

DEICORP PROJECTS SHOWGROUND PTY LTD



Air Quality Management Plan

2 Mandala Parade, Castle Hill NSW

Document Control

Report Title: Air Quality Management Plan; 2 Mandala Parade, Castle Hill NSW

Report No: E24724.E21_Rev2

Copies	Recipient
1 Soft Copy (PDF – Secured, issued by email)	Joelle Khnouf Deicorp Projects Showground Pty Ltd Level 4, 161 Redfern Street, REDFERN NSW 2016
1 Original (Saved to Digital Archives)	EI Australia Suite 6.01, 55 Miller Street, PYRMONT NSW 2009

Author		Technical Reviewer	
			
SARI ERU Senior Environmental Scientist		MALCOLM DALE Senior Principal – Contaminated Land CEnvP (SC Specialist)	
Revision	Details	Date	Amended By
0	Original	23 April 2021	-
1	Updated entity name and design plans	21 May 2021	LW/BA
2	Updated design plans	9 July 2021	BA

© 2021 EI Australia (EI) ABN: 42 909 129 957

This report is protected by copyright law and may only be reproduced, in electronic or hard copy format, if it is copied and distributed in full and with prior written permission by EI.

Table of Contents

	Page Number
1. INTRODUCTION	1
1.1 Background and Purpose	1
1.2 AQMP Objective and Scope of Works	1
1.3 Proposed Development	1
1.4 Structure of the AQMP	2
2. REGULATORY FRAMEWORK	3
2.1 Other Project Requirements	4
3. SITE SETTING	5
3.1 Property Identification, Location, and Physical Setting	5
3.2 Meteorological Conditions	5
3.2.1 Wind Conditions	6
3.2.2 Atmospheric Conditions	7
3.3 Site Receptors	7
4. BACKGROUND AIR QUALITY	8
4.1 Previous Investigations	8
4.2 Local Emission Sources	9
4.3 Existing Air Quality	9
5. AIR QUALITY IMPACTS	11
5.1 Construction Activities	11
5.2 Potential Impacts	11
5.3 Contaminants Related to Air Quality	12
5.3.1 Weather	12
5.3.2 Mobile Plant	12
5.4 Acceptance Limits for Air Quality	13
5.4.1 Acceptance Limits of Secondary Effects	13
6. AIR QUALITY MANAGEMENT	14
6.1 Principals of Dust Management	14
6.2 Roles and Responsibilities	14
6.3 Hours of Work	15
6.4 Induction and Training	15
6.5 Monitoring	16
6.5.1 Visual Surveillance	16
6.6 Reporting	17
6.6.1 Incident Reporting	17
6.7 Review of AMQP	17

7. AIR QUALITY MITIGATION	18
7.1 Management Measures	18
7.2 Mitigation Measures	18
7.3 Contingency Measures	20
8. STATEMENT OF LIMITATIONS	22
REFERENCES	23
ABBREVIATIONS	24

Schedule of Figures

Figure 3-1 Mean Wind Conditions for Site	6
Figure 4-1 Emissions by Sector for Castle Hill (2013)	9

Schedule of Tables

Table 2-1 Regulatory Framework	3
Table 3-1 Site Setting Information	5
Table 3-2 Generalised Atmospheric Conditions	7
Table 4-1 Summary of GHD (2019) Air Quality Assessment	8
Table 6-1 Summary of Responsibilities	14
Table 6-2 Air Quality Monitoring	16
Table 7-1 Air Quality Management Measures	18
Table 7-2 Air Quality Mitigation Measures	19
Table 7-3 Contingencies for Non Conformances	20

Appendices

APPENDIX A - FIGURES

- A.1 Site location
- A.2 Site Layout Plan

APPENDIX B – PROPOSED DEVELOPMENT

1. Introduction

1.1 Background and Purpose

Following the opening of the Sydney Metro North West (SMNW) rail project in May 2019, Landcom and Sydney Metro are working together to develop walkable, attractive mixed use places around the SMNW stations. This includes the government owned land located adjacent to the Hills Showground Station, at 2 Mandala Parade, Castle Hill NSW ('the site'). The site was bound by De Clambe Drive to the north, Doran Drive to the west, Mandala Parade to the south and Andalusian Way to the east (see **Figure 1, Appendix A**).

EI Australia (EI) was engaged by Deicorp Projects Showground Pty Ltd to prepare an Air Quality Management Plan (AQMP), to be implemented at the site during construction of the State Significant Development (SSD) for mixed, commercial (retail) and residential land uses. This AQMP was developed in response to condition C14 of development consent SSD 9653, for the management of air quality during construction of the proposed development. Acceptable air quality may be summarized as no nuisance dust or odours to be received at or beyond the site boundaries, presented in **Figure 2, Appendix A**.

While this AQMP provides general advice for the management of air quality associated with the expected construction activities, further Job Safe Analysis (JSA's) and/or Safe Work Method Statements (SWMS) should be prepared for job specific situations.

1.2 AQMP Objective and Scope of Works

The objectives of this AQMP were to assist the client with the management of air quality at the site, by outlining procedures to minimise the potential for the generation of dust and other emissions during construction. This would be achieved by completing the following scope of works:

- Identify the potential sources of dust and other emissions which may impact air quality during construction;
- Outline mitigation and/or management measures to be implemented at the site, with regards to dust generation and the movement of dust;
- Develop site specific criteria and performance measures to demonstrate the sites compliance with the requirements of standards and guidelines relevant to air quality for the site; and
- Provide site staff with an increased level of understanding and awareness of all management issues associated with the air quality relevant for the works.

1.3 Proposed Development

Based on the supplied plans (**Appendix B**), the proposed development would include construction of multi-storey, mixed commercial and residential apartment buildings overlying a common (commercial) retail plaza structure with six-levels of basement car park.

1.4 Structure of the AQMP

The structure of the report is outlined below:

- Section 1 – Introduction: This section introduces the assessment.
- Section 2 – Regulatory Framework: This section describes the legislation, standards and guidelines applicable to Air Quality at the site.
- Section 3 – Site Setting: This section describes the existing environmental characteristics of the site relevant to the development.
- Section 4 – Background Air Quality: This section details the Air Quality of the existing site, and identifies Site Receptors.
- Section 5 – Air quality Impacts: This section outlines the predicted air emissions and impacts to the surrounding environment as a result of the proposed construction activities for the development.
- Section 6 – Air quality Management: This section outlines high level recommendations for the project regarding air quality.
- Section 7 – Air quality Mitigation: This section presents an overview of the proposed air quality mitigation and contingency measures to be undertaken during the project.

2. Regulatory Framework

Legislation, guidelines and standards relevant to air quality management for the development are presented within **Table 2-1**.

Table 2-1 Regulatory Framework

Regulatory Document	Summary of Requirements
Legislation	
Environmental Planning and Assessment Act 1979 (EP&A Act)	The EP&A Act determines the category of development, and gives rise to state environmental planning policies (SEPP) developed to assist regulators with the protection of human and environmental health.
Protection of the Environment Operations Act 1997 (the POEO)	The objective of the POEO Act is to achieve the protection, restoration and enhancement of the quality of the environment. The POEO Act gives rise to the POEO (Clean Air) Regulation (2010).
Environmental Planning and Assessment Act 1979 (EP&A Act)	The EP&A Act determines the category of development, and gives rise to state environmental planning policies (SEPP) developed to assist regulators with the protection of human and environmental health.
State Environmental Planning Policy (SEPP) (Major Projects) 2005.	SEPP (Major Projects) facilitates the development or redevelopment of important sites of economic, environmental or social significance to the State, to encourage works to be approved for the benefit of the State.
Local Council Plans	▪ The Hills Local Environmental Plan 2019; and ▪ The Hills Development Control Plan 2012.
Standards	
Standards Australia	All activities should adhere to: ▪ AS2601: 2001 <i>The Demolition of Structures</i>; ▪ AS2159:2009 <i>Piling Design and Installation</i>; ▪ AS 3580: 2007 <i>Methods of Sampling Analysis of Ambient Air</i>, being: ▸ Part 1.1 (2007) <i>Guide to Siting Air Monitoring Equipment</i>; ▸ Part 10.1 (2003): <i>Determination of Particulate Matter - Deposited Matter (Gravimetric Method)</i>; and ▸ Part 12.1 (2001): <i>Determination of light scattering – integrating nephelometer method</i>.
Guidelines	
National Environment Protection Measure for Ambient Air Quality (2016), 2021 Variation (NEPM-AAQ)	National Environment Protection Standards were determined in accordance with (set) monitoring protocol, to achieve ambient air quality that allows for the adequate protection of human health and well-being.
National Environment Protection Measure (Diesel Vehicle Emissions) Measure (2001), 2009 Variation (NEPM-DVE)	National Environment Protection Standards to reduce emissions from diesel vehicles, by facilitating compliance with in-service emission standards from diesel vehicles.

Regulatory Document	Summary of Requirements
Other relevant Guidelines	▪ Department of Environment and Conservation NSW (DEC) <i>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW</i> (2007);, ▪ EPA (2016) <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i>; ▪ Landcom (2004) <i>Managing Urban Stormwater: Soils and Construction</i> (the "Blue Book"). Of particular relevance was: ▸ Volume 1 (4th Edition); ▸ Volume 2A <i>Installation of Services</i>; and ▸ Volume 2C, <i>Unsealed Roads</i>.

2.1 Other Project Requirements

As stated in **Section 1.1**, consent was granted by a delegate of the Minister for Planning and Public Spaces for the Hills Showground Station Precinct on 29 January 2021 as SSD 9653. Related to Air Quality was Part C, Condition C14 which states:

"CONSTRUCTION IMPACT ASSESSMENT

C14. Future detailed development applications shall provide analysis and assessment of the impacts of construction and include:

- (a) Construction Pedestrian and Traffic Management Plan as per Condition C17*
- (b) Noise and Vibration Management Plan*
- (c) Air Quality Management Plan*
- (d) Construction Waste Management Plan*
- (e) Community Consultation and Engagement Plans*

The plans referred to above may be prepared as part of a Construction Environmental Management Plan prepared and implemented under the conditions of any consent granted for future development applications."

3. Site Setting

3.1 Property Identification, Location, and Physical Setting

The site is situated within an area of mixed land use, including residential, commercial and recreational activities. A summary of the site setting is presented in **Table 3-1**.

Table 3-1 Site Setting Information

Attribute	Description
Street Address	Part of the Hills Showground Station Precinct, the site was referred to as the 'Doran Drive Precinct' with the street address of 2 Mandala Parade, Castle Hill NSW.
Lot and DP	Lot 55 in Deposited Plan (DP) 1253217
Site Area	7,969 m ²
Location Description	10 km north-west of Parramatta CBD, bound by De Clambe Drive (north), Andalusian Way (east), Mandala Parade (south) and Doran Drive (west).
Topography	The site surface was moderately dipped towards the southwest, with site levels varying from 98.13m AHD in the north-east, reducing to 90.63m AHD in the south-west. The boundaries of the site were battered, with an average 1-1.5m drop observed towards the surrounding roads. Local topography gently slopes to the south-west, towards Cattai Creek.
Site Drainage	Site drainage is likely to be consistent with the general slope of the site. Any run off would be expected to flow into the new constructed stormwater pits, which discharges into the municipal stormwater system and ultimately, to the closest surface water feature, Cattai Creek (approx. 130m southwest of site).
Surrounding Use	▪ North: Castle Hill Showground, with residential use beyond. ▪ South: Hills Showground Metro Station and associated retail plaza, followed by residential properties and Carrington preschool (approx. 110m southwest) ▪ East: Hills Showground Precinct East, comprising the former offices and car park of The Hills Shire Council, with residential beyond. ▪ West: Hills Showground Precinct West, comprising a car park and retail plaza, with commercial use beyond.
Soil Landscapes	The site overlies an erosional Glenorie (<i>gn</i>) soil landscape, characterised by undulating to rolling low hills on Wianamatta Group shales, while the western portion of the site overlies a colluvium Hawkesbury (<i>ha</i>) soil landscape, characterised by rugged, rolling to very steep hills on Hawkesbury Sandstone. ▪ (Source: Bannerman SM and Hazelton PA, 1990, <i>Soil Landscapes of the Penrith 1:100,000 Sheet</i>)

3.2 Meteorological Conditions

Meteorological conditions of the site are of fundamental importance to Air Quality as these conditions drive the release of emissions into the atmosphere, resulting in the occurrence of off-site impacts. In accordance with EPA (2016), the parameters of most importance are:

- Wind Direction and Speed, to determine the direction and speed at which the emissions are transported from the source(s) to the receptor; and
- Atmospheric conditions, such as rainfall, temperature and atmospheric turbulence.

3.2.1 Wind Conditions

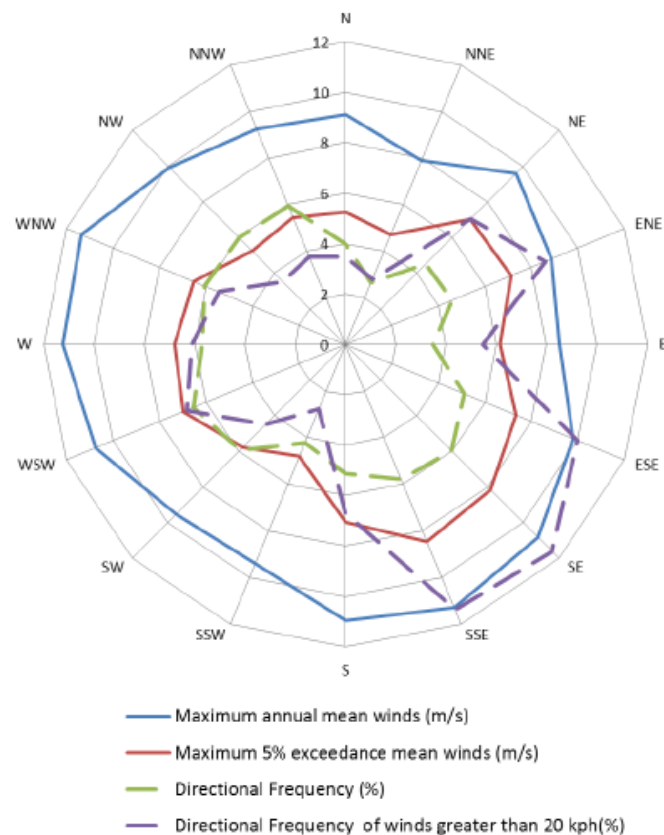
EI were provided with a report on the local wind conditions for the development, prepared by Windtech Consultants Pty Ltd (Windtech), as:

- Windtech (2019) *Hills Showground Station Precinct, Castle Hill Pedestrian Wind Environment Statement*, prepared for Landcom, Report WF043-01F02(Rev1), dated 29 October 2019.

Findings of relevance to this AQMP were:

- The regional winds for the site are governed by three principal directions, being the north-east (NE), south and south-east (SSE), and west (W). Using data obtained from the Bankstown BOM station from 1993 to 2016, directional wind speed and frequency of occurrence was determined, and is presented in **Figure 3-1** below;
- As shown in **Figure 3-1**, the annual wind pattern was dominated by SSE and W flows, with a maximum annual wind speed of 10-12metres per second (m/s);
- NE winds prevail through the summer months, with W winds prevalent in the winter and SSE winds occurring all year round;
- The site was situated at the north-eastern end of a low-rise former industrial area, with residential buildings to the south. These structures were unlikely to shield the site from prevailing winds due to their height and distance, however taller structures to the west may provide some shelter for the W prevailing winds during development; and
- The rise in site topography towards the north-east may accelerate the westerly and southerly winds, however the expected effects were considered minimal.

Figure 3-1 Mean Wind Conditions for Site



3.2.2 Atmospheric Conditions

EI reviewed the statistical data obtained from the nearest meteorological monitoring station to the site, collected by the Bureau of Meteorology (BOM). The closest station to the site with useable data was Seven Hills (Colin Street) Station (Site ID 067026) situated approximately 9km to the southwest of the site. A summary of the meteorological conditions for the site are presented in **Table 3-2**.

Table 3-2 Generalised Atmospheric Conditions

Attribute	Description
Temperature	In general, the local climate comprised warm summers and mild winters, Mean temperatures range from 4.5° C to 17.4° C in July, and 15.3° C to 28.4° C in December. Annual average temperatures ranged from 11.2° C to 23.4° C. (Source: http://www.bom.gov.au/climate/averages/tables/cw_067026.shtml , accessed 15 April 2021)
Rainfall	Rainfall occurred throughout the year, with wetter periods observed from January to June. The mean monthly rainfall recorded by BOM for the closest monitoring site (Seven Hills – Collin St) ranged from 43.6 mm in July to 116 mm in February, with an average annual rainfall of 913.8mm. (Source: http://www.bom.gov.au/climate/averages/tables/cw_067026.shtml , accessed 15 April 2021)

3.3 Site Receptors

In accordance with EPA (2016), site receptors were defined as locations where people or things are, or would likely reside (i.e. residential housing areas, schools, offices or public space). Site receptors of greatest concern include those sensitive to environmental change, such as the very young, the elderly and the infirm. The closest sensitive receptors identified for the site were:

- The residential land use located:
 - 70m to the south;
 - 250m to the north; and
 - 200m to the east.
- The users of Carrington Childcare, 110m to the southwest;
- Recreational and ecological users of Cattai Creek, 1300m southwest of site;
- Users of the Hills Showground Metro Station, Station Plaza and commuter carpark adjacent the site to the south and west; and
- The site worker any external work areas immediately adjacent to the site boundary during the construction work.

4. Background Air Quality

4.1 Previous Investigations

Previous consultant, GHD Pty Ltd (GHD), completed an Air Quality Assessment (AQA) in support of a State Significant Development (SSD) application for the larger Hills Showground Precinct. The findings were provided to EI as:

- GHD (2019) *Hills Showground Station Precinct, Concept Design Air Quality Assessment for Landcom*, Report 12518111, dated October 2019.

The AQA provided pertinent information regarding background air quality for the site, with the relevant findings presented in **Table 4-1**.

Table 4-1 Summary of GHD (2019) Air Quality Assessment

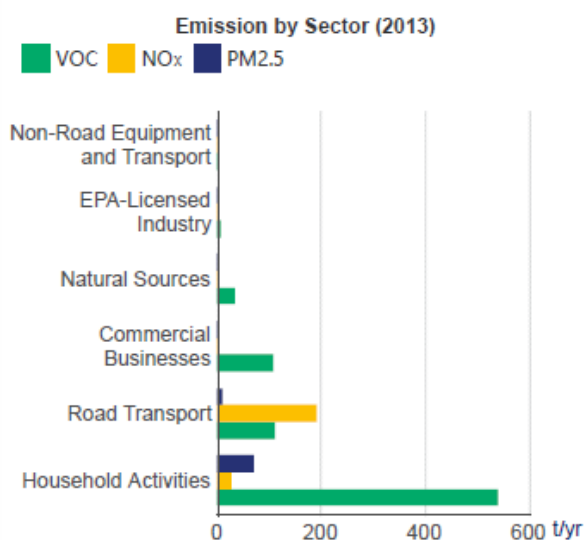
Attribute	Description
Objective	The objective was to assess the likely air quality impacts expected for the Hills Showground Station Precinct and provided mitigation measures to be considered for the management of air quality at the current site and surrounds. The AQA included: ▪ 1 Mandala Parade, being lots 50 and 54 in DP 1253217; ▪ 2 Mandala Parade, being Lot 55 in DP 1253217 (the current site); ▪ 3 Andalusian Way, being Lot 56 in DP 1253217; ▪ 5 De Clambe Drive, being Lot 53 in DP 1253217; and ▪ 3 De Clambe Drive, being Lot 52 in DP 1253217.
Scope of Works	The AQA assessed the air quality impacts for the development, in accordance with the following scope of works: ▪ A review of all relevant Office of Environmental and Heritage (OEH) air quality monitoring data and any significant existing sources of localised emissions, road traffic emissions and any expected rail emissions; ▪ The relevant criteria relating to air quality was outlined as per EPA (2016); ▪ The likely air quality impacts on the proposed sensitive receivers (residential, commercial and industrial) in the precinct were assessed; and ▪ High level (in-principle) recommendations were provided for building locations and design, to minimise air quality impacts.
Emission Sources	GHD completed a review of the Australian Government's, Department of the Environment and Energy (DEE) <i>National Pollution Inventory</i> (NPI) which identified two potential sources of industrial emissions within a 5 km radius of the development area, being Castle Hill Sewage Treatment Plant (1.5km north) and Hytec Yarrabee Road Quarry (4.7km south). The potential risks posed by these sources were regulated by the POEO Environmental Protection Licencing (EPL) scheme, and assuming the facilities maintain compliance with their EPL, no adverse air quality impacts were expected. In addition, emission sources within the development area were identified, and the potential to impact the site receptors was assessed, as follows: ▪ Rail emissions from SMNW train movements were found to be minor due to the underground nature of the operation, and no adverse air quality impacts from rail emissions were expected; and ▪ Road vehicle emissions were assessed for the major arterial routes, Carrington Road and Showground Road only, being the worst case scenario anticipated for the development, based on traffic levels.

Attribute	Description
Conclusions	GHD (2019) concluded that emissions from the SMNW and local sources were minor and were unlikely to impact the site, however conservative assessments screening road traffic emissions identified that under worst-case conditions, the annual PM2.5 emissions produced by the major arterial roads may present an unacceptable level of air quality for the residential users for the end site. Recommendations were made for the building design; however these strategies were not relevant for the construction phase of works.

4.2 Local Emission Sources

EI reviewed the Air Emissions Inventory for the Eastern Creek locality using 'Air Emissions in My Community' (<https://www.epa.nsw.gov.au/your-environment/air/air-emissions-inventory/air-emissions-my-community-tool>). This tool provides a graphical representation of data gathered for the 2013 Air Emissions Inventory collected by the NSW EPA, with the findings presented below in **Figure 4-1**.

Figure 4-1 Emissions by Sector for Castle Hill (2013)



The sectors responsible for the majority of emissions for the locality were EPA licenced industry, road transport and the most significant contributor, household activities. As reviewed by GHD (2019), local industrial activity would be of low concern (**Table 4-1**), therefore road transport and household activities were the primary sources of emissions for the locality.

4.3 Existing Air Quality

Background air quality was determined by GHD (2019) using information obtained from the NSW Office of Environmental Heritage (OEH) ambient air quality monitoring stations. The nearest, useable dataset for the site was Macquarie Park, located at the Macquarie University Sports Fields in Culloden Road, approx. 11km southeast of the site. The 90th percentile concentrations for background air quality pollutants were reviewed for 2019 to be:

- PM10: 26.8 µg/m³ over 24hours and 17.2 µg/m³ annual;
- PM2.5: 11 µg/m³ over 24hours and 7 µg/m³ annual;
- CO: 0.3 mg/m³ per hour or 0.3 mg/m³ over 8 hours; and
- NO₂ : 24.4 µg/m³ over 1 hour and 11.3 µg/m³ annual.

Using the average annual concentrations of PM10 and PM2.5, GHD derived a conservative ration of 0.5 for particulate emissions for the AQA. The annual average background concentrations were relatively high, indicating poor air quality on a regional level.

5. Air Quality Impacts

5.1 Construction Activities

As stated in **Section 4.2**, the potential sources of emissions for the locality were road transport and household activities. With reference to **Section 1.3**, the construction phase of works will involve:

- Bulk Excavation of site soils to at least 19mBGL of the existing site, for the construction of the basement car park;
- The installation of foundations, underground services and lift pits and/or crane pads;
- Construction of the above ground structures; and
- Landscaping.

Site preparation works, including demolition was complete, and site stripping has removed all trees and plantings across the site. Activities of greatest concern to air quality to be completed for construction were identified as:

- Soil disturbance activities, including bulk excavation, drilling and/or piling, general earthworks, the installation of services and landscaping;
- The importation and stockpiling of material (i.e. aggregate and soils) and uncovered loads;
- Cutting, grinding and sawing activities and the operation of concrete / asphalt agitators;
- Wind erosion in areas of exposed soil within an open environment; and
- The operation of mobile plant, including excavators, piling rigs and haulage trucks, including the use and idling of machinery and trucks and driving over unpaved surfaces.

5.2 Potential Impacts

Environmental aspects of the site and the potential impacts resulting from poor air quality have been identified by reviewing the information presented for the site. These are summarised as:

- Air pollution due to wind generated dust.
- Water pollution due to dust transported by wind.
- Health impacts (i.e. breathing or eye irritation) if elevated levels persist.
- Reduced visibility due to dust in the air.
- Negative aesthetic impacts due to reduced visibility.
- Poor working conditions due to health implications.
- Additional cleaning effort/costs due to dust transported by wind.
- Damage to personal property due to dust transported by wind damaging property where it lands.
- Loss of soil resources due to dust transported by wind away from original area.
- Air pollution due to odour of the exhaust.

Control of dust emissions and/or odour at the site boundary will ensure impacts for the site receptors are minimised.

5.3 Contaminants Related to Air Quality

Given the lack of contamination identified within the site, the primary contaminant of concern for Air Quality during construction was dust, otherwise referred to as Particulate Matter (PM). There are three size fractions for PM, being:

- PM_{2.5} (i.e. being less than 2.5 microns in size), associated with fuel burning, industrial combustion and vehicle emissions;
- PM₁₀ (i.e. being less than 10 microns in size) associated with coarse grained dusts (i.e. road dust) and construction activities; and
- PM with aerodynamic diameter of 50 microns or less (Total Suspended Particulates – TSP).

During mechanical motion and earth movements, the vast majority of PM generated is between 2.5 microns and 50 microns in aerodynamic diameter. PM greater than 10 microns in aerodynamic diameter cannot pass into the human respiratory system; however, PM of this size fraction can result in nuisance to surrounding receptors as a result of dust deposition. Consequently, in relation to PM, two potential impacts from dust generation are considered:

- Ambient concentration of PM₁₀; and
- Dust deposition (as a nuisance issue).

Given the nature of the construction works required, the activities associated with earthworks and construction of the below ground structures and the installation of foundations, services and landscaping were considered to be the activities of greatest concern to the generation of PM.

5.3.1 Weather

Weather can have a large impact on Air Quality. With higher temperatures, and as wind speeds increase there will be a greater potential for dust generation to occur. Weather reporting should be provided to all site contractors on a daily basis, which would be based on Bureau of Meteorology (BoM) information for Seven Hills (Collins Street), 11km to the southwest, and was considered to be the closest station to the site, . The information would be delivered to all staff during toolbox / pre- start meetings, or where required, significant changes in conditions may be announced over the site radio. As stated in **Table 3-2**, the site was typically of a warm to moderate climate, with low levels of rainfall occurring over the summer months. During periods of dry weather and in periods of high wind the likelihood of dust to be generated from onsite activities would increase, and additional controls may be required, or works may cease altogether.

5.3.2 Mobile Plant

It was considered that any mobile plant emissions generated through the combustion of fuel will be short term and minimal, in comparison to the emissions generated by vehicles travelling along the surrounding roadways. Given the short term and low level of emissions of these pollutants from the site during the construction works, fuel combustion contaminants, such as volatile organic compounds (VOCs) or Nitrogen Oxides (NO_x) were unlikely to impact air quality.

Pre-start inspections should be completed on all mobile plant to ensure the equipment is well maintained and serviced so that vehicular emissions remain within relevant air quality guidelines and standards. Any equipment or vehicles seen to create excessive emissions should be either replaced or serviced. Given these conditions are met, the most significant issue related to mobile plant at the site would be the generation of dust resulting from driving along unpaved surfaces, and the haulage of soils (including loading and unloading). Currently, it was anticipated that all traffic will gain access to the site from De Clambe Drive in the north. Consideration of the sites proximity to site receptors site is required (**Section 3.3**) for the selection of internal haulage routes at the site.

5.4 Acceptance Limits for Air Quality

The emissions of greatest concern for the site were related to the generation of dust from the construction activities occurring onsite. An acceptable level of air quality will be achieved when:

- No complaints are received from nearby residents or local road users in relation to dust and sediment beyond the site boundary;
- No visible dust is identified at, or beyond the site boundary which has migrated from the site;
- No dust generated within the site has the potential to affect the site workers;
- Site workers and visitors during construction are made aware of the air quality requirements of the site and the existence of this AQMP;
- Relevant measures and procedures are implemented throughout the construction phase of works; and
- All regulatory requirements (**Section 2**) are generally complied with, and effective communication is maintained with Council, the NSW EPA and key stakeholders of the development.

5.4.1 Acceptance Limits of Secondary Effects

A secondary effect resulting from the construction works may include the odour levels generated from mobile plant. The levels of odour within the site shall be monitored using olfactory methods (i.e. through smell) as determined by the Project Manager, Site Supervisor and/or Environmental Consultant. The odour would be described as non-detectable, low, moderate or strong and an acceptable limit for the site will be achieved when:

- No detectable odour is identified at the site boundary; and/or
- No odours greater than moderate or strong are present onsite, or that have the potential to affect workers.

6. Air Quality Management

6.1 Principals of Dust Management

Management of dust impacts from construction activities will be undertaken through the use of on-site management together with visual monitoring of boundary emissions. Where repetitive complaints or non-conformances are identified, additional monitoring may be required (i.e. boundary PM10 monitoring) and should this situation arise, advice from the Environmental Consultant shall be sought.

On-site management will form the basis for the generation of dust from site activities, and shall ensure off-site impacts are minimised. Continuous control of dust emissions at the source will assist with achieving compliance with the regulatory framework for Air Quality at the site. Conformance with the air quality criteria (**Section 5.3.1**) will ensure, as far as possible, that construction activities may continue unimpeded, without resulting in adverse effects to the surrounding Air Quality. Where triggers are, or could exceed the air quality criteria, site management must be informed, and contingency measures implemented.

6.2 Roles and Responsibilities

The roles and responsibilities associated with the works are outlined in **Table 6-1**. The Project Manager will have the main responsibility for maintaining and implementing this AQMP. Responsibility for implementing certain components of the AQMP may be delegated to particular project staff and/or contractor(s) nominated to undertake those works.

Table 6-1 Summary of Responsibilities

Role	Brief Description of Responsibilities
Project Manager	▪ Ensure effective overall management of environmental performance during the site development. ▪ Review this AQMP to ensure compliance with requirements. ▪ Ensure the AQMP is implemented. ▪ Undertake environmental reviews required by DA consent conditions and regulatory policies and legislation. ▪ Undertake all community consultation and notifications associated with the works.
Site Supervisor	▪ Supervise the work activities and ensure all environmental controls are in place. ▪ Monitor daily work routines so that environmental controls are established and maintained as per the AQMP and detailed mitigation measures. ▪ Monitor daily work routines so that environmental protection requirements are communicated to all personnel and contractors under his/her control. ▪ Where necessary stop work activities until adequate environmental safeguards have been implemented. ▪ Identify areas of improvement and notify the head contractor. ▪ Ensure environmental issues are communicated to all site staff.
Environmental Consultant	▪ Provide advice regarding the requirements of Air Quality for construction at the site; ▪ Outline the monitoring requirements for Air Quality as and when required; ▪ Assist with the investigation and resolution of any complaints received with regards to Air Quality; and ▪ Assist with communicating the performance of Air Quality at the site to key stakeholders and regulators as required.

Role	Brief Description of Responsibilities
All Site Staff and Contractors	All contractors must employ best practices in managing any air quality related impacts during site redevelopment. All contractors must also: ▪ Ensure work instructions reflect the requirements of this AQMP and all requirements are implemented. ▪ Ensure all required records/documentation are maintained and submitted to the head contractor. ▪ Ensure training/induction of personnel is carried out and that staff operate in an environmentally responsible manner. ▪ Undertake and report on all monitoring and inspections completed. ▪ Report all environmental incidents and near misses.

6.3 Hours of Work

Construction activities were identified as the primary source of dust generated at the site, therefore the period of time when these activities are occurring would be of greatest risk to the sites receptors. For the site, the working hours typically approved by the Hills Shire Council will be specified by consent, to ensure that construction is carried out in a safe and environmentally friendly manner. Any works occurring outside of these hours must be approved by council, and will be subject to conditions. The hours consented for the works were not known, however generalised working hours were expected to be:

- Monday to Friday, 7:00am to 6:00pm;
- Saturday, 8:00am to 1:00pm; and
- Sunday / Public Holidays, no work.

6.4 Induction and Training

All employees and contractors work on site will undergo an induction training relating to air quality management issues, prior to being authorised to work within the site. Specific information related to air quality to be included during induction/training will include:

- Information regarding the existence of this AQMP, and the requirements of consent, including the identification of site boundaries (**Figure 2**) and the site specific environmental measures required;
- Details of the potential sources and emissions of concern (**Sections 5.2**) and Information regarding typical activities that may impact air quality;
- Details of the mitigation measures for the typical site activities; and
- Incident response procedures, including details of the complaints handling process for the site.

Records of all training activities, including inductions, will be maintained by the Project Manager. These records shall include (but not be limited to):

- Details of the person being inducted, including their employer, the role and activities to be completed within the site and the time period of the works;
- Details of the person responsible for providing the training; and
- Where applicable, reference to the material presented, and a copy of the information provided.

6.5 Monitoring

Monitoring for air quality will involve regular inspections of working areas and activities for the duration of the works. Routine inspections should be conducted as per frequency in **Table 6-2**.

Table 6-2 Air Quality Monitoring

Monitoring	Performance Indicator	Frequency
Weather – Meteorological Data Including daily rainfall, temperature and wind (direction and speed) from Seven Hills (Collins St) Station, obtained by BOM	Delivery to site staff during toolbox meetings, announced over site radio where required. Parameters of interest are: ▪ Wind Speed and Direction to determine the site receptors up and down-wind of the site, and the likely risk; and ▪ Temperature as well as rainfall to inform the extent of natural dust attenuation through watering, and if additional watering is necessary.	Daily
Visual surveillance for dust emission and site inspection for visible dust deposits on surface / mud tracking off site (Section 6.5.1)	No dust emissions or sediment tracking beyond the site boundary and no incidents or complaints reported.	Daily
Inspections to verify unusual odours	No unusual odour detected at boundary and no complaints received.	Daily
Plant/equipment inspections including daily pre-start inspections	Inspections undertaken in line with operational requirements and regularly serviced, with inspection sheets maintained.	Daily / as required.

6.5.1 Visual Surveillance

Visual surveillance provides a rapid indication of the potential for the site to generate dust, and the effectiveness of dust control measures. A procedure for completing visual surveillance at the site is presented below.

- 1 A designated person on site (i.e. Project Manager, or as delegated) will undertake the following visual checks near the site boundary at least once on each working day until the Project works are completed.
- 2 If dust migration beyond the site boundary is observed, identify the source of the dust being generated at the source (e.g. wheel generated dust, excavators, stockpiles, wind erosion).
- 3 Inspect and report on watering of site surfaces (i.e. water cart activity and daily water usage rate), and/or where dust and sediment are seen beyond the site boundary. The weather conditions (**Section 3.2**) will also be recorded when a non-conformance is reported during a visual surveillance check.
- 4 Prepare a summary of the findings as part of an environmental inspection report. Non-conformance (e.g. excessive dust generation, dust/earth/ other materials leaving the site) will be reported immediately to the Construction Manager or management.

Upon identification of excessive dust generation, mitigation measures as outlined in **Section 7** will be implemented.

6.6 Reporting

Record keeping and reporting requirements may be undertaken by the site project manager and include relevant project team members and stakeholders. The record keeping will include:

- A copy of the complaints register for the month and details of how complaints were addressed and resolved;
- Identification of non-compliance with the conditions of the development consent that includes dust and odour, including a record of visual surveillance undertaken at the site;
- Details of additional measures to be implemented to address any noncompliance;
- Details relating to excavated volumes and types of soil disturbed within the site, including dates of excavation; and

Details of any fill material imported into site.

6.6.1 Incident Reporting

The Project Manager must be notified of any pollution incident, or situation that has the potential to cause harm to the environment. Evidence will be required that notification was made, in accordance with the POEO Act 1997. When requested by the Project Manager, the Site Supervisor is to provide an incident investigation report, including identification of the cause of the incident and corrective actions taken, in the form directed. The Project Manager will act as a contact in the event of complaints of dust emissions, and is responsible for informing all necessary stakeholders of information pertaining to Air Quality compliance for the site.

6.7 Review of AMQP

This AMQP may be reviewed at any stage during the development to ensure that it addresses ongoing environmental issues and any changes in legislation, policies or guidelines. In particular, environmental incidents, non-conformance or environmental audit outcomes should be considered when undertaking a review, and may trigger a review of amendment. Updating the AMQP is the responsibility of the Site Supervisor. Approval of the updated AMQP is the responsibility of the Project Manager.

7. Air Quality Mitigation

Mitigation and management measures will be established to limit or contain dust generated by the construction works. Methods for management of emissions would be incorporated into Project inductions, training toolboxes and pre-start talks. The mitigation measures will ultimately be the responsibility of the Project Manager, however all staff should be made responsible for the mitigation of dust for the activities they perform within the site. El note, site management refers to either the Project Manager or Site Supervisor.

7.1 Management Measures

Measures outlined in **Section 6** to be implemented at the site with respect to air quality are summarised in **Table 7-1** below.

Table 7-1 Air Quality Management Measures

Action	Responsibility	Timing
For the general public, display the name and contact details of personnel responsible for air quality / environmental management of the site.	Project Manager	Duration of Works
Record all air quality complaints or incidents that generate dust, either on or off-site. Identify the cause(s) and take appropriate measures to reduce emissions in a timely manner. Detail the measures taken, and make the complaints log available to the regulatory authorities when requested.	Site Supervisor / Project Manager	Duration of Works
Perform visual surveillance daily where receptors (Section 3.3) are in close proximity. Take action to resolve any non-conformances and detail within the incidents log.	Site Supervisor	Duration of Works
Increase the frequency of visual surveillance in dry or windy conditions, or while activities with a high potential to generate dust occur.	Project Manager	Duration of Works
If dusty conditions are observed(i.e. 10 m/s average over a 10-minute period (35-40 km/h), stop or relocate activities until conditions improve	Project Manager / Site Supervisor	Duration of Works
Locate stockpile areas and haulage routes in areas to reduce the surface area exposed to prevailing winds where practical. In addition, existing or constructed wind breaks shall be used where practical.	Site Supervisor / Project Manager	Duration of Works
Inform site contractors of daily meteorological conditions as reported, as well as any significant changes that may occur throughout the day.	Site Supervisor	Duration of Works
Prepare and ensure all staff undergo site induction prior to commencing work onsite, and ensure all staff are suitably qualified and experienced for the works to be completed.	Project Manager	Duration of Works

7.2 Mitigation Measures

Mitigation measures to be implemented at the site with respect to air quality are provided in **Table 7-3** below.

Table 7-2 Air Quality Mitigation Measures

Mitigation Criteria or Management Measure	Responsibility	
Site Preparation and Bulk Excavation		
Erect solid screens or barriers along the site boundary fencing to screen works on site and limit dust migration.	Site Management	
Use covered skip bins for all waste, and no burning of wastes is permitted.		
Entry and exit points to the site will be fitted with hardstand material and wheel wash facilities (where required) to limit the amount of material tracked offsite.		
Positioning of Stockpile areas shall be as far as reasonably practicable away from residential areas, places of public access and site boundaries.		
Paved roads will be regularly swept and watered when necessary. Use water assisted road sweepers within the site access and roads surrounding the site to remove any material tracked from the site, as necessary.	Site Supervisor	
Operation of a water cart on exposed soil areas, unsealed roads and excavation / worked areas during bulk excavation. The water rate will be adjusted accordingly to minimise generation of visible dust and the number and size of the water carts shall be regularly reviewed by the Project Manager to ensure that adequate watering is taking place and dust is kept to a minimum. Care is to be exercised to limit the amount of water used to ensure run-off does not occur and leave the site.		
Ensure effective water suppression is used during earthworks and soil disturbance activities. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.		
Limit the extent of clearing of vegetation and topsoil to the designated footprint required for construction and appropriate staging of any clearing.		
Minimise the exposure of fill and excavated material to active work fronts.	All Staff	
Ensure sediment and erosion mitigation measures are in place and effective to avoid sediment and stormwater runoff leaving the site.		
Minimise drop heights for material transport to prevent dust dispersal.		
Ensure all on-road vehicles comply with relevant vehicle emission standards, where applicable, and all vehicles switch off engines when stationary and safe to do so (no idling vehicles).		
Keep site fencing, barriers and scaffolding clean through rinsing with water.	Site Management	
Cover, or fence stockpiles to prevent wind erosion where they are inactive for extended periods (i.e. for two weeks or more).		
Haulage and Mobile Plant Operations		
Watering of all unsealed internal roadways and haulage routes, as well as fill and bulk excavation areas. The water rate will be adjusted accordingly to minimise generation of visible dust.		
Modify work activities during periods of high winds and/or dry conditions by limiting soil disturbance activity.	Site Management	
All vehicles on-site will be confined to a designated route with a speed limit of 20 km/hr enforced.		
Dirt, sand and other materials that have been tracked onto public roads beyond the site boundary will be cleaned using a road sweeper as soon as practicable, but at a frequency of no less than weekly during construction.		

Mitigation Criteria or Management Measure	Responsibility
Internal sealed roads that are part of the final design will be constructed first and used, as far as practicable, for construction-related traffic.	
Trips and trip distances will be controlled and reduced, for example by coordinating delivery and removal of materials to avoid unnecessary trips.	
Dirt tracked from the site from construction traffic will be managed using shaker grids and/ or wheel cleaning. If thorough washing can be achieved, wheel washing may be carried out without a specific device, e.g. washing using a tide/ hose.	All Staff
All trucks delivering fill or leaving the site with spoil material will have their load covered.	
Construction Works	
Rehabilitate exposed surfaces as soon as feasible, either by revegetation, paving, or providing other covering. Rehabilitation is to be consistent with approved landscape plan.	Site Management
Construction activities shall be re-programmed so that work which could cause a nuisance or danger to people or property is carried out during periods of little wind.	
Ensure effective water suppression is used during earthworks and soil disturbance activities. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.	All Staff
Only use cutting, grinding or sawing equipment that is fitted with, or in conjunction with suitable dust suppression techniques such as water sprays, exhaust ventilation etc. and avoid or restrict dust generating activities during windy periods.	
Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period of time, or during dry windy weather conditions.	

7.3 Contingency Measures

In addition to the mitigation and management measures detailed above, contingency measures for the mitigation of expected non-conformances are provided in **Table 7-3** below.

Table 7-3 Contingencies for Non Conformances

Trigger Action	Contingency Measure
Visible dust leaving the boundaries or where visual surveillance identifies a potential issue (Section 6.5.1)	- Apply dust suppression techniques (i.e. water; use of covers; stabilisation of stockpiles); - Assess wind conditions and stop work if strong; - Use of windbreaks, netting screens or semi-permeable fences; - enclosing shielding or providing filters on plant likely to generate excessive quantities of dust (e.g. dust extractors, filters and collectors on drilling rigs); - stopping or relocating construction activities during periods of consistently high wind, i.e. 10 m/s average over a 10-minute period (35-40 km/h) until the wind velocity stops; - Water spraying will be undertaken; - Speed limits on unsealed access tracks will be reduced to 10 km/h (or lower if required) to further limit dust travelling to the nearest site receptor.

Trigger Action	Contingency Measure
Air Quality complaints received for the project	Once Complaint is received, conduct an investigation to verify the complaint, which includes: ▪ Review most recent dust monitoring results for locality and advise Environmental Consultant for further direction. Additional monitoring may be required, and should consider positioning of monitors at each of the site boundary's, for the collection of TSP and PM10 (at least); ▪ Assess results against air quality goals and determine the need for corrective action; ▪ Discuss results with affected residents, and discuss an approach for corrective action. Action may include: ▸ Replanting or sealing completed works as soon as possible; ▸ If the project continues to receive complaints or non-conformances, further dust control measures are to be implemented such as wind fencing, matting or mulching.
Nuisance odour detected at or beyond the site boundary. Complaint received	▪ Assess wind conditions and stop work if strong; ▪ Remove odour-generating material from site; ▪ Enclosing shielding or providing filters on plant likely to generate excessive quantities of dust (e.g. dust extractors, filters and collectors on drilling rigs); ▪ Stopping or relocating construction activities during periods of consistently high wind, i.e. 10 m/s average over a 10-minute period (35-40 km/h) until the wind velocity stops.
Excessive smoke / vehicle emissions Complaint received	▪ Cease use of Mobile Plant; and ▪ Consult mechanic, and remove from site until resolved.
Asbestos or other air quality contaminants identified	▪ Stop work, and isolate the area from all foot and road traffic. Inform Site Supervisor and/or Project Manager and contact Environmental Consultant; ▪ Follow the Unexpected Finds Protocol developed for the site; and ▪ Do not proceed with works until advised by Environmental Consultant.

8. Statement of Limitations

This AQMP is based on published guidelines and regulations, as referenced throughout the document.

As a sub-plan, this AQMP has been prepared to describe practical measures to be implemented primarily in order to minimise any detrimental impact on the surrounding environment resulting from the site establishment, demolition, earthworks, construction and post-construction phases of the project.

While this AQMP provides overall guidance and direction for dust and odour management, a number of Work Method Statements will need to be prepared for use in site-specific situations.

This report was prepared for Deicorp Projects Showground Pty Ltd and no responsibility is accepted for use of any part of this report in any other context or for any other purpose or by other third parties. This report does not purport to provide legal advice.

This report and associated documents remain the property of EI subject to payment of all fees due for this assessment. The report should not be reproduced except in full and with prior written permission by EI.

References

Australian Standard AS 3580.1.1:2007 Methods for sampling and analysis of ambient air: Part 1.1: Guide to siting air monitoring equipment

Australian Standard AS 3580.10.1:2003 Methods for sampling and analysis of ambient air: Method 10.1: Determination of particulate matter – Deposited matter – Gravimetric method

Australian Standard AS/NZS 3580.12.1:2001 Methods for sampling and analysis of ambient air - Determination of light scattering - Integrating Nephelometer method

DEC (2007) *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW*, Department of Environment and Conservation NSW (DEC) 2007/1, ISBN 978 1 74122 373 6 dated January 2007;

DEC's Quarterly Air Monitoring Reports (www.environment.nsw.gov.au/air/datareports.htm)

EPA (2016) *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*, Environment Protection Authority of New South Wales, EPA 2016/0666, August 2005, minor revisions November 2016.

National Environment Protection Council's (NEPC) (2003) – *National Environment Protection Measure (NEPM) for Ambient Air Quality* (2003), 2021 Variation.

NEPC (2001) – *National Environment Protection Measure (NEPM) for Diesel Vehicle Emissions* (2001), 2009 Variation.

The Hills Local Environmental Plan 2019

(<https://www.legislation.nsw.gov.au/view/html/inforce/current/epi-2019-0596>)

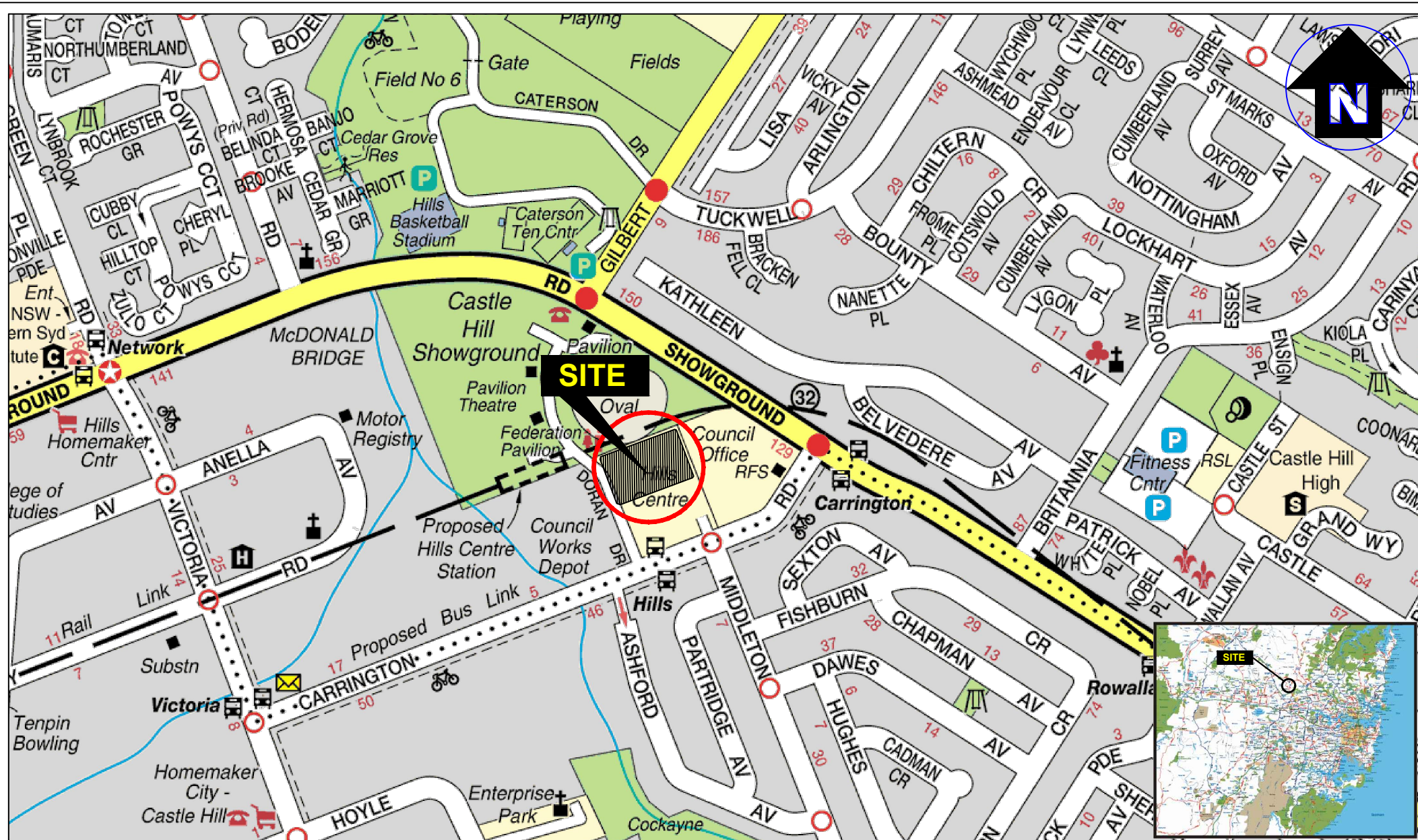
The Hills Development Control Plan (2012)

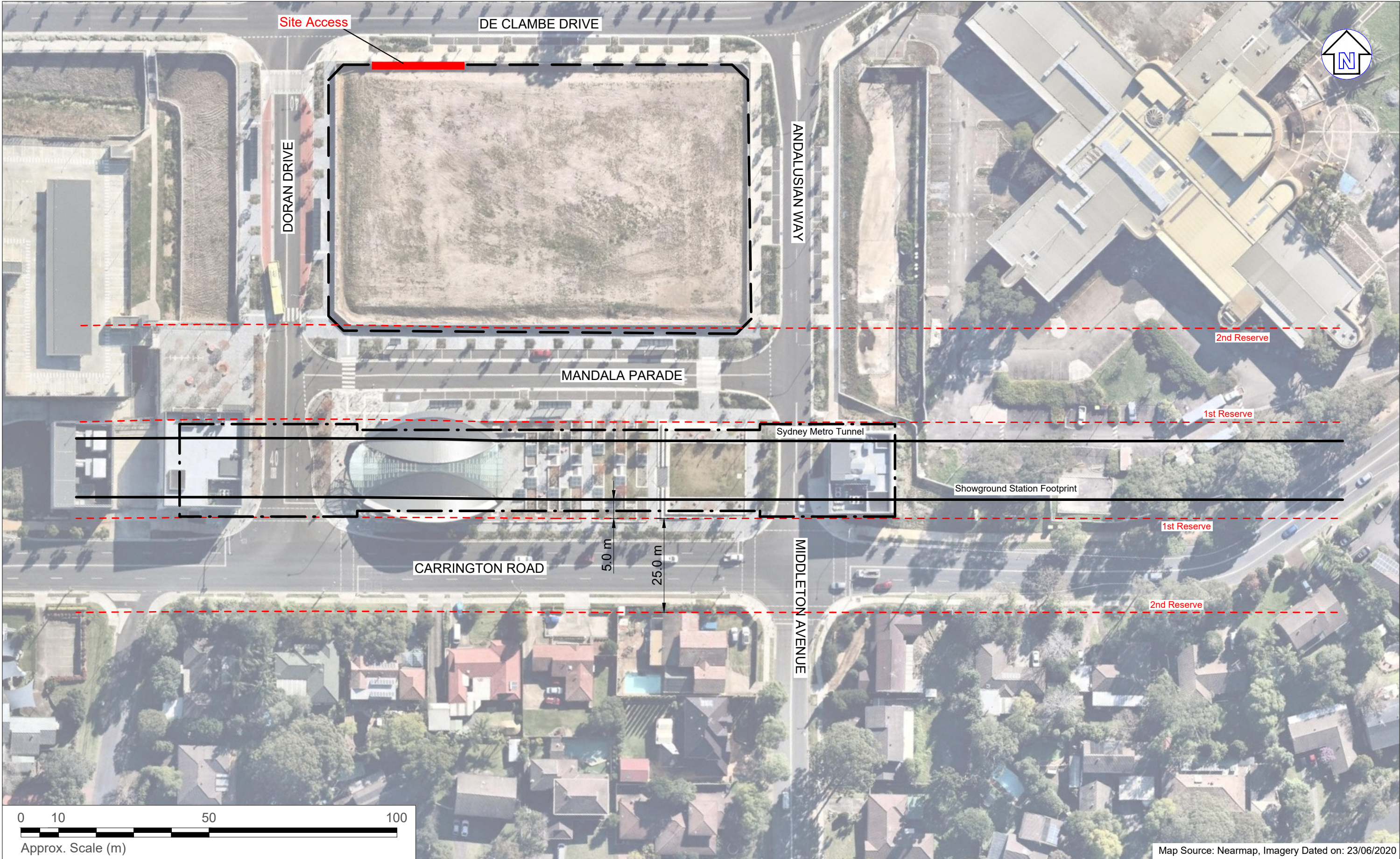
Windtech (2019) *Hills Showground Station Precinct, Castle Hill Pedestrian Wind Environment Statement*, prepared for Landcom by Windtech Consultants Pty Ltd, Report WF043-01F02(Rev1)-WS Report, dated 29 October 2019.

Abbreviations

ACM	Asbestos-Containing Materials
AHD	Australian Height Datum
AQMP	Air Quality Management Plan
AS	Australian Standard
ASS	Acid Sulfate Soils
CEMP	Construction Environmental Management Plan
DP	Deposited Plan
EI	EI Australia
EPA	Environment Protection Authority (of New South Wales)
km	Kilometres
LGA	Local Government Area
m	Metres
NO _x	Nitrous Oxide
NO ₂	Nitrous Dioxide
OEH	Office of Environment and Heritage, NSW (formerly DEC, DECC, DECCW)
POEO	Protection of the Environment Operations
PM _{2.5}	Particulate matter (<2.5 microns) being a measure of dust.
PM ₁₀	Particulate matter (<10 microns) being a measure of dust.
SO ₂	Sulfur Dioxide
TSP	Total Suspended Particulate
UPSS	Underground Petroleum Storage System
UST	Underground Storage Tank
VENM	Virgin Excavated Natural Material
VOC	Volatile Organic Compounds

Appendix A - Figures





LEGEND

- Approximate Site Boundary
- Approximate Sydney Metro Tunnel
- Approximate Showground Station Footprint
- - - - - Approximate 1st & 2nd tunnel reserve extents 5m & 25m away from the tunnel boundaries



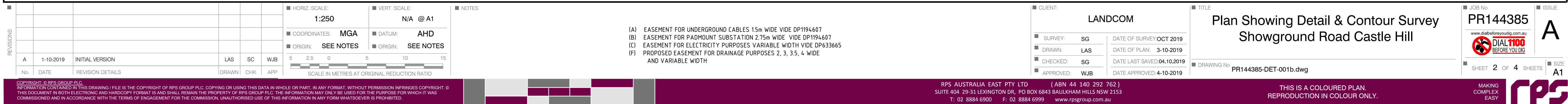
Suite 6.01, 55 Miller Street, PYRMONT 2009
Ph (02) 9516 0722 Fax (02) 9518 5088

Drawn:	AM.H.
Approved:	S.E.
Date:	21-05-21

Deicorp Projects Showground Pty Ltd
Air Quality Management Plan
2 Mandala Parade, Castle Hill NSW
Site Layout Plan

Figure:
2
Project: E24724.E21

Appendix B – Proposed Development





NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION (DWG, PC AND BIM) FILES AND UNCONTROLLED DOCUMENTS ARE NOT ISSUED FOR INFORMATION ONLY.

CLIENT
Deicorp

DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Notified Architect Nicholas Turner 6055, ABN 56 564 394 871

Rev	Date	Approved by	Revision Notes
a	07.06.21	JMC	Dist DA for Review
01	25.06.21	JMC	Retail Update
02	06.07.21	JMC	DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia

Drawing Title
GA PLANS
Basement 06

Scale
1:200 @A1, 50% @A3

Project No.
19068
Dwg No.
DA-110-002

Drawn by
AM, VT, JL, JE
Rev
02

North
↑

TURNER

Level 7 ONE Oxford Street
Sydney NSW 2010
AUSTRALIA

T +61 2 8668 0000
F +61 2 8668 0068
turner@turner.com.au



NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION (DWG, PC AND BIM) FILES AND UNCONTROLLED DOCUMENTS ARE NOT ISSUED FOR INFORMATION ONLY.

CLIENT
Deicorp

DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Notwithstanding to the extent that the drawings are not to be used for construction purposes.

Rev	Date	Approved by	Revision Notes
a	07.06.21	JMC	Dist DA for Review
01	25.06.21	JMC	Retail Update
02	06.07.21	JMC	DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia

Drawing Title
GA PLANS
Basement 05

Scale
1:200 @A1, 50% @A3
Status
DA Submission

Project No.
19068
Dwg No.
DA-110-003

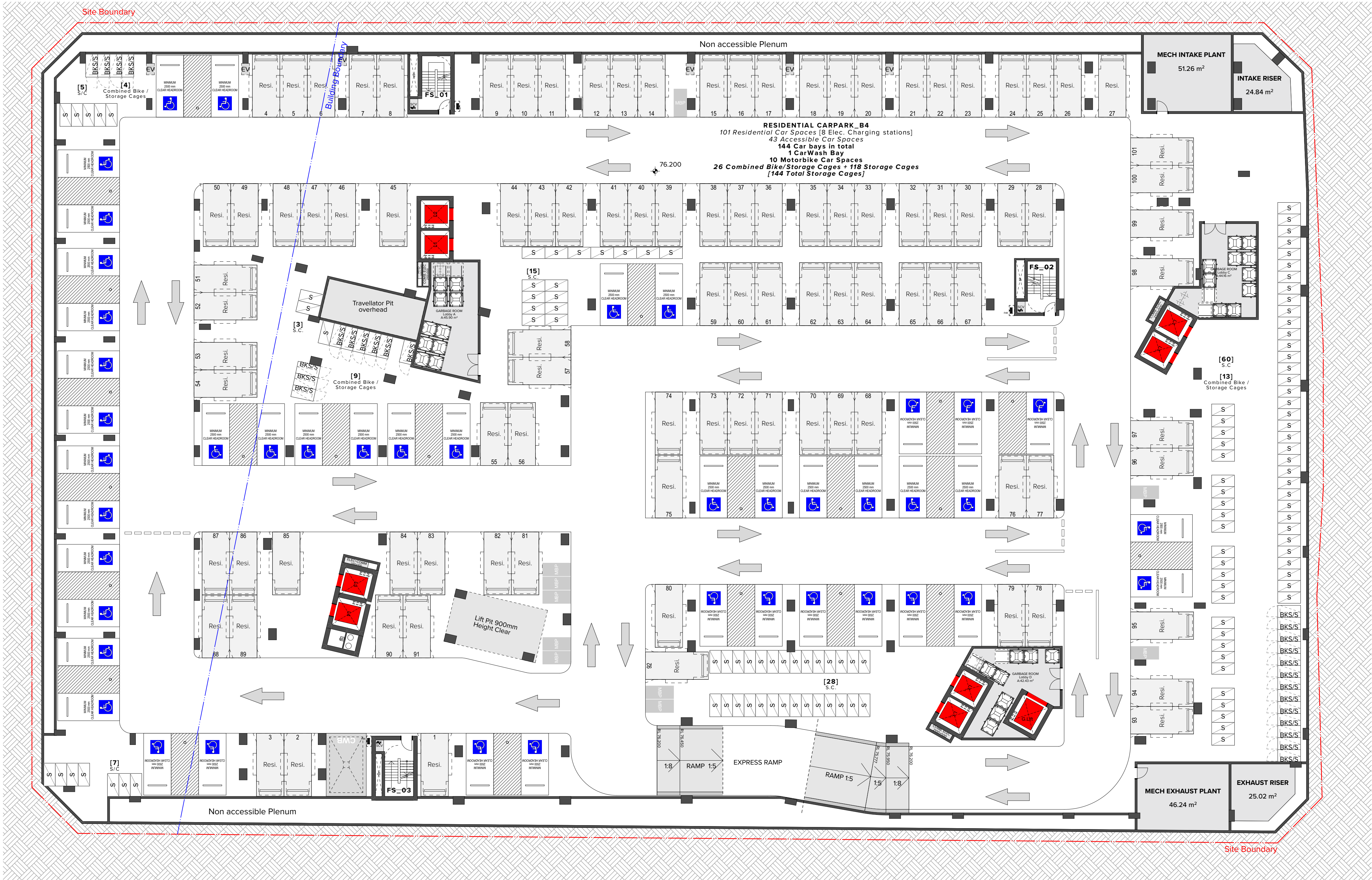
Drawn by
AM_VL_A_E
Rev
02

North
↑

TURNER

Level 7 ONE Oxford Street
Sydney NSW 2010
AUSTRALIA

T +61 2 8688 0000
F +61 2 8688 0088
turner@turner.com.au



NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION (DWG, PC AND BIM) FILES AND UNCONTROLLED DOCUMENTS ARE NOT ISSUED FOR INFORMATION ONLY.

CLIENT
Deicorp

Rev a 07.06.21
01 25.06.21
02 06.07.21

Approved by JMC
JMC
JMC

Revision Notes
Dist DA for Review
Retail Update
DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia

Drawing Title
GA PLANS
Basement 04

Scale
1:200 @A1, 50% @A3

Project No.
19068

Dwg No.
DA-110-004

Drawn by
AM_VL_A_E

Rev
02

North

TURNER

Level 7 ONE Oxford Street
Sydney NSW 2010
AUSTRALIA

T +61 2 8688 0000
F +61 2 8688 0088
turner@turner.com.au



NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION. DWG, PC AND BIM FILES ARE UNCONTROLLED DOCUMENTS AND ARE ISSUED FOR INFORMATION ONLY.

CLIENT
Deicorp

DLCS Quality Endorsed Company ISO 9001:2015, Registration Number 20476
Notwithstanding to whomsoever, Turner, 6000, APR 98 504 094 871

Rev	Date	Approved by	Revision Notes
a	07.06.21	JMC	Detail DA for Review
01	25.06.21	JMC	Retail Update
02	06.07.21	JMC	DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia

Drawing Title
GA PLANS
Basement 02

Scale	1:200 @A1, 50% @A3	Project No.	19068	Drawn by	AM, VT, JL, JE	North	↑
Status	DA Submission	Dwg No.	DA-110-006	Rev	02		

TURNER

Level 7 ONE Oxford Street
Darlinghurst NSW 2010
AUSTRALIA

T +61 2 8558 0000
F +61 2 8558 0088
turner@tda.com.au



NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION (DWG, PC AND BIM) FILES AND UNCONTROLLED DOCUMENTS AND ARE ISSUED FOR INFORMATION ONLY.

CLIENT
Deicorp

DLCS Quality Endorsment Company ISO 9001:2015, Registration Number 20476
Notified Architect Nicholas Turner 6055, APR 98 594 594 811

Rev	Date	Approved by	Revision Notes
01	07.06.21	JMC	Detail DA for Review
02	25.06.21	JMC	Retail Update
03	06.07.21	JMC	DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia

Drawing Title
GA PLANS
Basement 01

Scale
1:200 @A1, 50% @A3

Project No.
19068

Dwg No.
DA-110-007

Drawn by
AM, VT, JL, JE

Rev
02

Status
DA Submission

North

TURNER

Level 7 ONE Oxford Street
Sydney NSW 2010
AUSTRALIA

T +61 2 8668 0000
F +61 2 8668 0066
turner@tda.com.au



NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION (DWG, PC AND BIMA FILES AND UNCONTROLLED DOCUMENTS) AND ARE ISSUED FOR INFORMATION ONLY.

CLIENT
Deicorp

Rev 01 07.06.21 Approved by JMC
02 25.06.21 JMC Dist DA for Review
03 06.07.21 JMC Retail Update
DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia
Drawing Title
GA PLANS
Ground Level

Scale
1:200 @A1, 50% @A3
Status
DA Submission
Project No.
19068
Dwg No.
DA-110-008
Drawn by
AM, VT, JL, JE
Rev
03
North

TURNER

Level 7 ONE Oxford Street
Darlinghurst NSW 2010
AUSTRALIA
T +61 2 8668 0000
F +61 2 8668 0066
turner@turner.com.au



NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION. IFC AND BIMA FILES ARE UNCONTROLLED DOCUMENTS AND ARE ISSUED FOR INFORMATION ONLY.

CLIENT
Deicorp

Rev	Date	Approved by	Revision Notes
01	07.06.21	JMC	Dist. DA for Review
02	25.06.21	JMC	Retail Update
03	06.07.21	JMC	DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill NSW 2154 Australia

Drawing Title
GAPLANS
Level 01

Scale	1:200 @A1, 50% @A3	Project No.	19068	Drawn by	AM_VL_01_E	North	↑
Status	DA Submission	Dwg No.	DA-110-010	Rev	03		

TURNER

Level 7 ONE Oxford Street
Sydney NSW 2010
AUSTRALIA

T +61 2 8688 0000
F +61 2 8688 0088
turner@turner.com.au

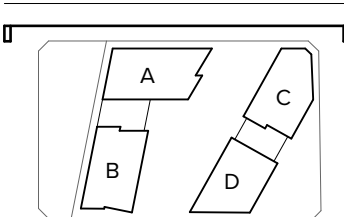


Legend:

BAL1 Semi-frameless full height clear glass balustrade system with 50mm wide top rail. Framing System, aluminium powder coat finish. Colour to match PCF1	BW1 Brick Work Type 1 Light Grey Brick, High Bricks "Clock-end-stormy, lightning" or Similar Stretcher Bond	BW6 Brick Work Type 5 Pink Brick, Austral Bricks "Aussie Capt White" or Similar, Soldier Bond	COP1 Off form Concrete with natural finish. Penetrating Clear matt sealer over	PCP1 Powder coat Finish. Colour to match Dulux "Domino" or Similar	SC1 Vertical steel screen. Detailing, material and finish to match BAL2	GC1 Glass clear. Framing System, aluminium. Powder coat finish. Framing colour to match PCF1	GC7 Colour back glass panel Framing System, aluminium. Powder coat finish. Framing colour to match PCF1. Colour back panel to match PF1	PF3 Paint Finish White. Colour to match Dulux "Dulux Natural White" or Similar	SG5 Metal/Cer park directional
BAL2 Vertical 10 x 150 Steel Balustrade. Powder coat finish, colour and finish to match PCF1	BW2 Brick Work Type 2 Light Grey Brick, High Bricks "Clock-end-stormy, lightning" or Similar More Bond Penetrating Bricks	BW7 Brick Work Type 6 Light Orange, Austral Bricks "Stromental Silver" or Similar, Stretcher Bond	COP2 Off form Concrete with Charcoal finish. Penetrating Clear matt sealer over	PCF2 Powder coat Finish. Colour to match Dulux "Eternity Gold Pearl" or Similar	SC2 Horizontal Aluminium Louver screen, finish to match PCF1	GC2 Glass clear. Framing System, aluminium. Powder coat finish. Framing colour to match PCF2	GC8 Glass clear Louver, Framing System, aluminium. Powder coat finish. Framing colour to match PCF1	SG1 External Sign - The corner of Doran Drive and Mandels Parade	SG6 Car park Entry/Exit Signage
	BW3 Brick Work Type 3 Red blue Brick, Austral Bricks "Bowral Blue" or Similar, Stretcher Bond	BW8 Brick Work Type 7 Orange Brick, Austral Bricks "ChardChallotte" or Similar, Stretcher Bond	COP3 Off form Concrete with White finish. Penetrating Clear matt sealer over	PCF3 Powder coat finish. Colour to match Dulux "Dulux Natural White" or Similar	SC3 Horizontal Aluminium Louver screen, finish to match PCF2	GC3 Glass clear. Framing System, aluminium. Powder coat finish. Framing colour to match PCF4	GC9 Glass clear Curtain Wall System	SG2 External Sign - The corner of Doran Drive and De Crambe Drive	SG7 External Sign - Online Pic Signage
	BW4 Brick Work Type 4 Red blue Brick, Austral Bricks "Bowral Blue" or Similar, Soldier Bond	BW9 Brick Work Type 8 Green/Grey Brick, Pyraline "Oregon" or Similar, Stretcher Bond	COP4 Smooth Finish Concrete precast wall element. Pigmented white	PCF4 Powder coat finish. Colour to match Dulux "Dulux Eternity Pewter Pearl" or Similar	SC4 Vertical Aluminium Batten screen, finish to match PCF2	GC4 Colour back glass panel Framing System, aluminium. Powder coat finish. Framing colour to match PCF2. Colour back panel to match PF1	PF1 Paint Finish Dark grey colour to match Dulux "Domino" or Similar	SG3 External Sign - The corner of Antlausan Way and De Crambe Drive	
	BW5 Brick Work Type 4 Pink Brick, Austral Bricks "Aussie Capt White" or Similar, Stretcher Bond		COP5 Smooth Finish Concrete precast wall element. Pigmented white		SC5 Horizontal Aluminium Louver screen, finish to match PCF4	GC5 Colour back glass panel Framing System, aluminium. Powder coat finish. Framing colour to match PCF2. Colour back panel to match PF2	PF2 Paint Finish. Colour to match Dulux "Eternity Gold Pearl" or Similar		
			COP6 Decorative profile finish concrete precast wall element. Pigmented white			GC6 Colour back glass panel Framing System, aluminium. Powder coat finish. Framing colour to match PCF1. Colour back panel to match PF3			
			COP7 Decorative profile finish concrete precast wall element. Pigmented white						
			CLD1 Profile Metal Cladding colour to match PCF2						

NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. BEFORE TURNING UP ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION (DWG, PCF AND BWA FILES AND UNCONTROLLED DOCUMENTS AND ARE ISSUED FOR INFORMATION ONLY)

CLIENT
Delcorp



Rev	Date	Approved by	Revision Notes
01	07.06.21	JMC	Dist DA for Review
02	01.07.21	JMC	For Coordination
03	06.07.21	JMC	DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia

Drawing Title
GA ELEVATIONS
North Elevation

Scale 1:200 @A1, 50% @A3	Project No. 19068	Drawn by AG, VT, JB
Status DA Submission	Dwg No. DA-210-101	Rev 03

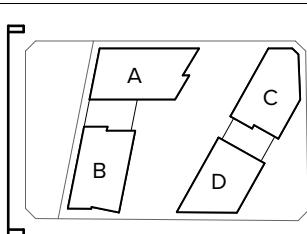


Legend:

- | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|-------|---|-------|--|--------|--|--------|--|--------|--|-------|---|---|---|-------|---|-------|--|-------|------------------------------------|
| (BAL) | Semi-frameless, full height clear glass balustrade system with 50mm wide top rail. Framing System, aluminium powder coat finish. Colour to match PCF1 | (BW1) | Brick Work Type 1
Light Grey Brick, High Bricks
"Dark-end-stormy, lightning" or Similar
Stretcher Bond | (BW6) | Brick Work Type 5
Pink Brick, Austral Bricks
"Aussie Capri White" or Similar, Soldier Bond | (COP1) | Off form Concrete with natural finish. Penetrating Clear matt sealer over | (CPC1) | Smooth finish concrete precast Wall Element, Dark Grey finish | (PCF1) | Powder coat Finish: Colour to match Dulux "Domino" or Similar | (SC1) | Vertical steel screen. Detailing, material and finish to match BAL2 | (GC1) | Glass clear, Framing System, aluminium. Powder coat finish, Framing colour to match PCF1 | (GC7) | Colour back glass panel Framing System, aluminium. Powder coat finish, Framing colour to match PCF1. Colour back panel to match PF1 | (PF3) | Paint Finish White. Colour to match Dulux "Dulux Natural White" or Similar | (SG5) | Multi/Car park directional |
| (BAL2) | Vertical 10 x 150 Steel Balustrade. Powder coat finish, colour and finish to match PCF1 | (BW2) | Brick Work Type 2
Light Grey Brick, High Bricks
"Dark-end-stormy, lightning" or Similar
More Bond Penetrating Bricks | (BW7) | Brick Work Type 6
Light Orange, Austral Bricks
"Symmetrical Silver" or Similar, Stretcher Bond | (COP2) | Off form Concrete with Charcoal finish. Penetrating Clear matt sealer over | (CPC2) | Smooth finish concrete precast Wall Element, Natural finish | (PCF2) | Powder coat Finish: Colour to match Dulux "Eternity Gold Pearl" or Similar | (SC2) | Horizontal Aluminium Louver screen, finish to match PCF1 | (GC2) | Glass clear, Framing System, aluminium. Powder coat finish, Framing colour to match PCF2 | (GC8) | Glass clear Louver, Framing System, aluminium. Powder coat finish, Framing colour to match PCF1 | (SG1) | External Sign - The corner of Doran Drive and Mandels Parade | (SG6) | Car park Entry/Exit Signage |
| | | (BW3) | Brick Work Type 3
Red blue Brick, Austral Bricks
"Bowral Blue" or Similar, Stretcher Bond | (BW8) | Brick Work Type 7
Orange Brick, Austral Bricks
"Charcoal/Lattice" or Similar, Stretcher Bond | (COP3) | Off form Concrete with White finish. Penetrating Clear matt sealer over | (CPC3) | Smooth finish concrete precast Wall Element, Charcoal finish | (PCF3) | Powder coat finish: Colour to match Dulux "Dulux Natural White" or Similar | (SC3) | Horizontal Aluminium Louver screen, finish to match PCF2 | (GC3) | Glass clear, Framing System, aluminium. Powder coat finish, Framing colour to match PCF4 | (GC9) | Glass clear Curtain Wall System | (SG2) | External Sign - The corner of Doran Drive and De Crambe Drive | (SG7) | External Sign - Online Pic Signage |
| | | (BW4) | Brick Work Type 4
Pink Brick, Austral Bricks
"Aussie Capri White" or Similar, Stretcher Bond | (BW9) | Brick Work Type 9
Green/Grey Brick, Pyralis
"Oregon" or Similar, Stretcher Bond | (COP4) | Smooth finish Concrete precast wall element. Pigmented white | (CPC4) | Decorative profile finish concrete precast spandrel, pigmented white | (PCF4) | Powder coat finish: Colour to match Dulux "Dulux Eternity Pewter Pearl" or Similar | (SC4) | Vertical Aluminium Batten screen, finish to match PCF2 | (GC4) | Colour back glass panel Framing System, aluminium. Powder coat finish, Framing colour to match PCF2. Colour back panel to match PF1 | (PF1) | Paint Finish Dark grey Colour to match Dulux "Domino" or Similar | (SG3) | External Sign - The corner of Antalusian Way and De Crambe Drive | | |
| | | (BW5) | Brick Work Type 5
Pink Brick, Austral Bricks
"Aussie Capri White" or Similar, Stretcher Bond | | | (COP5) | Decorative profile finish concrete precast spandrel, finish to match PCF1 | (CLD1) | Profile Metal Cladding colour to match PCF2 | | | (SC5) | Horizontal Aluminium Louver screen, finish to match PCF4 | (GC5) | Colour back glass panel Framing System, aluminium. Powder coat finish, Framing colour to match PCF2. Colour back panel to match PF2 | (PF2) | Paint Finish: Colour to match Dulux "Eternity Gold Pearl" or Similar | | | | |
| | | | | | | | | | | | | | (GC6) | Colour back glass panel Framing System, aluminium. Powder coat finish, Framing colour to match PCF1. Colour back panel to match PF3 | | | | | | | |

NOTES
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION (DWG, PC AND BIM) FILES AND UNCONTROLLED DOCUMENTS AND ARE ISSUED FOR INFORMATION ONLY.

CLIENT
Deicorp



Rev	Date	Approved by	Revision Notes
01	07.06.21	JMC	Dist DA for Review
02	01.07.21	JMC	For Coordination
03	06.07.21	JMC	DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia

Drawing Title
GA ELEVATIONS
West Elevation

Scale
1:200 @A1, 50% @A3

Project No.
19068

Dwg No.
DA-210-201

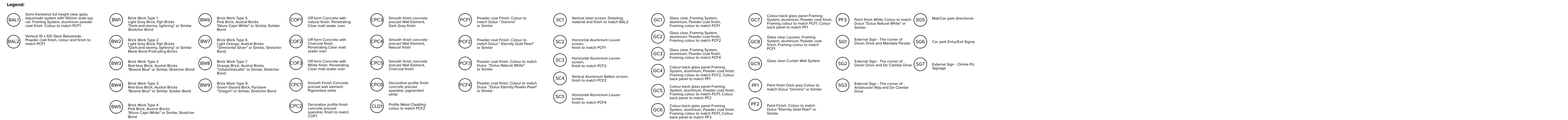
Drawn by
AG_VT_JB

Rev
03

TURNER

Level 7 ONE Oxford Street
Sydney NSW 2010
AUSTRALIA

T +61 2 8688 0000
F +61 2 8688 0088
turner@turner.com.au



Scale	Project No.	Drawn by
1:200 @A1, 50% @A3	19068	AG, VT, JB
Status	Dwg No.	Rev
DA Submission	DA-210-301	03

Level 7 **ONE** Oxford Street
Darlinghurst NSW 2010
AUSTRALIA



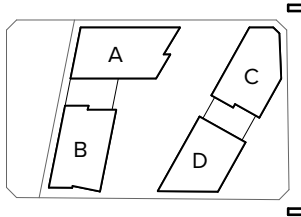
Legend:

- | | | | | | | | | | | | | | | | | | | | | | |
|--------|--|-------|--|-------|---|--------|--|--------|---|--------|--|-------|---|-------|---|-------|---|-------|--|-------|------------------------------------|
| (BAL) | Semi-frameless full height clear glass balustrade system with 50mm side top rail. Framing System, aluminium powder coat finish. Colour to match PCF1 | (BW1) | Brick Work Type 1
Light Grey Brick, High Bricks
"Clock-end-stormy, lightning" or Similar
Stretcher Bond | (BW6) | Brick Work Type 5
Pink Brick, Austral Bricks
"Aussie Capt White" or Similar, Soldier Bond | (COP1) | Off form Concrete with natural finish. Penetrating Clear matt sealer over | (CPC1) | Smooth finish concrete precast Wall Element, Dark Grey finish | (PCF1) | Powder coat Finish. Colour to match Dulux "Domino" or Similar | (SC1) | Vertical steel screen, Detailing, material and finish to match BAL2 | (GC1) | Glass clear, Framing System, aluminium, Powder coat finish, Framing colour to match PCF1 | (GC7) | Colour back glass panel Framing System, aluminium, Powder coat finish, Framing colour to match PCF1, Colour back panel to match PF1 | (PF3) | Paint finish White. Colour to match Dulux "Dulux Natural White" or Similar | (SG5) | Melt/Cat park directional |
| (BAL2) | Vertical 10 x 150 Steel Balustrade. Powder coat finish, colour and finish to match PCF1 | (BW2) | Brick Work Type 2
Light Grey Brick, High Bricks
"Clock-end-stormy, lightning" or Similar
Mortar Bond Penetrating Bricks | (BW7) | Brick Work Type 6
Light Orange, Austral Bricks
"Stromental Silver" or Similar, Stretcher Bond | (COP2) | Off form Concrete with Charcoal finish. Penetrating Clear matt sealer over | (CPC2) | Smooth finish concrete precast Wall Element, Natural finish | (PCF2) | Powder coat Finish. Colour to match Dulux "Eternity Gold Pearl" or Similar | (SC2) | Horizontal Aluminium Louver screen, finish to match PCF1 | (GC2) | Glass clear, Framing System, aluminium, Powder coat finish, Framing colour to match PCF2 | (GC8) | Glass clear Louver, Framing System, aluminium, Powder coat finish, Framing colour to match PCF1 | (SG1) | External Sign - The corner of Doran Drive and Mandala Parade | (SG6) | Car park Entry/Exit Signage |
| | | (BW3) | Brick Work Type 3
Red blue Brick, Austral Bricks
"Borward Blue" or Similar, Stretcher Bond | (BW8) | Brick Work Type 7
Orange Brick, Austral Bricks
"LithardChallotte" or Similar, Stretcher Bond | (COP3) | Off form Concrete with White finish. Penetrating Clear matt sealer over | (CPC3) | Smooth finish concrete precast Wall Element, Charcoal finish | (PCF3) | Powder coat finish. Colour to match Dulux "Dulux Natural White" or Similar | (SC3) | Horizontal Aluminium Louver screen, finish to match PCF2 | (GC3) | Glass clear, Framing System, aluminium, Powder coat finish, Framing colour to match PCF4 | (GC9) | Glass clear Curtain Wall System | (SG2) | External Sign - The corner of Doran Drive and De Crambe Drive | (SG7) | External Sign - Online Pic Signage |
| | | (BW4) | Brick Work Type 4
Pink Brick, Austral Bricks
"Aussie Capt White" or Similar, Stretcher Bond | (BW9) | Brick Work Type 8
Green Silver Brick, Pyraline "Oregon" or Similar, Stretcher Bond | (COP4) | Smooth finish Concrete precast wall element, Pigmented white | (CPC4) | Decorative profile finish concrete precast, pigmented white | (PCF4) | Powder coat finish. Colour to match Dulux "Dulux Eternity Pewter Pearl" or Similar | (SC4) | Vertical Aluminium Batten screen, finish to match PCF2 | (GC4) | Colour back glass panel Framing System, aluminium, Powder coat finish, Framing colour to match PCF2, Colour back panel to match PF1 | (PF1) | Paint finish Dark grey colour to match Dulux "Domino" or Similar | (SG3) | External Sign - The corner of Antalusian Way and De Crambe Drive | | |
| | | (BW5) | Brick Work Type 5
Pink Brick, Austral Bricks
"Aussie Capt White" or Similar, Stretcher Bond | | | (COP5) | Decorative profile finish concrete precast, finish to match COP1 | (CLD1) | Profile Metal Cladding colour to match PCF2 | (SC5) | Horizontal Aluminium Louver screen, finish to match PCF4 | (GC5) | Colour back glass panel Framing System, aluminium, Powder coat finish, Framing colour to match PCF2, Colour back panel to match PF2 | (PF2) | Paint finish. Colour to match Dulux "Eternity Gold Pearl" or Similar | | | | | | |
| | | | | | | | | | | | | (GC6) | Colour back glass panel Framing System, aluminium, Powder coat finish, Framing colour to match PCF1, Colour back panel to match PF3 | | | | | | | | |

NOTES

THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INQUIRE TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION (DWG, PC AND BIM FILES AND UNCONTROLLED DOCUMENTS) AND WEBSITE FOR INFORMATION ONLY.

CLIENT
Deicorp



Rev	Date	Approved by	Revision Notes
01	07.06.21	JMC	Dist DA for Review
02	01.07.21	JMC	For Coordination
03	06.07.21	JMC	DA Submission

Project Title
Doran Drive
Doran Drive, Castle Hill Castle Hill NSW 2154 Australia

Drawing Title
GA ELEVATIONS
East Elevation

Scale
1:200 @A1, 50% @A3

Project No.
19068

Dwg No.
DA-210-401

Drawn by
AG, YL, JB

Rev
03

TURNER

Level 7 ONE Oxford Street
Darlinghurst NSW 2010
AUSTRALIA

T +61 2 8668 0000
F +61 2 8668 0068
turner@turner.com.au