

Report

# Assessment of Air Discharges from the Storage and Processing of Greenwaste

**Prepared for Vernon Developments Ltd (Client)**

**By The Air We Breathe Ltd (The Air We Breathe)**

04 June 2025



## Revision History

Revision N°	Prepared By	Description	Date
A	Charles Kirkby	Initial draft for client review	07 May 2025
B	Charles Kirkby	Final for issue	04 June 2025

### Disclaimer

© The Air We Breathe 2025 (unless The Air We Breathe has expressly agreed otherwise with the Client in writing).

This report has been prepared by The Air We Breathe on the specific instructions of our Client. It is solely for our Client's use for the purpose for which it is intended in accordance with the agreed scope of work. Any use or reliance by any person contrary to the above, to which The Air We Breathe has not given its prior written consent, is at that person's own risk.

Unless otherwise stated, all map data and aerial imagery used in his report has been obtained from the Auckland Council and/or Land Information New Zealand (LINZ) Data Service and is licenced by them for re-use under for re-use under the Creative Commons Attribution 4.0 New Zealand licence.

## Table of Contents

<b>1</b>	<b>Introduction.....</b>	<b>2</b>
1.1	Background .....	2
1.2	Purpose of this Document .....	2
1.3	Site Visit.....	2
<b>2</b>	<b>Existing Environment.....</b>	<b>3</b>
2.1	Site Description .....	3
2.2	Surrounding Land Use.....	4
2.3	Topography and Meteorology .....	4
2.4	Existing Air Quality .....	5
<b>3</b>	<b>Activity Description.....</b>	<b>7</b>
3.1	Activity Summary .....	7
3.2	Site Layout.....	7
3.3	Discharges of Contaminants to Air.....	7
3.4	Contingency Measures.....	8
3.5	Air Quality Management Plan.....	8
<b>4</b>	<b>Assessment of Effects .....</b>	<b>9</b>
4.1	Overview.....	9
4.2	Amenity Effects.....	9
4.3	Mitigation and Monitoring .....	12
4.4	Consideration of Alternatives .....	12
<b>5</b>	<b>Suggested Duration and Conditions of Consent .....</b>	<b>13</b>
5.1	Consent Duration.....	13
5.2	Suggested Conditions .....	13

## List of Tables

Table 1: FIDOL assessments – odour.....	10
Table 2: FIDOL assessments – dust.....	11

## List of Figures

Figure 1: Site location and zoning .....	3
Figure 2: Hourly average wind speeds and directions recorded at the Pukekohe monitoring station, 2015-2024 .....	5
Figure 3: Diurnal plot of 1-hour average PM <sub>10</sub> concentrations, Patumahoe monitoring site, 2005-2024 .....	6
Figure 4: Indicative site layout plan.....	8

## **Appendices**

### **Appendix A – Draft Air Quality Management Plan**

## **Executive Summary**

Vernon Developments Ltd (VDL) has applied to the Auckland Council for consents to construct and operate a greenwaste storage and processing facility at 1799A Great South Road, Bombay, to be operated by Aarons Contracting Limited. VDL has commissioned The Air We Breathe Limited to prepare this air quality assessment to support those application to the Auckland Council for an air discharge consent, with the overall assessment of environmental effects report being prepared by The Surveying Company Ltd (TSC).

The site is located between Great South Road to the west and State Highway 1 (SH1) to the east, within an area zoned Rural - Mixed Rural under the Auckland Unitary Plan. Surrounding land is largely rural, although there about 11 residential dwellings within 300m of the site, almost all to the south.

The main contaminant discharge to air from the activity will be odour from the composting of greenwaste, although there will also be discharges of dust from vehicle movements on unsealed roadways and yards. Given the small scale of the activity (probably under 400 tonnes of greenwaste at any time), the location of the site, the nature of the greenwaste itself, and the proposed mitigation measures, the likelihood of offensive or objectionable adverse effects from odour from the normal operation of the site is low. Similarly, the rural location of the site and the low number of vehicle movements means that the likelihood of offensive or objectionable adverse effects due to dust emissions is also low.

Conditions of consent have been suggested, that are based on those for similar types of activity, while reflecting the relatively small scale and rural location of the site.

## **1 Introduction**

### **1.1 Background**

Vernon Developments Ltd (VDL) has applied to the Auckland Council for the necessary consents to construct and operate a greenwaste storage and processing facility at 1799A Great South Road, Bombay, to be operated by Aarons Contracting Limited. In response to a request from the council for further information, it has been identified that resource consent will be also required for discharges of contaminants into air from the activity under Rule E14.4.1(A152) of the Proposed Auckland Unitary Plan Operative in Part 2016 (AUP).

Rule A152 identifies “*Green waste collection station not meeting the permitted activity standards*” as a Restricted Discretionary Activity in Rural zones.

Therefore, VDL has commissioned The Air We Breathe Limited to prepare this air quality assessment to support an application to the Auckland Council for an air discharge consent, with the overall assessment of environmental effects report to be prepared by The Surveying Company Ltd (TSC)..

### **1.2 Purpose of this Document**

This air quality assessment has been prepared in accordance with the requirements of the Resource Management Act 1991 (RMA). It includes an assessment of the actual and potential effects on the environment, and represents a qualitative assessment as set out in the Ministry for the Environment (MfE) Good Practice Guide for Assessing Discharges to Air from Industry 2016 (MfE Industry GPG).

The report contains the following information:

- A description of the activity
- A description of the receiving environment
- An assessment of actual and potential effects of the discharges on the environment
- A description of the controls that are proposed to minimise adverse effects
- Suggested conditions of consent

### **1.3 Site Visit**

Charles Kirkby of The Air We Breathe visited the site on 14 April to assess the site location and receiving environment. The weather at the time of the site visit was dry and sunny, with light winds from a south-easterly direction.

## 2 Existing Environment

### 2.1 Site Description

The site will be located northeast corner of 1799A Great South Road, Bombay. The activity will be entirely contained within part of one parcel, the legal description of which is Lot 6 Deposited Plan 156089 C/T NA93B/140. The location of the site is indicated in Figure 1.

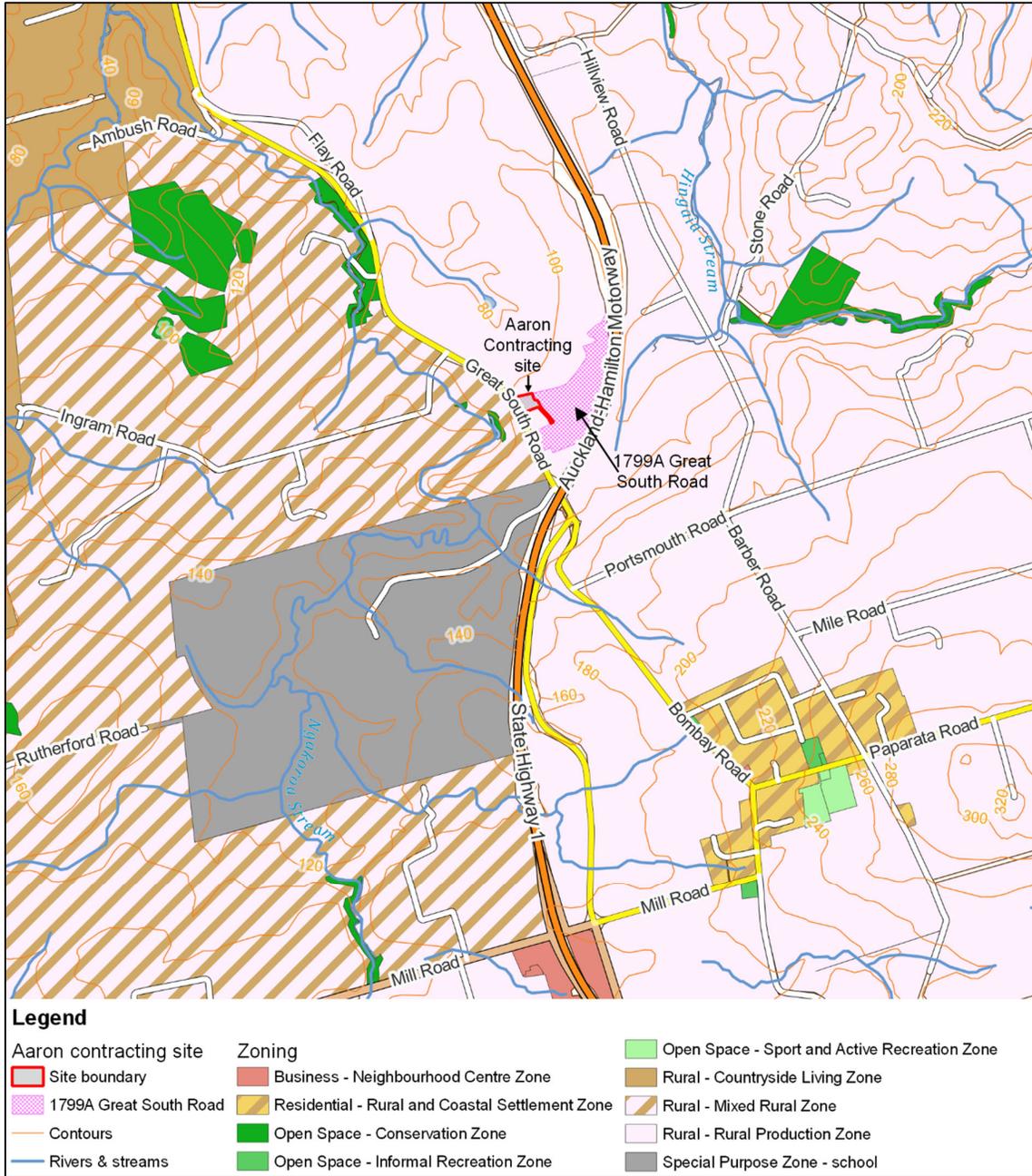


Figure 1: Site location and zoning

## 2.2 Surrounding Land Use

The site is located between Great South Road to the west and State Highway 1 (SH1) to the east, within an area zoned Rural - Mixed Rural under the AUP. Surrounding land to the north, east and west is also zoned. Land to the southeast (beyond SH1) is zoned Rural – Rural Production, as is land to the west of SH1 from approximately 300m to the south of the site, although this latter area is overlaid with a Special Purpose – School Zone (St Stephen’s College). Surrounding land use zones are shown in Figure 1.

Aside from the adjacent dwelling owned by the applicant (1799 Great South Road), there about 10 other residential dwellings within 300m of the site, almost all to the south. The closest of these is approximately 100m to the south-southwest of the site boundary.

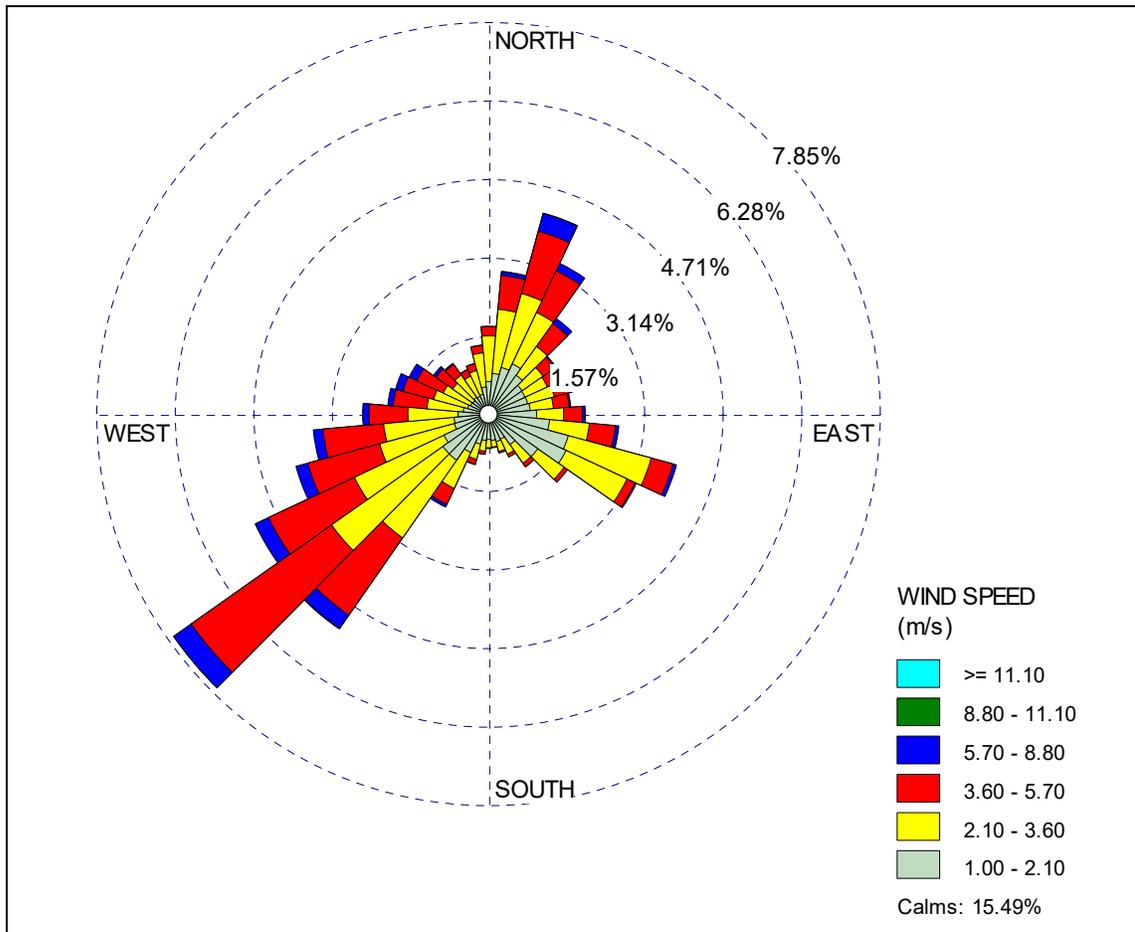
## 2.3 Topography and Meteorology

The most important meteorological conditions affecting dispersion of contaminants after they are emitted are wind speed and direction and atmospheric stability. These vary according to seasonal and diurnal factors as well as day to day weather changes. The topography of an area also influences wind and air flow and therefore the dispersion of contaminants emitted from a site.

The site is located approximately 100m above sea level, on the highest part of the property. Aside from the ridge where the site is located (part of the Raventhorpe tuff ring), surrounding land generally slopes down to the northwest and rises to the south and east, reaching an elevation of over 200m above sea level some 2km from the site. These hills will tend to block winds from the southeast, although they will also result in ‘katabatic winds’ to the northeast during calm conditions at night

The nearest permanent meteorological monitoring station to the site is located to the west of Pukekohe, 11km west of the site. A wind rose summarising the distribution of hourly average wind speeds and directions recorded at the Pukekohe monitoring station for the years 2015-2024 is shown at Figure 2.

The prevailing wind direction recorded at the Pukekohe monitoring station was from the southwest sector, with significant contributions to the overall distribution from northeasterly and southeasterly directions. The strongest winds appear to be from southwesterly and northeasterly directions.



**Figure 2: Hourly average wind speeds and directions recorded at the Pukekohe monitoring station, 2015-2024**

## 2.4 Existing Air Quality

The principal contaminants that may be discharged into air from the site are dust and odour.

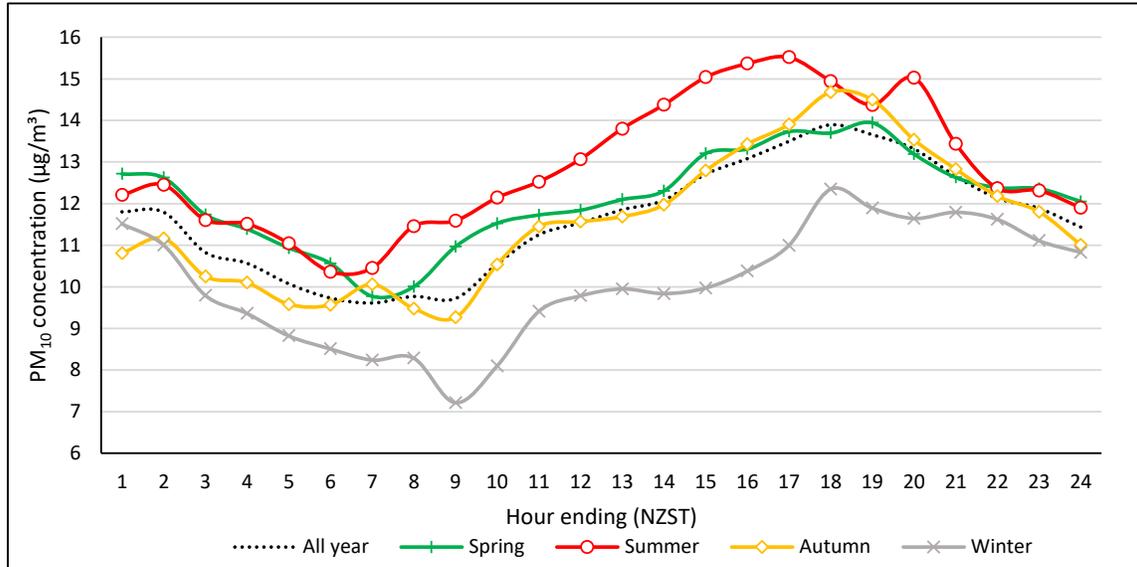
Neither VDL nor The Air We Breathe are aware of any other industrial sources of dust or odour within 1km of the site, nor of any sites within the same radius that hold current resource consent for discharges of contaminants into air.

Because most driveways and farm yards in rural areas are either metalled rather than sealed, there is the potential for dust emissions due to vehicle movements in the area surrounding the site. Similarly, there is also the likelihood of odour emissions associated with agricultural activities in the area.

The Air We Breathe is not aware of any routine odour monitoring in rural areas, but the Auckland Council (and its predecessor, the Auckland Regional Council) has monitored measured concentrations of fine particulate matter (PM<sub>10</sub>) at a rural site to the west of Pukekohe (Patumahoe) since 2005. A total of four exceedances of the New Zealand Air Quality Standard for PM<sub>10</sub> have been recorded that

site in this period, none of which appear to have been related to windblown dust generated in the locality.<sup>1</sup>

Analysis of the monitoring results indicate that PM<sub>10</sub> concentrations tend to be higher than average in summer and lower in winter, and generally increase through the day before decreasing at night (refer Figure 2).



**Figure 3: Diurnal plot of 1-hour average PM<sub>10</sub> concentrations, Patumahoe monitoring site, 2005-2024**

<sup>1</sup> The New Zealand air quality standard for PM<sub>10</sub> is defined in the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (as amended) as a 24-hour average concentration of 50 µg/m<sup>3</sup>, with an allowance of one exceedance of this limit per calendar year.

### 3 Activity Description

#### 3.1 Activity Summary

The primary purpose of the proposed activity is to process greenwaste, into usable products – coarse mulch and compost.

The following description is largely taken from the original AEE for land use consents, with additional information provided by the operator.

*Aarons Contracting Limited specialise in scrub mulching within the Auckland area. Green waste and logs are delivered to the site by staff and stockpiled on the ground, within the metalled hardstand area. When there is a suitable amount of stockpiled material, the green waste is mulched / wood chipped on-site. This processed product is then piled within small areas sectioned off with large concrete blocks. This processing is only undertaken once every 2 months and occurs over a 1-2 day period.*

We understand that up to 300m<sup>3</sup> of unprocessed greenwaste (less than 100 tonnes) may be held on site at any time, meaning that the total amount of material stored or in process on site should not exceed about 400 tonnes at any time.

The chipped product is either sold directly to as woodchip, or stockpiled for about three months for use a coarse garden mulch.

The site will also produce a basic compost from greenwaste. The greenwaste (all vegetation - no faeces or food product) is put through a grinder (rather than a shredder), then turned every couple of weeks to introduce oxygen and maintain even heat. The total processing time to produce a saleable product is about six months.

As noted in the original AEE, all movement of greenwaste, mulch and compost will be undertaken in the operator's own trucks, with up to eight truck movements per day.

#### 3.2 Site Layout

As notes above, the activity will be located in the northwestern corner of the property adjacent to Great South Road. An indicative site layout plan is shown in Figure 4.

The key points to note are that:

- Unprocessed greenwaste will be stored in the northwestern corner of the site, indicative area 260m<sup>2</sup>
- Mulch and compost will be stored in the southwestern corner, indicative area 430m<sup>2</sup>, with concrete block walls used to prevent spillover to the rear and (where necessary) to separate material at different stages of processing.

While the site plan shows the general areas for storage of greenwaste, mulch and compost, the actual extent of these areas may vary.

#### 3.3 Discharges of Contaminants to Air

The principal contaminant that may be discharged to air is odour generated by anaerobic decomposition of the greenwaste. There may also be fugitive emissions of dust from vehicle movements on unsealed areas of the site, and visible steam generated from within the maturing mulch and compost as moisture is evaporated.

The greatest potential for odour emissions from greenwaste processing arises from anaerobic decomposition of soft materials such as lawn mowings and green garden and horticultural waste,

which will only be present in limited quantities at the site. Greenwaste that is delivered to the site will generally be very coarse, with a high proportion of woody biomass, only a limited proportion of grass and other 'soft' material.

Dust emissions may arise from the movement of trucks delivering greenwaste and removing final product. Routine truck movements will be confined to the metalled site access and gravel yard.



Figure 4: Indicative site layout plan

### 3.4 Contingency Measures

The relatively small scale of the activity and low frequency of grinding or shredding (1-2 days every 2-3 months) means that there will be ample time to rectify potential breakdowns of processing equipment, without significant risk of increased odour emissions.

In the event that stockpiles of material in process or final product become anaerobic and generate excessive odour, the first course of action will be to turn the material over using an excavator. Lime can be mixed in to assist in short-term odour minimisation if needed. Material that has degraded beyond being usable as a product will be removed for disposal to a suitably licensed treatment or disposal site.

### 3.5 Air Quality Management Plan

General monitoring and maintenance protocols will be summarised in a simple Air Quality Management Plan (AQMP) for the site. A (draft) copy is attached at Appendix A.

## 4 Assessment of Effects

### 4.1 Overview

This section of the report comprises the detailed assessment of actual and potential environmental effects associated with the discharges to air from the proposed activity. It addresses the following actual and potential effects

- Effects on ecosystems
- Amenity effects
- Mitigation measures and monitoring.

None of the contaminants likely to be discharged from the site will cause adverse effects on human health.

Possible adverse effects on amenity values may arise from discharges of odour from unprocessed greenwaste and stockpiles of mulch or compost during maturation, or of dust from vehicle movements across the unsealed site.

### 4.2 Amenity Effects

#### 4.2.1 Odour

The MfE Good Practice Guide for Assessing and Managing Odour 2016 (MfE Odour GPG) outlines a number of tools for the assessment of odour discharges (p29 of the MfE Odour GPG). The following tools have been utilised for this assessment:

- Review of meteorological and production data
- Contingency procedures, process controls and design
- Analysis of site-specific meteorology and topographical features.

Meteorological data are discussed in section 2.3 of this report. Contingency measures and process design and control are discussed in section 3.3.

Section E14.6.1.1 of the Unitary Plan and section 3.1 of the MfE Odour GPG require assessment of odour discharges using the so-called 'FIDOL factors'. These can be summarised as follows:

**Frequency** of exposure to a particular odour. One-off or very occasional incidents (e.g. odour associated with a major storm event) would be much less likely to be regarded as 'offensive or objectionable' than regular or frequent occurrences.

**Intensity** or strength of the odour.

**Duration** of a particular odour event.

**Offensiveness** relates to the 'hedonic tone' of an odour – i.e. is it pleasant, neutral or unpleasant. For example, the odour of baking bread may generally be regarded as pleasant, while sewage odour, especially that caused by discharges of H<sub>2</sub>S, would generally be regarded as unpleasant or offensive.

**Location** of an activity and sensitivity of the receiving environment – what may be considered offensive or objectionable in a residential area, may not necessarily be considered offensive or objectionable in an industrial area.

In assessing whether a particular activity is likely to generate 'offensive or objectionable' discharges of odour – and, in consequence, whether significant adverse effects are likely, each of the FIDOL factors must be taken into account. For example, an odour of low intensity and moderate offensiveness that

occurs daily or on several days over a limited period may be regarded as 'offensive or objectionable' (and therefore be a significant effect); whereas the same odour in the same location that only occurs once or twice a year may not be regarded as 'offensive or objectionable'. Conversely, a highly unpleasant odour may be regarded as 'offensive or objectionable' even though it only occurs occasionally.

A 'FIDOL' assessment for odour from the site during normal operation is set out in Table 1.

**Table 1: FIDOL assessments – odour**

Factor	Assessment
Frequency	<b>Moderate.</b> Composting processes routinely generate some odour as greenwaste decomposes. However, given the scale of the proposed operation and the separation from residential neighbours (other than the dwelling at 1799 Great South Road which is owned by the applicant), this will only occasionally be detectable at any .
Intensity	<b>Low.</b> The only time odour from the site might be of sufficient intensity to cause concern would be if either the fresh greenwaste or the maturing mulch stockpile became anaerobic, which is most likely to occur with 'soft' greenwaste such as lawn mowings. The greenwaste processed at the site will only contain low proportions of such waste; mixing this with the coarse material that will form the bulk of the greenwaste processed allows for better air movement within the maturing stockpiles, preventing anaerobic conditions developing.
Duration	<b>Low.</b> If potentially offensive odour does develop that cannot be corrected by turning the material over, the decomposing material will be removed for disposal to landfill; if necessary, lime can be mixed into the material (for immediate odour minimisation) prior to disposal.
'Offensiveness' or intrinsic character	<b>Low.</b> Odour from anaerobic decomposition of greenwaste can be unpleasant, but in normal operation, composting type odours are similar to freshly turned soil with a high organic load.
Location	<b>Low.</b> The proposed site is located in a Rural – Mixed Rural Zone, which specifically provides for rural production and processing activities that generate rural odour.

Based on the combined FIDOL factors, the likelihood of offensive or objectionable adverse effects from odour from the normal operation of the site is low. As noted above, there is the possibility of increased odour emissions from anaerobic decomposition, but this will be adequately minimised by the proposed process controls (type of waste accepted) and mitigation measures (re-mixing, mixing with lime, and off-site disposal).

#### 4.2.2 Dust

The Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions 2016 (MfE Dust GPG) notes that the "*nuisance effects of dust emissions are influenced by the nature of the source, sensitivity of the receiving environmental and on individual perception.*" Also, "*individual responses can also be affected by the perceived value of the activity producing the dust.*" For this reason, the MfE Dust GPG recommends that similar FIDOL factors as used for odour assessments are taken into account in any assessment of amenity effects of dust events.

There is a potential for dust emissions from the activity because the site is and will remain largely unsealed. Dust can be generated either by wind entrainment of fine material on the surface, or by vehicle movement. Wind entrainment is generally only a significant source of dust in moderate to strong winds – i.e. when wind speeds exceed about 5-7 m/s (18-25 km/h). The amount of dust generation by vehicle movements is a function of vehicle mass (i.e. large trucks generate more dust

than cars), and the square of vehicle speed. An effective control measure, therefore, is to limit vehicle speeds across unsealed sites, generally to less than 10-20 km/h.

A 'FIDOL' assessment for dust from the site during normal operation is set out in Table 2.

**Table 2: FIDOL assessments – dust**

Factor	Assessment
Frequency	<b>Low.</b> There will be no more than about eight truck movements per day, and application of fresh metal across trafficked areas of the site will largely avoid significant dust emissions.
Intensity	<b>Low.</b> If fine material is allowed to build up in the surface within trafficked areas, significant dust emissions could occur. In addition to the regular maintenance of the surface, a speed limit of 20 km/h will apply across the site.
Duration	<b>Low.</b> Significant dust emissions would only occur when vehicles are entering or leaving the site, or during windy conditions.
'Offensiveness' or intrinsic character	<b>Moderate.</b> Dust emissions always have the potential to be at least moderately unpleasant.
Location	<b>Low.</b> Unsealed driveways, farm access roads, and yards are common throughout rural areas of Auckland, meaning that some exposure to dust can be expected even for residential activities in the area

Based on the combined FIDOL factors, the likelihood of offensive or objectionable adverse effects from dust from the normal operation of the site is low.

#### 4.2.3 Visible emissions

While there may also be visible steam from the maturing mulch piles, and would not affect visibility

As noted in section 3.3, evaporation of moisture within the maturing mulch and compost stockpiles may generate visible steam, especially on cold winter mornings. This cannot practicably be avoided, since it is a natural consequence of the high temperatures (>65°C) generated within the stockpiles that are a necessary part of the maturation process.

In practice, such emissions should rapidly disperse, these would have negligible impact in an industrial area, and are highly unlikely to cause impacts on visibility on, for example, Great South Road.

#### 4.2.4 Cumulative Effects

As noted in section 2.4 above, there is the potential for dust and odour emissions from existing permitted activities in the surrounding area.

Although the site may marginally increase to overall dust levels in the area, dust emissions from the site will be no different in nature or intensity than those from existing permitted activities, including activities that would be permitted on the site itself.

There is the potential for more intense odour emission from the site than might be expected from agricultural activities, for example during the initial stages of composting or when turning over piles of compost. However, based on The Air We Breathe's observations of surrounding agricultural activities, actual background levels of odour will generally be very low, so there is little or no potential for cumulative effects from the site.

#### 4.2.5 Summary of adverse effects

Based on the assessment set out above, The Air We Breathe considers that the likelihood of adverse effects due to discharges of odour and dust be low, and those from visible emissions will be negligible. Similarly, given the nature of activities that may be permitted on the site, and of agricultural activities in the immediate area, the risk of cumulative effects of discharges of dust or dour from the site is very low.

Any adverse effects will be appropriately avoided or mitigated by the site location, the nature and scale of the activity, and proposed control measures.

#### 4.3 Mitigation and Monitoring

Odour emissions will be minimised in part by the relatively small scale of the activity and by the coarse nature of the most of the greenwaste to be handled at the site, and by regular turning of the mixed material using an excavator or front end loader. In addition, the following contingency measures are proposed:

- Removing odorous (anaerobic) material for off-site disposal
- If necessary, using lime for short-term odour control.

Dust emissions from these areas will be minimised by limited vehicle speeds on site to 20 km/h.

The following process and environmental monitoring is proposed:

- Recording of volumes or weights of greenwaste received and mulch despatched from the site
- Recording of stockpile core temperatures of the maturing compost at least once a week for at least four weeks for each batch
- Daily site walkovers to check for excessive or unusual odour or dust emissions
- Incident reporting:
  - Complaints regarding dust or odour
  - Incidents where anaerobic conditions have developed in stockpiles.

Incident reporting will include the outcome of investigations to identify the cause, and any remedial measures taken.

#### 4.4 Consideration of Alternatives

Section 105 of the RMA requires that an assessment of environmental effects includes a description of any potential alternative methods or locations if it is likely that the proposed activity will result in a significant adverse environmental effect. The Air We Breathe considers that the discharges from the site will not result in a significant adverse environmental effect; therefore comment on alternatives is not required.

## **5 Suggested Duration and Conditions of Consent**

### **5.1 Consent Duration**

Given the location of the activity and the low level of adverse effects, the Air We Breathe considers it appropriate for the applicant to seek the maximum duration of consent allowable under the RMA (35 years).

### **5.2 Suggested Conditions**

#### **General**

1. The site shall be constructed and operated in accordance with the with the plans and all information submitted with the application
2. Access to the relevant parts of the property shall be maintained and made available at all reasonable times to enable the servants or agents of the Auckland Council to carry out inspections, surveys, investigations, tests, measurements or take samples while adhering to the consent holder's health and safety policy.
3. This consent shall expire on [date] unless it has lapsed, been surrendered or been cancelled at an earlier date.
4. The consent holder shall be responsible for all discharges into air from the site and shall make any person on the site aware of any relevant conditions of this consent.

#### **Specific Conditions**

5. Beyond the boundary of the site there shall be no dust or odour caused by discharges from the site, which in the opinion of an enforcement officer, is noxious, offensive or objectionable.
6. All processes on the site shall be operated, maintained, supervised, monitored and controlled to ensure that emissions authorised by this consent are maintained at the minimum practicable level.
7. There shall be no discharge from any activity on the site that gives rise to visible emissions, to an extent which, in the opinion of an Auckland Council enforcement officer, are noxious, dangerous, offensive or objectionable.

#### **Process Conditions**

8. The types and volumes of waste materials accepted onto the site for storage or processing shall be limited to greenwaste, being plant and tree trimmings and general vegetative waste from land clearance.
9. All storage and handling of greenwaste and mulch on site shall be carried out in such a manner as to reduce dust and odour emissions to a practicable minimum. Measures shall include but not be limited to turning over stockpiles of mulch and compost at regular intervals to maintain aeration.
10. Vehicle speeds on site shall be limited to no more than 20 km/h.

#### **Monitoring Conditions**

11. Visual assessments of dust emissions from the site shall be made frequently, and at least once per operating day to check that the dust control measures are operating effectively. The

time, location and result of these assessments shall be recorded in accordance with Condition 13.

12. Odour assessments shall be made at least once each day that either greenwaste is being ground, or mulch or compost stockpiles are being turned over. These assessments shall, as far as is practicable, be made both upwind and downwind of the relevant operating area of the site. The time, location and result of these assessments shall be recorded in accordance with Condition 13.

### **Logging and Reporting Conditions**

13. All records, monitoring and test results required by the conditions of this consent shall be made available on request, during operating hours, to a Council enforcement officer and shall be kept by the consent holder for a minimum period of two years from the date of each entry.
14. A record of the volume and/or weight of all greenwaste that is accepted onto the site shall be maintained by the consent holder and is to be made available during normal working hours to the Auckland Council, on request.
15. A Council enforcement officer shall be notified, as soon as practicable, in the event of any significant increase in the discharge of contaminants into air which may result in a breach of these conditions. A full report shall be provided to the Auckland Council by the consent holder within 5 working days identifying the nature of the event and what steps have been taken to prevent a recurrence.
16. Within three months of the date of commencement of this consent, an updated Air Quality Management Plan (AQMP) shall be submitted to the Auckland Council for certification, to confirm that the activities undertaken in accordance with the AQMP will achieve the objectives of the plan and compliance with the relevant consent conditions.
17. The AQMP shall accurately record all monitoring, management and operational procedures, methodologies, log sheets and contingency plans necessary to comply with the conditions of this consent. The AQMP shall include, but not be limited to, procedures relating to:
  - a. Procedures for acceptance and storage of waste materials on the site, including whether the material should be rejected from the site
  - b. Complaint response procedures and investigations
  - c. Operation and management of the process
  - d. Procedures for odour assessments and methods used to mitigate odour from the process
  - e. Procedures for the visual inspections for dust and methods to minimise dust discharge onsite
  - f. Procedures for contingency planning and emergency response (including unforeseen discharges to air)
  - g. The identification of staff responsibilities.
18. The AQMP shall be reviewed by the consent holder on an annual basis and any subsequent changes to the certified AQMP shall be submitted to the Auckland Council for certification prior to becoming operational. The amended AQMP is to be implemented as soon as the Council has certified that the amended AQMP is consistent with achieving compliance with the conditions of this consent.

19. All air quality complaints received shall be logged by the consent holder. The complaint details shall include:
- a. The date, time, location and nature of the complaint
  - b. The name, phone number and address of the complainant unless the complainant refuses to supply those details
  - c. Weather conditions, including approximate wind speed and direction, at time of complaint
  - d. Any causes identified
  - e. Any remedial actions taken.

Details of any complaints received shall be provided by the consent holder to the Auckland Council within 24 hours of receipt of the complaint(s).

### **Review Condition**

20. The conditions of this consent may be reviewed by the Auckland Council pursuant to section 128 of the Act, by giving notice pursuant to section 129, in June 2026 and/or the June of any following year in order to:
- a. Deal with any significant adverse effect on the environment arising from the exercise of the consent that was not foreseen at the time the application was considered and which is appropriate to deal with at the time of the review; and/or
  - b. Consider the adequacy of conditions that prevent nuisance and/or other adverse off-site effects beyond the boundary of the site, particularly if regular or frequent complaints have been received and validated by a Council enforcement officer; and/or
  - c. Consider developments in control technology and management practices that would enable practical reductions in the discharge of contaminants into air; and/or
  - d. Alter the monitoring requirements of conditions 11 and 12, including requiring further monitoring, increasing or reducing the frequency of monitoring.

Appendix A

**Draft Air Quality Management Plan**



## **Aarons Contracting Limited**

**1799A Great South Road, Bombay**

### **Air Quality Management Plan**

**Version: 0.1**

**Date: 04 June 2025**

## **1 Background**

Aarons Contracting specialises in land clearance, earthworks, and tree removal and trimming across Auckland and northern Waikato. A key aspect of this work is mulching of cleared scrub and trees, which then provides a valuable product for land maintenance.

## **2 Introduction**

### **2.1 Basis of this operation and maintenance plan**

This Air Quality Management Plan (AQMP) for 1799A Great South Road (the site) has been prepared by The Air We Breathe for Aarons Contracting in support of an application for land use consent for greenwaste processing at the site.

The purpose of the AQMP is to accurately record methodologies and contingency plans necessary to minimise discharges of contaminants to air. The AQMP forms part of an overall Environmental Management Plan (EMP) for the site. This AQMP comprises the following sections:

- Activity description
- Control measures to minimise dust and odour emissions
- Complaint investigation, monitoring and reporting.

### **2.2 Objectives**

The objective of this management plan is:

- To provide methods that may be employed to avoid, remedy or mitigate adverse effects on air quality due to greenwaste processing.

### **2.3 Performance requirements**

The key performance criteria are the standards for permitted activities set out in Chapter E14 of the Auckland Unitary Plan, as follows:

- (1) The discharge must not cause, or be likely to cause, adverse effects on human health, property or ecosystems beyond the boundary of the premises where the activity takes place.
- (2) The discharge must not cause noxious, dangerous, offensive or objectionable odour, dust, particulate, smoke..

## 2.4 Changes or amendments to the AQMP

The AQMP is a 'living document' that can be updated from time to time in accordance with the conditions of this consent and to address any other matters the consent holder considers necessary for the ongoing operation of the quarry.

## 2.5 Key contacts

The key contact for all aspects of this AQMP is:

**Aaron Blackburn**, [contact@aarons.co.nz](mailto:contact@aarons.co.nz), mobile 027 224 3846.

## 3 Activity Description

The primary purpose of the activity is to process greenwaste into usable products – coarse mulch and compost.

Up to 300m<sup>3</sup> of unprocessed greenwaste (less than 100 tonnes) may be held on site at any time, meaning that the total amount of material stored or in process on site should not exceed about 400 tonnes at any time.

The chipped product is either sold directly to as woodchip, or stockpiled for about three months for use as coarse garden mulch.

The site will also produce a basic compost from greenwaste. The greenwaste (all vegetation - no faeces or food product) is put through a grinder (rather than a shredder), then turned every couple of weeks to introduce oxygen and maintain even heat. The total processing time to produce a saleable product is about six months.

An indicative site layout plan is shown in Figure 1.

## 4 Environmental Issues

The principal contaminant that may be discharged to air is odour generated by anaerobic decomposition of the greenwaste. There may also be fugitive emissions of dust from vehicle movements on unsealed areas of the site, and visible steam generated from within the maturing mulch and compost as moisture is evaporated.

The greatest potential for odour emissions from greenwaste processing arises from anaerobic decomposition of soft materials such as lawn mowings and green garden and horticultural waste, which will only be present in limited quantities at the site. Greenwaste that is delivered to the site will generally be very coarse, with a high proportion of woody biomass, only a limited proportion of grass and other 'soft' material.

Dust emissions may arise from the movement of trucks delivering greenwaste and removing final product. Routine truck movements will be confined to the metalled site access and gravel yard.



Figure 1: Indicative site layout plan

## 5 Management Procedures

The key controls to minimise discharges of odour are directly related to those needed to effectively manage the process – i.e. controlling the greenwaste feedstock, and maintain aeration in the maturing stockpiles.

Odour emissions will be minimised in part by the relatively small scale of the activity and by the coarse nature of the most of the greenwaste to be handled at the site, and by regular turning of the mixed material using an excavator or front end loader. The only material processed at the site is that collected either by Aarons Contracting's own trucks, or by other contractors with prior approval from Aaron Contracting. There is no public access to the site, or public drop-off of greenwaste.

In addition, the following contingency measures are proposed:

- Removing odorous (anaerobic) material for off-site disposal.
- Using lime for short-term odour control

Dust emissions from these areas will be minimised by limited vehicle speeds on site to 20 km/h.

## 6 Monitoring

The following process and environmental monitoring is undertaken:

- Recording of volumes or weights of greenwaste received and mulch despatched from the site
- Recording of stockpile core temperatures of the maturing compost at least once a week for at least four weeks for each batch
- Daily site walkovers to check for excessive or unusual odour or dust emissions.
- Incident reporting:
  - Complaints regarding dust or odour
  - Incidents where anaerobic conditions have developed in stockpiles.

Any air quality complaints received, either directly from a member of the public or via the Auckland Council must be investigated and recorded. The details recorded should include:

- The date, time, location and nature of the complaint
- The name, phone number and address of the complainant unless the complainant refuses to supply those details
- Weather conditions, including approximate wind speed and direction, at time of complaint
- Any causes identified and remedial actions taken.

Details of any complaints received must be provided to the Auckland Council within 24 hours of receipt of the complaint(s).