## Appendix A - Notification of Above-Goal Reading

<b>Notification of above-goal reading</b> WestConnex New M5		
To be notified immediately to Project Company and RMS. Project Company is to notify DPE, EPA and NSW Health within 24 hours of the recording.		
<b>Date</b>		
<b>Time (start and finish)</b>		
<b>Relevant location</b>	<input type="checkbox"/> New M5 MOC1, Kingsgrove	<input type="checkbox"/> Campbell Street between Church Street and Princes Highway, St Peters
	<input type="checkbox"/> Vacant lot between Kingsgrove Road & Forrester Reserve	<input type="checkbox"/> St Peters Interchange Site, adjacent to Burrows Road
	<input type="checkbox"/> 49 West Botany Street, Arncliffe	<input type="checkbox"/> St Peters Public School, St Peters
	<input type="checkbox"/> 13 Eve Street, Arncliffe	<input type="checkbox"/> Barton Park, near Bestic Street
<b>Relevant goal</b>	<input type="checkbox"/> CO – 8 hour rolling average of 9.0 ppm (NEPM)	
	<input type="checkbox"/> NO <sub>2</sub> – One hour average of 0.12 ppm (245 µg/m <sup>3</sup> ) (NEPM)	
	<input type="checkbox"/> PM <sub>10</sub> – 24 hour average of 50 µg/m <sup>3</sup> (NEPM)	
	<input type="checkbox"/> PM <sub>2.5</sub> – 24 hour average of 25 µg/m <sup>3</sup> (NEPM)	
	<input type="checkbox"/> PM <sub>10</sub> – annual average of 25 µg/m <sup>3</sup> (NEPM)	
	<input type="checkbox"/> PM <sub>2.5</sub> – annual average of 8 µg/m <sup>3</sup> (NEPM)	
<b>Above-goal reading</b> Detail the above-goal reading that was received		
<b>Duration</b> Detail the duration of the above-goal reading or event		
<b>Nature of event</b> Detail nature of the event that contributed to the above-goal reading		
<b>Was the data valid?</b> If unknown at this stage, please indicate. Refer section 5.2.1 of this Protocol.		
<b>Was there an emergency?</b> Refer section 3.1 of this Protocol. If this is unknown at this stage, please indicate.		
<b>Measures employed</b> Detail measures employed to minimise the concentration levels		
<b>Commitment to prepare and submit a Report on Above-Goal Reading</b> A Report on Above-Goal Reading will be prepared for this notification. Please note that a Report is not required in the event of an emergency.		
<b>Person responsible for notification</b>	Name	
	Position	
	Organisation	



## Appendix B - Report on Above-Goal Reading

<b>Report on above-goal reading</b> WestConnex New M5 <small>To be submitted to DPE within 20 days of the Report of Above-Goal Reading</small>	
<b>Details of the exceedance</b> Attach relevant Notification of Above-Goal Reading	
<b>Was the data valid?</b> If invalid, include any details or justifications for the invalidity	
<b>Comparison with long term monitoring trends and background air quality data</b> This is not required to be completed, however if available and	
<b>Cause or major contributor of the exceedance</b> If the cause or major contributor are not able to be determined, then known facts of what was occurring at the time should be included (eg traffic information, ventilation outlet monitoring records etc)	
<b>Options to prevent recurrence</b> This is to include consideration of improvements to the tunnel air quality management system so as to achieve compliance with the ambient air quality goals, including but not limited to installation of the additional ventilation management facilities allowed for under condition B5, and discussion of whether those improvements are feasible and reasonable	

<b>Person responsible for report</b>	Name
	Position
	Organisation
	Date

## Appendix C - Contact list

### Environmental contacts

Title	Name	Phone number
<b>O&amp;M Contractor project representatives</b>		
Operation and Maintenance Manager	To be provided prior to commencement of operation	To be provided prior to commencement of operation
QSE Manager	To be provided prior to commencement of operation	To be provided prior to commencement of operation
Role TBC	To be provided prior to commencement of operation	To be provided prior to commencement of operation
<b>Project Company representatives</b>		
Project Company Project Representative	To be provided prior to commencement of operation	To be provided prior to commencement of operation
<b>Roads and Maritime</b>		
Roads and Maritime Project Representative	To be provided prior to commencement of operation	To be provided prior to commencement of operation
<b>Stakeholders and relevant agencies</b>		
Department of Planning & Environment	Director Infrastructure Management	[Redacted]
	Director Compliance (Post Approvals)	[Redacted]
Fire and Rescue NSW		[Redacted] [Redacted]
EPA		[Redacted] [Redacted]
Ministry of Health / Camperdown Public Health Unit		[Redacted] [Redacted] [Redacted]
SafeWork NSW		[Redacted]
City of Sydney		[Redacted] [Redacted]
Canterbury Bankstown		[Redacted] [Redacted]
Bayside Council		[Redacted] [Redacted]
Georges River Council		[Redacted] [Redacted]
Inner West Council		[Redacted] [Redacted]
Transport Management Centre		[Redacted]