



# Report

## Dust Management Plan - Lot 100, Meriton Site, Rhodes

9 JULY 2009

Prepared for  
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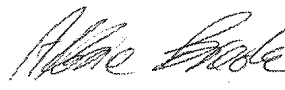
  
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## Overview

This Dust Management Plan (DMP) has been prepared in order to provide a framework for the management of dust on Precinct C of the Rhodes peninsula during the period in which Thiess decommissioning activities, as well as Meriton construction activities are occurring. This document also serves to support:

- The management of activities on the site, such that ambient dust levels are acceptable to the residents of Lot 100 and that DECC criteria for PM<sub>10</sub> are met;
- The implementation of the commitments made in the modification of MP 05\_0039 for occupation of Lot 100;
- The implementation of assumptions made as part of the Human Health Risk Assessment<sup>1</sup> (HHRA), which supported modification of MP 05\_0039.

This document contains the following information:

- Sources of dust emissions on Precinct C;
- Dust management and mitigation strategies;
- Dust monitoring programs;
- Monitoring response procedures;
- Resident Liaison and Complaints handling procedures;
- Reporting procedures; and
- Procedures for revision and review of the DMP.

It is intended that this document is able to be updated, in order to address any key matters that are identified as part of the monitoring activities, throughout the course of the construction period.

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• <sup>1</sup> URS (2009), 'Human Health Risk Assessment, Occupation of Lot 100, 42 Walker Street, Rhodes', May 2009.



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## Potential Dust Emitting Activities

Meriton will be conducting a range of activities during construction on Precinct C, which have the potential to emit dust during the time of residential occupation of Lot 100. The dispersion modelling conducted as part of URS (2009) identified the following factors:

- Peak predictions were found to occur at the southern boundary of Lot 100;
- Haul road emissions, were predicted to be the dominant contributor to ambient PM<sub>10</sub> levels.

Provided below is summary of the range of dust emitting activities that may occur.

### 2.1 Haul Road Emissions

Emissions from haul roads are considered to be a potentially significant source of dust emissions. Haul roads will be used for the delivery and removal of soil to and from the site, and the delivery of building materials to the site.

Haul road dust emissions are primarily generated by the action of vehicle wheels on the road surface. The dust is entrained into the aerodynamic wake of the vehicle, which at higher vehicle speeds creates a visible plume of dust behind a moving vehicle. Dust emissions on sealed roads are also created if particulate matter is present on the road surface. These can be avoided by regular cleaning of the surface.

Potential sources of dust from haul roads include:

- Vehicles passing on sealed and unsealed roads;
- Emissions of soil from tailgates and trays of soil hauling vehicles; and
- Particulate emissions from vehicle exhausts.

### 2.2 Earthworks

Earthworks are considered to be a potentially significant source of dust emissions. The primary location of these emissions is on Lots 101 and 102 of Precinct C (see **Figure B1** in **Appendix B**) during the excavation of soil for the construction of basement car parks, which is scheduled to occur for two months. Other areas of the site may be subject to levelling or grading, prior to sealing of the surface, or planting of grassed areas, however such activities will be of short duration. Potential sources of dust from earthworks will include:

- Excavation and ripping of soil;
- Other earthworks such as grading and levelling of soil; and
- Demolition of concrete slabs.

### 2.3 Wind Blown Dust

During periods of high winds, particulate matter may be lifted from the ground, resulting in airborne dust. Wind blown dust generally requires the wind speed to be above a threshold velocity, which is primarily dependent on the particle size of the material and its moisture content. Sources may include:

- Wind blown dust from exposed (unsealed) surface areas; and
- Wind blown dust from stockpiles.

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## 2 Potential Dust Emitting Activities

### 2.4 Construction Activities

There are a range of activities associated with construction that may cause minor emissions of dust from time to time. Most of these sources are small in scale, and can be controlled locally. These sources may include:

- Sweeping of work areas etc.;
- Abrasive and cutting activities (e.g. sanding, use of saws); and
- Disposal of building materials through garbage chutes.

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## Mitigation Measures

The following mitigation strategies will be employed on Precinct C, in order to minimise dust emissions.

### 3.1 Haul Road Emissions

- Restriction of traffic speeds on Precinct C to 10km/h;
- Sealing and kerbing of roads on the site including:
  - All roadways adjacent to Lot 100 within 6 months of residential occupation; and
  - All roadways on Precinct C within 12 months of residential occupation.
- Watering of unsealed haul roads using a water cart (see **Appendix A** for estimated haul road watering requirements);
- Ensuring that all trucks transporting soil are covered when entering or exiting the site;
- Ensuring that vehicle tailgates are properly sealed, and that they do not deposit loose dirt onto the road surface;
- Cleaning soil from the undercarriage and wheels of vehicles as required;
- Cleaning of sealed roads, using methods which will include one or more of the following:
  - Vacuuming;
  - Sweeping; and
  - Washing.
- Cessation of hauling activities during periods of high wind speeds;
- Ensuring that vehicles travel on designated roadways;
- Maintaining visual awareness of vehicle movements, such that visible dust emissions can be identified and addressed;
- Ensuring that vehicles are not left with engines idling for extended periods; and
- Ensuring that vehicles are properly maintained and operating efficiently.

### 3.2 Earthworks

- Undertaking works during favourable meteorological conditions;
- Cessation of excavation activities during periods of high wind speeds;
- Minimising work areas where possible;
- Wetting down of work areas through the use of hose/s or water cannon or water cart;
- Ensuring that vehicles are not left with engines idling for extended periods; and
- Ensuring that vehicles are properly maintained and operating efficiently.

### 3.3 Wind Blown Dust

- Minimising working areas;

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### 3 Mitigation Measures

- Watering of exposed surface areas using water cannon or sprinkler systems as required.
- Covering and/or watering of stockpiles as required;
- Re-vegetation of exposed soil on completed areas using fast seeding grass, or turf and planting of appropriate shrubs and trees for long-term soil management; and
- Sealing of exposed areas by means of paving/concreting.

#### 3.4 Construction Activities

- Maintaining an awareness of activities that have the potential to contribute to dust levels;
- Using localised dust extraction methods where appropriate; and
- Wetting down work areas where feasible.

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## Monitoring Strategies

### 4.1 Observations and Awareness

The primary monitoring mechanism will be the use of visual observations on the site to identify dust emissions. Employees on the site will be briefed on the following:

- The need to control dust emissions;
- The need to inform the site supervisor of when potential dust generating activities are planned; and
- The need to maintain awareness of dust emissions on the site.

### 4.2 Review of Planned Activities

The Site Supervisor will routinely review scheduled activities that may create dust. The review will consider appropriate scheduling of works, e.g. to avoid adverse weather conditions, implementation of additional mitigation strategies to reduce the dust-generating potential of activities, and ensuring that activities are conducted in accordance with this Dust Management Plan.

### 4.3 Real Time Dust Monitoring

Meriton proposes to undertake continuous real time dust monitoring of PM<sub>10</sub> at Lot 100, using a Tapered Element Oscillating Microbalance in accordance with DECC Ambient Monitoring Method AM-22<sup>2</sup>, which specifies the Australian Standard (AS) AS3580.9.8-2001. This AS was updated in the year 2008, hence it is presumed that the 2008 AS is also acceptable.

The monitor will be located on Lot 100 at the southern boundary as shown in **Figure 1**. This location meets technical and logistical requirements for the siting of the monitor. These requirements include the following:

- Location at the sensitive area identified in the HHRA (URS, 2009);
- The availability of a space where a secure enclosure can be established; and
- The availability of mains power.

The monitor will be commissioned and configured to provide automated alerts to the Site Supervisor, such that the mitigation responses detailed in **Section 5** can be implemented. The monitor will also record a constant stream of data, for retrospective analysis and reporting of data, as required.

Meriton will undertake this monitoring until construction on Precinct C is complete, or until a point at which the monitoring is identified as unnecessary (subject to the review of Canada Bay Council and the Director-General).

Meriton will take measures to prevent the monitor from being affected by nearby residential activities e.g. smoking.

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<sup>2</sup> DEC 2007, *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales* (January, 2007)

## 4 Monitoring Strategies

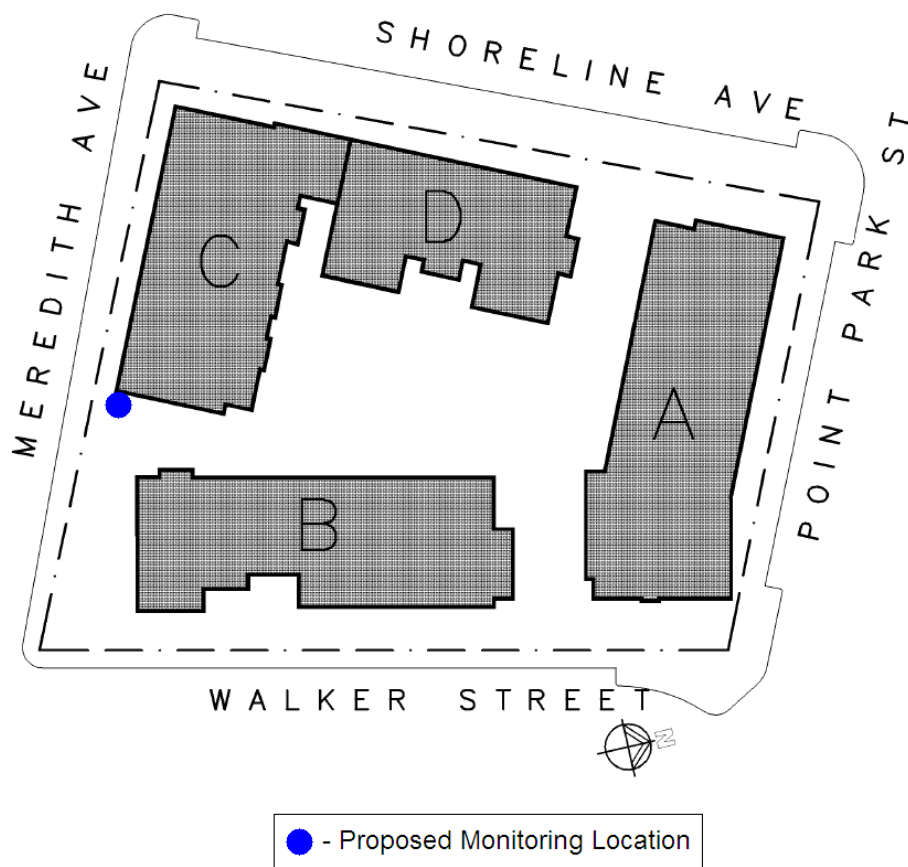


Figure 1 – Outlay of Lot 100 Showing Proposed Monitoring Location

### 4.4 Wind Speed and Wind Direction

The parameters of wind speed and wind direction will be recorded at the dust monitoring location. Whilst existing building structures on the site do not permit siting in accordance with Australian standards (as is typical for almost all urban environments), it is considered prudent to collect this data, particularly scalar wind speed, as it will be potentially useful in the future assessment of localised wind conditions in conjunction with dust levels. Analysis of the data may also allow a site specific wind speed threshold to be identified at the monitor, such that automated alerts could be provided to the site supervisor during the presence of elevated winds.

## Mitigation Strategies, Responses and Reporting

### 5.1 Response Level Thresholds

During the time in which monitoring is undertaken, (subject to the review of this plan) the following response level thresholds will be applied.

**Table 1 - Response Level Thresholds**

Threshold	Averaging Period	Response Level ( $\mu\text{g}/\text{m}^3$ )	General Action
Level 1	30 Minutes	90	Review emissions sources and apply appropriate mitigation
Level 2	30 Minutes	150	Cease all dust generating activities and apply appropriate mitigation

#### 5.1.1 Level 1 Response

Should the Level 1 response threshold be triggered, the following steps should be undertaken:

- Identify dust source:
  - Are visible dust emissions occurring from haul roads?
    - If so, review and apply measures in **Section 3.1**
  - Are visible dust emissions occurring from earthworks?
    - If so, review and apply measures in **Section 3.2**
  - Are wind-blown dust emissions visible?
    - If so, review and apply measures in **Section 3.3**
  - Are visible dust emissions occurring from general construction activities?
    - If so, review and apply measures in **Section 3.4**
  - If dust source is not immediately obvious to site supervisor:
    - Identify dominant wind direction, and conduct visual inspection of activities on site.
    - If activity is identified, cease work on that activity (if safe and practical) until suitable control measures (as identified in **Section 3** can be applied);
  - Monitor measured dust levels.
- In the absence of any identifiable dust generating activities on the site;
  - Confirm that there are no dust generating activities in the immediate vicinity of the monitor (including residential activities such as smoking or cooking);
    - If activity is identified, cease;
  - Confirm that visible dust emissions are not being emitted from Precinct B
    - If so, notify Thiess site supervisor of emissions.

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## 5 Mitigation Strategies, Responses and Reporting

- Confirm that dust levels are not associated with regional dust events (bushfires / dust storms / other fires / other pollution episode) by contact with DECC or accessing DECC monitoring station data.

### 5.1.2 Level 2 Response

Should the Level 2 response threshold be triggered, the following steps should be undertaken:

- Cease all hauling activities;
- Cease any major excavation activities;
- If not already performed, carry out steps detailed in Section 5.1.1 (Level 1 Response);
- Apply mitigation measures to the maximum extent practicable, including the application of haul road watering in accordance with the requirements estimated in **Appendix A**;
- If on-site emissions are found to be triggering the threshold:
  - Apply mitigation measures until a concentration less than the Level 1 threshold has been obtained for a period of 30 minutes.
- If emissions are determined to be either offsite or regional, then for the period that the Level 1 threshold is exceeded:
  - Resume works whilst applying mitigation measures to the maximum extent practicable;
  - Review regional dust levels/presence of offsite emissions after half an hour, after one hour, and then an hourly basis until the Level 1 threshold is not exceeded;
  - Conduct site inspections on an hourly basis to ensure that mitigation measures are applied to the maximum extent practicable.
- Take actions to notify Canada Bay Council and the Director-General of the Level 2 threshold exceedance as soon as practicable after the exceedance.
- Document the event using the form provided in **Appendix C** or equivalent such that a written notification can be provided to Canada Bay Council and the Director-General within one week of the event occurring.
- Should unusual/unforeseen circumstances be identified, seek advice from Canada Bay Council or DECC on a suitable way to proceed.

## 5.2 Failure of Monitoring equipment

Should an equipment outage be experienced at the monitoring point, Meriton will perform the following actions within 4 working hours of identifying the outage:

- Attempt to identify obvious faults (e.g. failure of power, communications) and rectify where possible;
- Notify the equipment supplier of fault, and obtain timeframe for maintenance visit;
- Notify council of the failure and inform of expected timeframe for rectification;
- Proceed with work, whilst performing hourly site inspections for visible dust emissions;

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## 5 Mitigation Strategies, Responses and Reporting

- Apply mitigation measures such that no visible emissions are occurring from activities on the site.

Should the dust monitoring equipment outage last longer than a period of 10 days, Meriton will source a replacement monitor.

### 5.3 Reporting

By the 15<sup>th</sup> of each month, Meriton will submit a monthly report to Canada Bay Council containing the following information:

- A table and chart of 24 hour PM<sub>10</sub> levels recorded in the previous calendar month;
- Details of any exceedances of the Level 1 and Level 2 Response Levels; and
- Any proposed changes to the dust management plan.



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## Resident Liaison and Complaint Handling Procedure

Meriton will manage the provision of information to residents, as well as handling any complaints that occur. Meriton proposed to perform these activities in accordance with the consent conditions for residential occupation using the following services:

- Provision of a information and complaint number; and
- Provision of a website which will allow presentation of information, as well as any complaints to be posted.



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## Revision and Review of Dust Management Plan

### 7.1 Initial Review

A review of the dust management plan will be provided as part of the initial monthly report. This review may include consideration of the appropriateness of the Level 1 and Level 2 response thresholds as a means of avoiding exceedances of the PM<sub>10</sub> guideline level, or unnecessary cessation of works.

### 7.2 Further Revision and Review

This DMP will be reviewed as required, in order to address key matters that are identified as part of the monitoring activities, throughout the course of the construction period. The trigger for further review will be if more than 10 exceedances of the Level 1 response threshold or more than 5 exceedances of the Level 2 response threshold are recorded in any one-month period (excluding multiple triggers for the same dust event and events that are demonstrated to have been caused by regional dust events or external dust emissions).

The matters for review may include (but not be limited to) the following:

- Identifying meteorological conditions that create multiple dust events;
- Identifying systematic issues with implementation of mitigation measures on site;
- Revised means of identifying regional dust levels and/or dust emissions from adjacent areas.
- Adjustment of the Level 1 and Level 2 response concentrations, and/or modification of averaging periods in order to achieve the following:
  - Achievement of the 24 hour DECC goal for PM<sub>10</sub>;
  - Prevention of unnecessary cessation of works (i.e. cessation of works on days where the 24 hour DECC goal for PM<sub>10</sub> is being met); and
  - Improvement of responses to transient dust issues.
- Additional control measures for sources identified to be significant.
- Cessation of monitoring at Lot 100 on the basis of:
  - More sensitive and/or relevant sampling locations being identified (e.g. at other Lots on Precinct C); and/or
  - Elimination of significant sources near to Lot 100, and/or demonstration (through air quality monitoring) of acceptable dust levels at Lot 100.

Revised plans would be submitted to, and subject to the approval of the Director-General, and Canada Bay Council.



## Limitations

This Plan is provided strictly in accordance with and subject to the following limitations:

- a) This Plan was prepared for Australian Remediation Services P/L in accordance with normal prudent practice and by reference to applicable environmental regulatory authority and industry standards, guidelines and assessment criteria in existence at the date of this Plan, and any previous site investigation and assessment reports referred to in this Plan.
- b) This Plan has been prepared for the sole benefit of Australian Remediation Services P/L and neither the whole nor any part of this Plan may be used or relied upon by any party other than Australian Remediation Services P/L.
- c) This Plan should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by URS for use of any part of this Plan in any other context.
- d) This Plan is based solely on the scope of work agreed between URS and Australian Remediation Services P/L.
- e) This Plan should be read in conjunction with the Attached Reports. No responsibility is accepted by URS for use of this Plan in any other context.
- f) This Plan is based solely on the investigations and findings contained in the Attached Reports and on the conditions encountered and information reviewed at the time of preparation of each Attached Report.
- g) This Plan is subject to all limitations and recommendations included in the Attached Reports.
- h) Where any Attached Report indicates that information has been provided to URS by third parties, URS has made no independent verification of this information except as expressly stated in the Attached Report.
- i) URS has only considered those substances specifically referred to in this Plan. URS makes no statement or representation as to the existence (or otherwise) of any other chemicals.
- j) Investigations undertaken prior to this Plan are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and contamination may have been identified prior to this Plan.
- k) Except as specifically stated above, URS makes no warranty, statement or representation of any kind concerning the suitability of the site for any purpose or the permissibility of any use, development or re-development of the site.
- l) Use, development or re-development of the site for any purpose may require planning and other approvals and, in some cases, environmental regulatory authority and accredited site auditor approvals. URS offers no opinion as to whether the current use has any or all approvals required, is operating in accordance with any approvals, the likelihood of obtaining any approvals for development or redevelopment of the site, or the conditions and obligations which such approvals may impose, which may include the requirement for additional environmental works.
- m) URS makes no determination or recommendation regarding a decision to provide or not to provide financing with respect to the site.
- n) The ongoing use of the site and/or the use of the site for any different purpose may require the owner/user to manage and/or remediate site conditions, such as contamination and other conditions, including but not limited to conditions referred to in the Attached Reports.



## Appendix A Haul Road Watering Application Rates

### A.1 Background

The dispersion modelling assessment of dust contained in URS (2009) assumed that haul road watering would achieve a control efficiency of 90 percent against uncontrolled emissions. It was noted in URS (2009) that this was on the basis of a fourfold increase in soil moisture content, in accordance with the US EPA AP-42 guidance<sup>3</sup>. This appendix provides a summary of the estimated water application rates required to achieve a control efficiency of 90 percent.

### A.2 Dust Control Efficiency of Haul Road Watering

Control efficiency of haul road watering has been estimated using the methodology of Cowherd (1988)<sup>4</sup>. This methodology is detailed in **Equation 1**.

$$C = 100 - \frac{0.8 p d t}{i} \quad \text{Equation 1}$$

Where:

- C = average control efficiency (%)
- p = potential hourly daytime evaporation (mm/h)
- d = average hourly daytime traffic rate in vehicles per hour
- t = time between applications (hr)
- i = intensity of application (L/m<sup>2</sup>)

also, noting that hourly rate of application =  $\frac{i}{t}$  (L/m<sup>2</sup>/hr)

The NPI Emission Estimation Technique Manual for Mining (NPI Manual) contains estimated control efficiencies for haul roads based on watering rates, as presented in **Table A1**. URS understand<sup>5</sup> that the control efficiencies provided in the NPI are derived from the work of Holmes Air Sciences (1998)<sup>6</sup> and Cowherd (1988), assuming the following parameters:

- A potential evaporation rate of 2mm/hr (maximum extreme - hot, windy conditions); and
- 30 truck passings per hour.

**Table A1 – Control Efficiencies Specified in the National Pollution Inventory Manual**

Application Rate (L/m <sup>2</sup> /hr)	Potential Evaporation (mm/hr)	Traffic Load (Passings/hr)	Control Efficiency (%, Cowherd)	Control Efficiency (%, NPI)
1.0 – Level 1	2	30	52	50
2.0 – Level 2	2	30	76	75

<sup>3</sup> US EPA (2006) AP 42, Fifth Edition, Volume I, Chapter 13, Section 2.2: *Miscellaneous Sources*  
<http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s0202.pdf>

<sup>4</sup> Cowherd et al (1988) *Control of Open Fugitive Dust Sources – Final Report*, under contract to the Office of Air Quality Planning and Standards, US EPA.

<sup>5</sup> SKM (2005), *Improvement of NPI Fugitive Particulate Matter Emission Estimation Techniques* (May 2005)  
<http://www.npi.gov.au/handbooks/pubs/pm10may05.pdf>

<sup>6</sup> Holmes Air Sciences (1998), "Review of Load Based Licensing Requirements and Exploration of Alternative Approaches". Report to the Minerals' Council of NSW.

## Appendix A

### A.3 Haul Road Water Application Rates Required on to Achieve a 90 Percent Control Efficiency on Precinct C

Based on the data presented in **Table A1**, additional watering is needed to achieve the target of 90% control efficiency for dust control. **Table A2** presents the estimated traffic rates for Lot 100.

**Table A2 - Estimate of Traffic Rates on Lot 100**

Activity	Loads / Day	Peak No. Loads / Hr*	Passings / Hr
Deliveries of construction materials	15	3	6
Hauling of Excavated Material**	45	9	18
TOTAL			24

\*Assuming an 8 hour day, and that peak traffic rates are 60% higher than daily average traffic rates. \*\*Scheduled to occur over a two month duration.

**Tables A2** through **A4** show the required water application rates for a range of daytime conditions, in the absence of rainfall, to achieve 90% control efficiency. The differing conditions are reflected in the calculations by different potential evaporation rates which in the absence of hourly evaporation data, have been assumed to be representative of the following:

- 2mm/hr (Hot, Windy Conditions),
- 1mm/hr, which (assumed representative of typical daytime summer conditions)
- 0.5mm/hr (assumed representative of typical daytime winter conditions)

An indication of monthly variation of mean daily evaporation in Sydney is provided in **Attachment A** to this Appendix. These data are the total evaporation over a day, and have been assumed to occur mainly over the hottest hours of the day to conservatively give hourly evaporation rates of 2, 1 and 0.5 mm/hr for this assessment.

**Table A3 - Application Rates Required for 90% Control Efficiency – Hot, Windy, Daytime Conditions**

Control Efficiency (%)	Potential Evaporation (mm/hr)	Traffic Load (Passings/Hr)	Required Application Rate (L/m <sup>2</sup> /hr)
90	2	30	4.8
		24	3.8
		12	1.9
		6	1.0

## Appendix A

**Table A4 - Application Rates Required for 90% Control Efficiency – Daytime, Assumed Typical Summer Daytime Conditions**

Control Efficiency (%)	Potential Evaporation (mm/hr)	Traffic Load (Passings/Hr)	Required Application Rate (L/m <sup>2</sup> /hr)
90	1	30	2.4
		24	1.9
		12	1.0
		6	0.5

**Table A5 - Application Rates Required for 90% Control Efficiency – Assumed Typical Winter Daytime Conditions**

Control Efficiency (%)	Potential Evaporation (mm/hr)	Traffic Load (Passings/Hr)	Required Application Rate (L/m <sup>2</sup> /hr)
90	0.5	30	1.2
		24	0.96
		12	0.48
		6	0.24

### A.4 Discussion

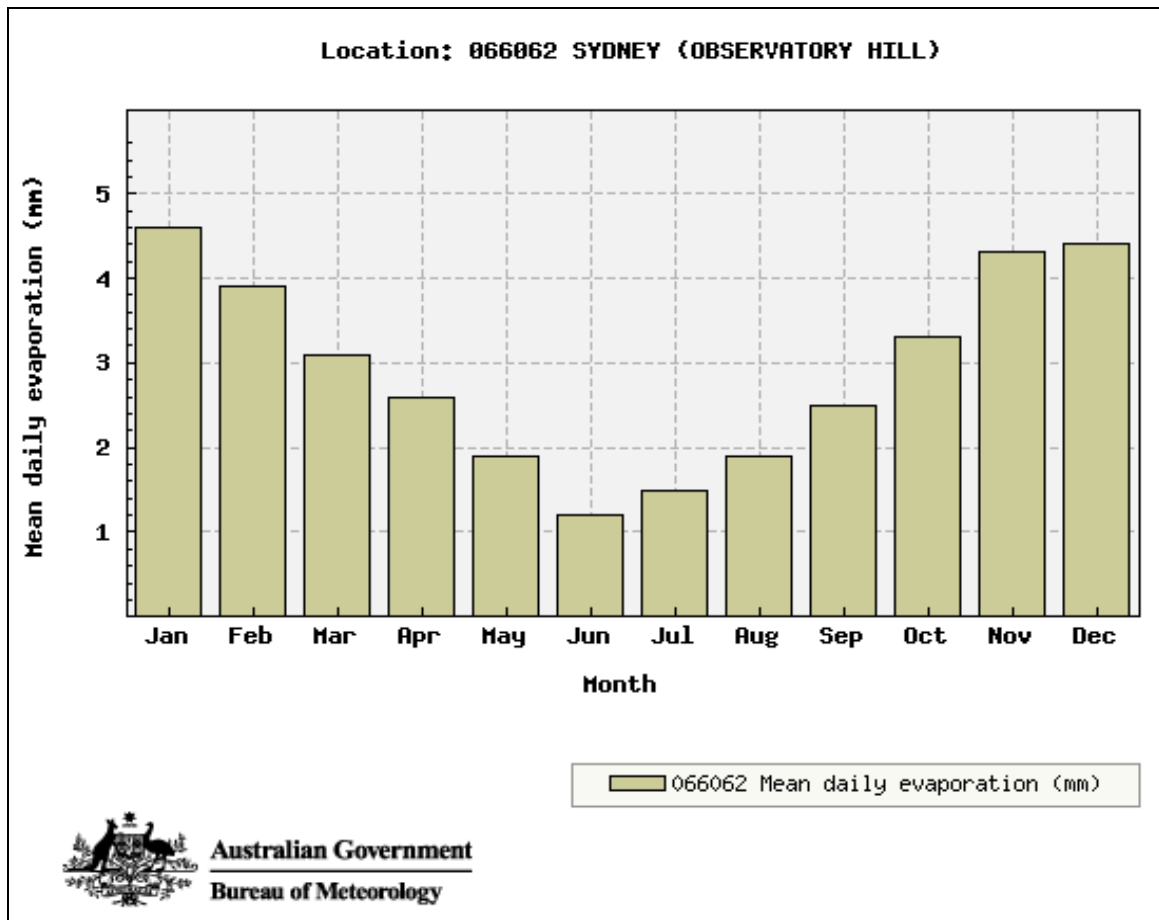
These estimated watering application rates have been prepared at the request of the DECC, as a guide. Several site specific factors would further reduce watering requirements beyond those specified in this appendix. These include:

- Reductions in site specific evaporation rates due to:
  - Shading of road surfaces by existing highrise developments on Lots 100 and 103;
  - Reduced wind speeds at the road surface as a result of existing highrise developments on Lots 100 and 103;
- Conservative dispersion modelling resulting in overestimation of required control efficiencies due to the presence of low hauling speeds on the site.
- The need to only water active (unsealed) roadways, unless identified as a source of wind blown dust.

These rates should serve as a guide for application rates when visible dust emissions from haul roads have been observed, when high dust levels have been recorded or when dust complaints have been received.

Appendix A

Attachment A1 – Average Daily Evaporation Rates at Observatory Hill (Sydney)



Sourced from Bureau of Meteorology website (09/07/09): [www.bom.gov.au](http://www.bom.gov.au)

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## Appendix B Review of Blaxland Road PM<sub>10</sub> Monitoring Data

This Appendix contains a review of dust monitoring data collected at Blaxland Road, Rhodes. This data is collected by Thiess Services P/L, as part of the monitoring requirements for the remediation of the Allied Feeds (Meriton) and Lednez sites, on the Rhodes peninsula. The dust monitoring unit is a Tapered Element Oscillating Microbalance (TEOM) monitor which is located approximately 80m east of the Precinct B and C as shown by the blue circle at the top of **Figure B2**. The monitor operates continuously and reports data in 5 minute intervals.

This analysis was performed in order to assess the scale of fluctuations in PM<sub>10</sub> levels in the area, which occur as a result of both fluctuations in regional background dust levels, as well as the presence of dust emitting activities on the peninsula. Whilst the proximity of the Blaxland Road monitor (relative to dust emitting activities) is not identical to the source-receptor distance for Lot 100, the data serves a purpose with regard to defining initial Level 1 and Level 2 Response Thresholds.

### *Response Levels*

Dust response levels have been suggested by DECC to enable the site to take corrective action to prevent dust concentrations exceeding the PM<sub>10</sub> goal of 50 µg/m<sup>3</sup> for a 24 hour average. The DECC has proposed a Level 1 response level of 90 µg/m<sup>3</sup> (reduction of dust-emitting activities) and 115 µg/m<sup>3</sup> (cessation of works on the site). These levels have been reviewed to provide context of the background PM<sub>10</sub> concentrations measured at the Blaxland Road site.

Ideally, the response levels should achieve the following objectives:

- Compliance with the DECC PM<sub>10</sub> goal;
- Efficient operation of the site;
- Allocation of adequate response time for dust issues to be addressed (after triggering the Level 1 Threshold) prior to the cessation of works (the Level 2 Threshold).

Figure B1 shows a recent year of monitoring data collected at Blaxland Road (29 June 2008 to 29 June 2009), presenting the highest 30 minute average concentration recorded each day. Also shown are the proposed initial Level 1 and Level 2 Response Thresholds, which have been selected to reflect the objectives listed above.

On the basis of analysis of the monitoring performed at Blaxland Road between June 2008 and June 2009 (365 days) the cessation of works threshold (Level 2) would have been reached on 10 days, whilst the DECC 24 hour goal would have been reached on 5 occasions. At least three of these occasions were due to regional events; Wide spread elevated dust levels were reported around Sydney on the 15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> of April during which the DECC goal was exceeded.

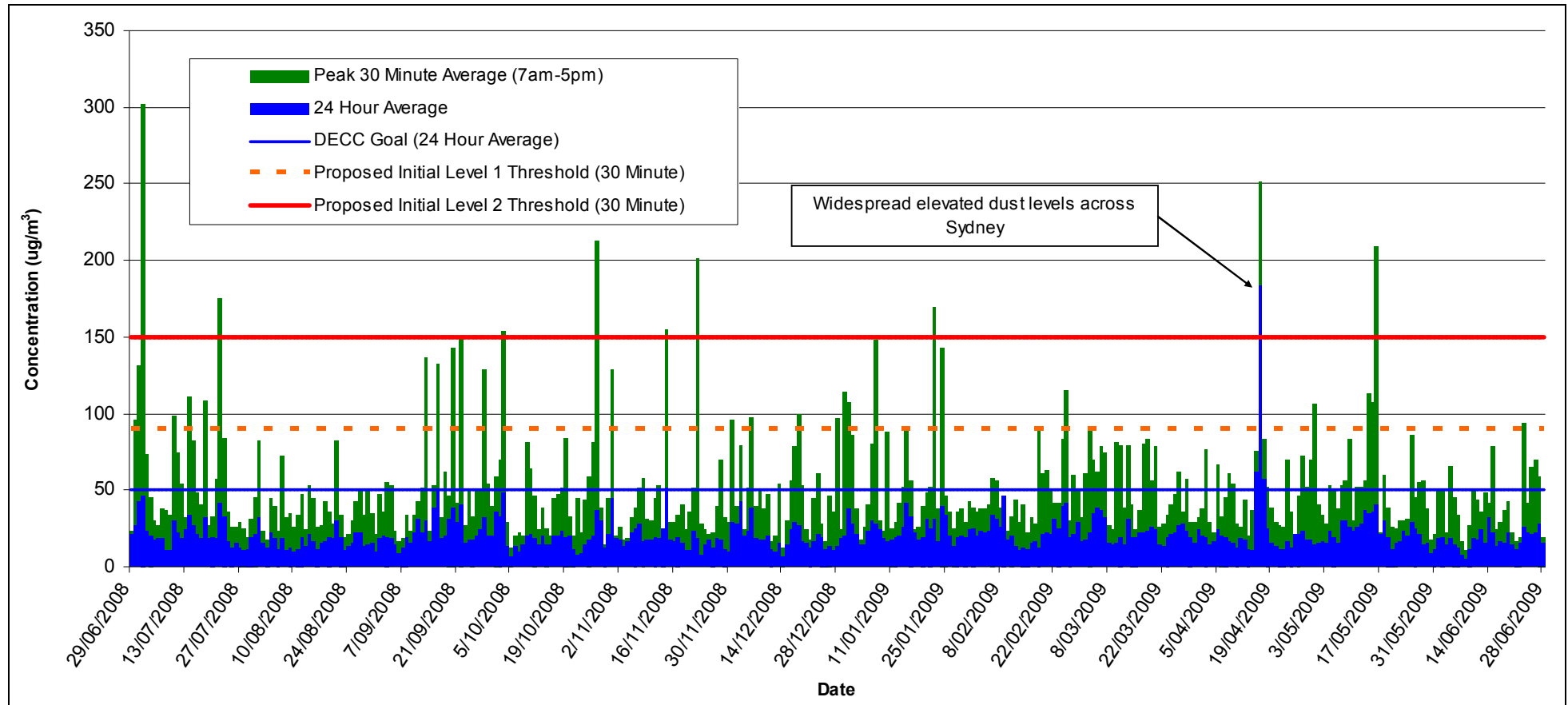
### *Conclusion*

Based on a brief analysis of PM<sub>10</sub> fluctuations in the area, Level 1 and Level 2 response thresholds of 90 and 150µg/m<sup>3</sup> (respectively) are considered appropriate initial values for implementation on Precinct C (see **Section 5** of this report for details on response Levels).



Appendix B

Figure B1 – Monitored PM10 Concentrations at Blaxland Road TEOM



**Figure B2 – Thiess Environmental Monitoring Map**



(Image prepared by Thiess Services P/L. Precinct C shown in yellow border.)

## Appendix C Sample Incident Notification Form

### Meriton Site – 42 Walker St Rhodes Dust Incident Notification Form

Date:	Time:	Personnel:
Location:		
People spoken to on site:		
When did the incident occur:		
What weather was present at the time of the incident? (Note wind speed, wind direction, and any significant rainfall over the previous 24 hours)		
Were there any visible dust plumes on Site? (Describe location, dust plume dimensions, possible sources)		
What site work/activities were being undertaken at time of incident ?		
What control measures were being utilised at time of complaint receipt ?		
Any other relevant observations?		
Any suggested causes ?		
<b>Monitoring Station Concentrations:</b> Note down the dust concentrations at monitoring stations during the incident.		

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## Appendix C

Incident recorded by: (sign) \_\_\_\_\_ Date: \_\_\_\_\_

Site visit details recorded by: (sign) \_\_\_\_\_ Date: \_\_\_\_\_



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