



Mirvac
Dust and Odour Management Plan

55 Coonara Avenue,
West Pennant Hills, NSW

15 February 2023
54393 - 135587 (Rev B)
JBS&G Australia Pty Ltd

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Abbreviations

Term	Definition
AHD	Australian Height Datum
CEMP	Construction Environmental management Plan
CSWMP	Construction Soil and Water Management Plan
DPIE	Department of Planning, Infrastructure and Environment
JBS&G	JBS&G Australia Pty Ltd
OSD	Onsite Stormwater Detention
PAH	Polycyclic Aromatic Hydrocarbons
RAP	Remedial Action Plan
SINSW	School Infrastructure New South Wales
TRH	Total Recoverable Hydrocarbon

1. Introduction

1.1 Introduction and Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Mirvac (the client), to prepare a Construction Dust and Odour Management Plan (DMP) for the proposed redevelopment of 55 Coonara Avenue, West Pennant Hills, NSW (the site). The site location and site layout are presented on **Figures 1 and 2**, respectively.

This DMP has been prepared with consideration to Condition 55 of The Hills Shire Council DA (Ref No: 860/2022/JP) to form part of Mirvac's Construction Environmental Management Plan (CEMP) (Mircac 2021) for the redevelopment of the site.

1.2 Objectives

The purpose of this DMP is to provide a description of the measures to be implemented to mitigate potential dust and odour emissions from the site during demolition and site redevelopment works. This DMP has been designed to ensure, via the implementation of a number of monitoring and management measures pertaining to the works, that the risks to the surrounding environment are negligible.

1.3 Relevant Activities

Activities which have the potential to generate dust and/or odours during development are summarised following:

- Demolition of site structures and hardstand pavements;
- Earthworks associated with cut and fill, site grading, construction of infrastructure, etc;
- Stockpiling of soils for future placement/offsite disposal;
- Landscaping activities, including any removal of existing flora, preparation of surfaces, importation and placement of soils; and
- General site activities (vehicle washout, etc.).

Further discussion of relevant activities as sources of air emissions is provided in **Section 2.1**.

1.4 Application and Responsibilities

The period of application is from the commencement of construction works until the cessation of works that have the potential to significantly disturb the site surface or site structures.

Construction works at the site will be undertaken under the guidance of the Principal Contactor. The Principal Contactor will be responsible for the implementation of the majority of procedures provided in this DMP.

It is noted that where the specific procedures are technical or complex in nature then the Principal Contactor may appoint appropriately qualified agents (i.e. competent person¹/environmental consultants) to fulfil the requirements of the procedure or advise the appropriate implementation of the procedure.

Prior to commencement of any activities listed in **Section 1.4**, the Principal Contractor, and relevant contractors and consultants, should refer to the CEMP (Mircac 2021). The list in **Section 1.4** is not intended to be exhaustive, an assessment should be made prior to the commencement of works by

¹ Competent Person means a person who has acquired through training, qualification or experience the knowledge and skills to carry out the task.

the Principal Contractor regarding whether those works are likely to involve the handling of soils (either site based or imported) or have the potential to generate dust/odour emissions from the site.

2. Dust and Odour Management Plan

2.1 Sources of Emissions to Air

Construction activities have the potential to generate fugitive dust emissions particularly during drier conditions. With due consideration to the proposed development the following dust generation activities have been identified:

- Removal of Site pavements (i.e. exposed surfaces).
- Site grading/excavation activities to reach the required construction levels.
- Movement of heavy vehicles/plant on unsealed areas.
- Handling of materials including:
 - Excavation to Stockpile;
 - Excavation to Placement;
 - Import to Placement;
 - Import to Stockpile;
 - Stockpile to Stockpile; and
 - Offsite disposal.
- Wind Erosion.

Dust emissions from sources which are dependent on operational activities would be limited to work hours permitted by the development consent. Wind erosion from exposed surfaces could occur outside these times, subject to Site management practices, but would generally be limited to periods of moderate to strong winds (wind speeds greater than ~ 5 m/s) depending on the material properties (i.e. moisture content and threshold friction velocity).

Emissions of fugitive dust from construction activities will comprise of mostly coarse particle size fractions, that is, in the PM10 and TSP range. While construction does generate fine particulate (i.e. PM2.5 and less) the bulk of these fine particulates are typically derived from combustion sources such as diesel-powered plant and equipment.

Emission of carbon monoxide (CO), nitrogen dioxide (NO₂) and sulfur dioxide (SO₂) would also occur from diesel powered plant and equipment on Site and vehicle movements to Site, but is anticipated to be minor.

3. Environmental Management Controls

3.1 Dust Management and Mitigation Measures

The following dust mitigation measures are required to be implemented:

- Dust cloth must be installed along the perimeter fencing of the site.
- Covering of truck loads during transport.
- Road sweeping, vehicle speed limits, truck washes and rumble grids at Site (or stage sites) exits to avoid tracking of dirt onto public roads.
- Sealing of trafficable areas and areas susceptible to windblown dust, including the use of stockpile covers, application of water via water cart and/or water cannons/misters to suppress dust potential, etc.
- For large, unsealed areas of the site (or stages) where works are not occurring or are not planned to have works occurring for a lengthy period of time (e.g. one month) consideration to the application of seeding/hydro-mulching to provide a barrier to mitigate dust generating potential of these areas.
- Where weather forecasts predict adverse conditions (e.g. high winds), the frequency and duration of dust control measures should be increased, or where required, the cessation of relevant works under adverse meteorological conditions such as high winds where dust control measures are not working as intended.
- Consideration of these and other best practice controls will be incorporated into operating procedures to ensure compliance with regulatory criteria. These measures are outlined below.

3.1.1 General

- Under no circumstances should any material be burnt on Site.
- Silt and other materials will be removed from around erosion control structures following any significant rain events to ensure sediment deposits do not become dust sources.

3.1.2 Vehicular/Wheel Generated Dust

- All vehicles on Site shall be confined to a designated route with a maximum speed limit of 20 km/h strictly enforced.
- Material should be, where possible, loaded directly into a truck for off-site disposal rather than excavation, stockpiling and then load out.
- Where materials have been identified as suitable for beneficial re-use, materials should be excavated and taken to their emplacement location rather than excavation, stockpiling, transport and emplacement. This approach reduces the double handling of materials and potential for excessive dust generation.
- A designated route to works area(s) (i.e. stockpile/materials storage areas, emplacement locations etc.) shall be established. When conditions are dry the use of a water truck (or similar) should be implemented.
- It is recommended that a minimum of one water truck/cart be kept on Site at all times for utilisation during bulk earthwork excavations and the wetting down of haul roads. It is recommended that the water truck/cart complete wet-down of haul roads and trafficable areas at least three times a day, including at the commencement of daily activities, or as haul roads/trafficable areas become dry. This frequency is required to be modified based

on meteorological conditions and water retention properties of the haul roads/trafficable areas of the site.

- At Site exit points and/or as trucks move onto sealed roads, rumble grids should be installed to remove excess dirt from truck/plant wheels. The rumble grids should be cleaned regularly.
- In the event of dirt being tracked onto pavements, the road will be cleaned prior to the material drying out and becoming a dust source.

3.1.3 Wind Erosion

- Wind erosion from temporary stockpiles can be limited by covering stockpiles when left for a period greater than 24 hours.
- When conditions are dry and windy, wind erosion from exposed surfaces and stockpiles should be controlled via application of a water spray/mist.
- Finished surfaces should be compacted and care taken not to re-disturbed, to reduce wind erosion.
- Installation of water cart spray or sprinkler system for the stockpile area which can be activated during adverse weather.

3.1.4 Excavation and Materials Handling

- During excavation activities, excavation areas will be wetted down using the water truck/cart and/or continuous water spray cannons/misters directed towards the excavation area to minimise the potential for dust to be generated.
 - Care should be taken to not over-wet excavations and/or stockpiles such that excess runoff is generated.
- Any excess soil/fill excavated during the works must be securely stockpiled on a sealed surface (e.g. concrete pad) or on plastic sheeting away from all storm water infrastructure.
- Stockpiles must be placed in a secure location on Site and covered with plastic sheeting if they are to remain for more than 24 hours, unless specifically advised otherwise by the consultant.
- Should excess soils be stockpiled on Site, sediment control measures (e.g. silt fences, hay bales) must be installed to protect run off from stockpiled/exposed soil materials into stormwater infrastructure.
- Material should be, where possible, loaded directly into a truck for off-site disposal rather than excavation, stockpiling and then load out. Where materials have been identified as suitable for beneficial re-use, materials should be excavated and taken to their emplacement location rather than excavation, stockpiling, transport and emplacement. This approach reduces the double handing of materials and potential for excessive dust generation.
- When dust cannot be effectively controlled using application of a water spay/mist (or similar), consideration should be given to modifying the works by limiting the use of significant dust generating equipment (i.e. dozers, loading/unloading fill) during periods of high wind.
- If any excess excavated soil/fill material is to be disposed off-site, it should be classified in accordance with NSW EPA (2014) Waste Classification Guidelines by the environmental consultant. Waste must be managed in accordance with the provisions of the *Protection of the Environment Operations (Waste) Regulation 2014*.

3.1.5 Vehicle Exhaust Emissions Management and Mitigation Measures

- Trucks and construction plant entering the Site should be well maintained in accordance with the manufacturer's specifications to comply with relevant regulations. Vehicles which are identified to be or considered to be defective (i.e. high exhaust levels) should be stood down for maintenance.
- Unnecessary idling for delivery trucks and plant should be avoided with engines turned off during periods of inactivity.
- Delivery of materials should be planned and coordinated to avoid congestion and excessive truck queuing/idling.
- The number of trucks and distance they are required to travel should be controlled and reduced where possible.

3.2 Ambient Air Monitoring

In addition to the above management controls, ambient air dust levels (PM₁₀) will be recorded during demolition and bulk earthworks activities at the site utilising continuous dust monitoring equipment which will be established at the northern and western site boundaries (site boundaries closest to sensitive receptors including residential dwellings).

In accordance with the National Environment Protection (Ambient Air Quality) Measure (NEPC 2013), guidance values for PM₁₀ in ambient air is 50 µg/m³ will be adopted for the assessment of ambient air quality for redevelopment activities.

Where the guidance values for PM₁₀ are exceeded in ambient air across the works period, modification of the dust management controls will be required, and consideration for increased frequency of water application via use of the water truck/cart and/or the addition of additives to water prior to its application to haul roads/trafficable areas/excavation faces to aid in dust suppression may be required.

4. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquiries.

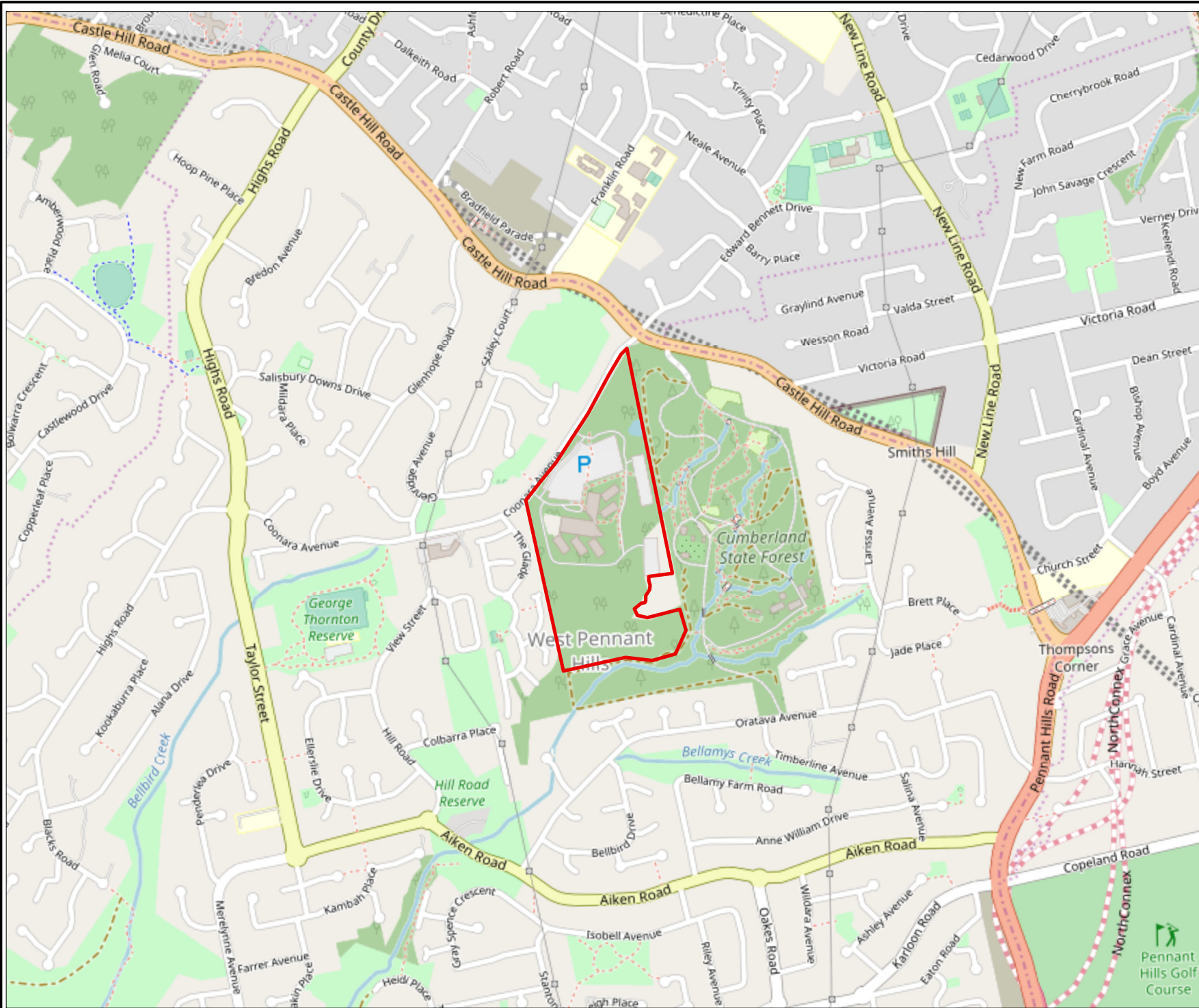
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.


Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures



Legend:

 Approximate Site Boundary



Job No: 54393

Client: Mirvac

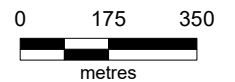
Version: R06 Rev A

Checked By: RL

Date 11/02/2021

Drawn By: DD

Scale 1:15,000



Coor. Sys. GDA 1994 MGA Zone 56

**55 Coonara Avenue
West Pennant Hills, NSW
(Lot 61 DP737386)**

SITE LOCATION

FIGURE: 1



Legend:

- Approximate Site Boundary
- Building
- Carpark
- Dam
- USTs
- Ring Road



Job No: 54393

Client: Mirvac

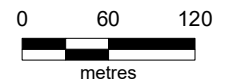
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Checked By: DD

Date: 11/02/2021

Drawn By: DD

Scale 1:5,250



Coor. Sys. GDA 1994 MGA Zone 56

**55 Coonara Avenue
West Pennant Hills, NSW
(Lot 61 DP737386)**

SITE LAYOUT

FIGURE: 2

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