PACIFIC ENVIRONMENTAL AUSTRALIA

OPEN CUT MINE CLOSURE AND PROPOSED GOLF COURSE

251 ADELAIDE STREET, RAYMOND TERRACE, NSW

DUST MANAGEMENT PLAN

DOCUMENT CONTROL

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1. INTRODUCTION

Airlabs Environmental Pty. Ltd. (Airlabs) were commissioned by Pacific Environmental Australia (PEA) to undertake a qualitative dust management plan for an open cut mine closure at 25 Adelaide street, Raymond terrace, NSW (the proposed site). It is intended that a golf course will be developed at the proposed site upon completion.

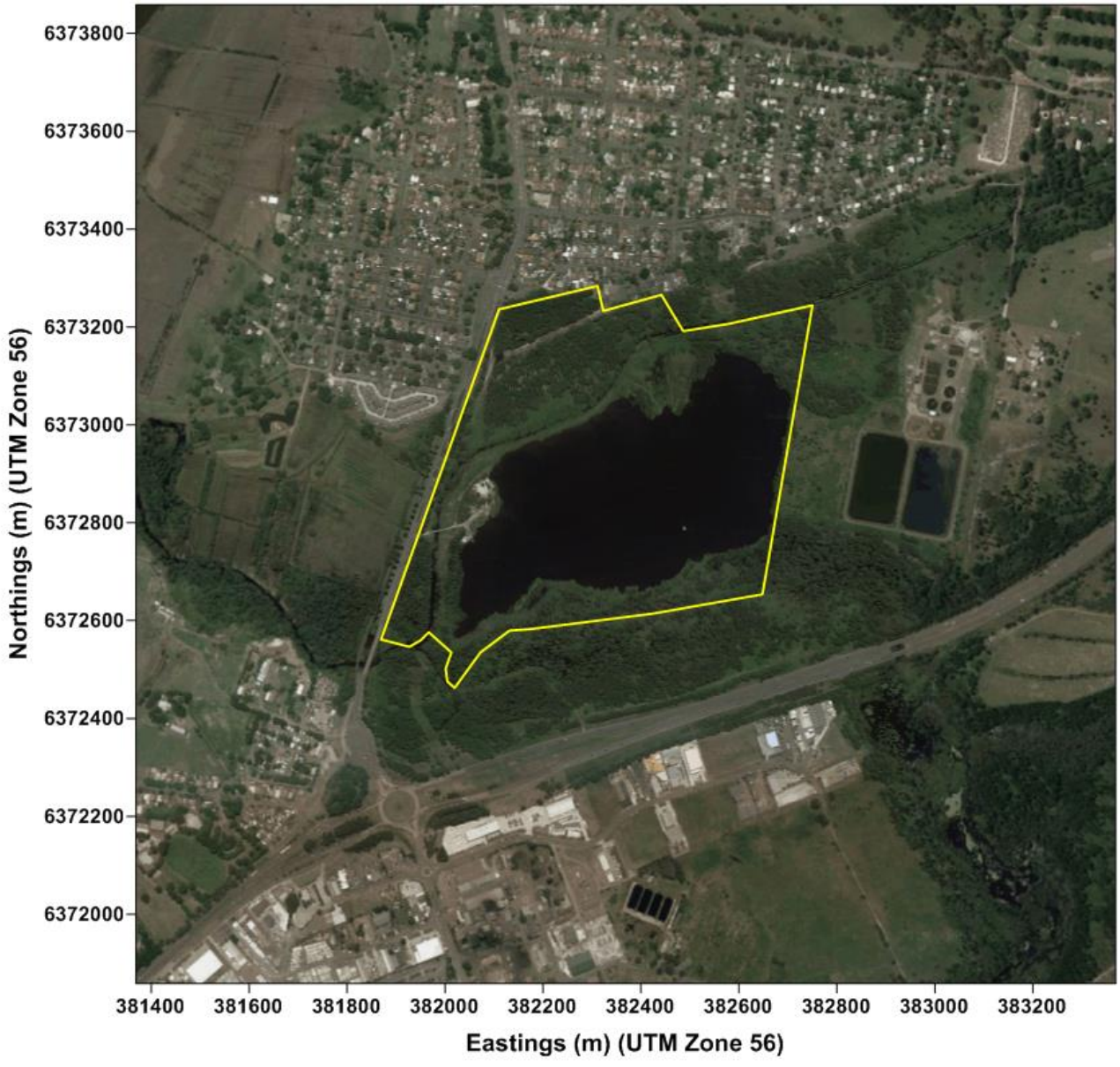
2. OVERVIEW AND LOCATION OF THE PROPOSAL

As per information provided to Airlabs, the proposed site was a former sand quarry and the open-cut voids are currently flooded with stormwater and some ground water intrusion with depths ranging from 1-10m deep.

The proposal involves filling the voids with gravel, sand and rocks to surrounding ground level and preparing the site for a future golf course development.

The location of the proposed site and surrounding land use is presented as an aerial image below.

Figure 1: Proposed Site Boundary (yellow outline)



Sensitive receptors, such as residential dwellings are located along northern boundary of the facility. Due to lower elevation at the site location and potential for flooding, there are no sensitive receptors to the west or east of the site. Light industrial/commercial development are present to the south.

3. SUMMARY OF DUST GENERATING ACTIVITIES

It is expected that there would be dust emissions generated during the mine closure activities. However, it is understood that these activities would occur only for a limited period of time, and therefore the impact of dust emissions generated would be short-term in nature.

The proposal involves following activities with potential to generate dust emissions:

- Haulage of materials (sand/gravel/rock) to the site using trucks and tippers
- Filling of voids by tipping materials into voids
- Handling of spoil and structural fill material.
- Earthworks to divert surface stormwater.
- Levelling or site using bull dozers and excavator.
- Wind erosion from temporary exposed areas and stockpiles.

As per information provided by Pacific Environmental, a maximum of 20 trucks will be entering per day to tip the material into voids. The trucks will enter and leave the facility on compacted gravel and clay haul road.

In the initial stages of the proposal, the activities on-site will mainly comprise trucks entering and tipping the material into voids. No other heavy machinery is expected to operate on site during the initial phase.

The later stage of proposal will commence when the voids have been filled with sand/gravel/rock. A total of two (2) bull dozers and one (1) excavator will be operational on site to level the site. It is expected there will be temporary stockpiling of material on site during later stages of the development.

4. PROPOSED DUST MITIGATION MEASURES

Given that the activities presented in above section are progressive and short-term / transient in nature, the potential for these dust generating activities to adversely impact the local air quality is low. Moreover, these activities would take place sporadically over a large area which would significantly limit the potential for any adverse off-site impacts.

Nonetheless, the following mitigation measures have been recommended by Airlabs to minimise dust emissions. Dust mitigation measures should be implemented at all times on site to ensure that dust generation from the proposed operations have minimal impacts on the local surrounding environment.

Table 1: Dust Mitigation Measures

Source of Dust	Mitigation Measure	Timing
General	Identify dust-generating activities and inform site personnel about location	Throughout proposal
	Identify adverse weather conditions (dry and high wind blowing from dust source to sensitive receptors) and halt dust emitting activities if visible dust impacts are identified at sensitive receptors.	Throughout proposal
Handling of spoil and structural fill material	Minimise drop height for material handling equipment.	Throughout proposal
Wind generated dust from temporary stockpiles and exposed areas	Apply watering through water trucks or sprinklers.	As required
	Progressive staging of dust generating activities throughout the day to avoid concurrent dust emissions.	Throughout proposal
	Minimise exposed area if possible.	Throughout proposal
	Minimise amount of temporary material stockpiled if possible.	Throughout proposal
Wheel generated dust during hauling	Restrict vehicle movement to haul routes that are watered regularly.	Throughout proposal
	Cleaning of haul roads.	As required
	Speed restrictions	Throughout proposal

Combustion of diesel or petrol fuels (from vehicle movements and mobile machinery) could generate emissions of particulate matter, CO, SO_2, NO_X and VOCs. Based on the proposed activities, it is expected that the fuel demands will be relatively low and therefore, emissions from vehicle exhaust and mobile machinery are not likely to cause adverse impacts on the surrounding sensitive receptors.

5. CONCLUSION

Airlabs were commissioned by Pacific Environmental Australia to conduct a dust management plan for remediation of an open cut mine closure at 25 Adelaide street, Raymond terrace, NSW. It is intended that a golf course would be developed at the site upon completion of the remediation works.

The facility was a former sand quarry and the open-cut voids are currently flooded with stormwater and some ground water intrusion. The proposal involves filling the voids with gravel, sand and rocks to surrounding ground level and preparing the site for a future golf course development.

Given that the activities presented in above section are progressive and short-term / transient in nature, the potential for these dust generating activities to adversely impact the local air quality is low. Nonetheless, dust mitigation measures have been recommended by Airlabs to ensure any potential dust emissions are minimised at any given time.

Based on Airlabs's experience in conducting air quality assessments, potential air quality impacts on surrounding receptors from the proposed remediation activities will be minimal and can be effectively through implementation of the recommended mitigation measures.