concrush

Reducing our impact on the environment

Operational Air Quality Management Plan (OAQMP)

for

Expansion of the Concrush Resource Recovery Facility

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1 INTRODUCTION

This Operational Air Quality Management Plan (OAQMP) has been prepared for Concrush Pty Ltd to provide a system for air quality management at the Concrush Teralba site and has been updated to include the expanded area following approval for the Expansion of the Concrush Resource Recovery Facility Project in accordance with State Significant Development (SSD 8753) Approval Conditions B39 and Condition C.

Concrush have as part of their ongoing business programme, a goal to minimise all air emissions from their Teralba site and comply with all air assessment limits and criteria. Concrush acknowledge that the key potential air emissions from the site are dust (various components and size fractions) and odour, and Concrush aim to achieve their goals with the implementation of this OAQMP which details:

- Controls for all dust and odour emissions;
- An air quality monitoring programme;
- A programme to monitor and report on the impacts and environmental performance of the development, and effectiveness of the management measures;
- A programme to investigate and implement ways to improve the environmental performance of the development over time;
- Protocols for managing and reporting any incidents, non-compliances and complaints;
- A contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as practicable;
- A protocol for a periodic review of this OAQMP.

The OAQMP also allocates the responsibilities and obligations of Concrush to ensure all dust and odour emissions are controlled, minimising the impact to the local community and environment. Further objectives of this plan are shown in **Section 2**.

This OAQMP also forms part of the Concrush Operational Environmental Management Plan (OEMP).

2 AIR QUALITY MANAGEMENT PLAN OBJECTIVES

The objective of this OAQMP is to provide an air quality management system for the Concrush Teralba facility. This Plan addresses:

- Identification of potential dust and odour emission sources;
- The ranking of all dust and odour emission sources;
- Controls for dust and odour emissions;
- The implementation of an air quality monitoring programme to quantify the amount of dust leaving the site & assessment to relevant legislative criteria and Key Performance Indicators (KPI) for air emissions;
- Compliance with the site Environmental Protection Licence (EPL) No. 13351; the Development Application (DA 2002/0558); the State Significant Development Approval (SSD 8753) dated 27 March 2020 (SSD 8753) and other relevant legislation;
- Incident reporting procedures;

- Complaints handling procedures;
- Training and awareness for all Concrush personnel and subcontractors;
- Define responsibilities and accountabilities of personnel;
- Promotion of employee and community environmental awareness;
- A contingency plan to manage any unpredicted air emission impacts and their possible consequences; and
- Compliance with workplace health and safety requirements on the site.

3 ROLES AND RESPONSIBILITES

The controls and management techniques presented in this OAQMP will be made available to all Concrush Teralba site staff and contractors. The responsible personnel will be informed of all controls through inductions, training and regular toolbox talks/meetings. The following table outlines the general responsibilities that apply in relation to this OAQMP.

DIRECTORS

- Ensuring air quality monitoring objectives and targets are established, monitored and achieved;
- Defining responsibilities for the management for monitoring and air quality management;
- Ensuring availabilities of the resources and training of staff and contractors on relevant air quality management responsibilities, procedures and controls;
- Undertake periodic audits of the air quality management systems in place and verify all controls and procedures are adhered to. Take corrective and preventative actions if necessary;
- Respond to community concerns and complaints.

BUSINESS MANAGER

- Ensuring the air quality management system is implemented and maintained;
- Reporting on air quality performance and the need for improvements;
- Identifying if corrective or preventative actions are required to be undertaken;
- Monitoring and ensuring compliance with air quality monitoring procedures and controls.
- Coordinating the development and maintenance of procedures for ongoing air quality monitoring;
- Ensuring that the weather station is operating correctly and contacting a technician if faults are identified.
- Ensuring that air quality monitoring data are published on the Concrush Pty Ltd website.

YARD MANAGER

- Identify, reduce and prevent any potential air quality (dust or odour issues).
- Monitoring site operations to ensure that all air quality procedures and controls are adhered to.
- Initiate any preventative actions to minimise the impact of dust or odour emissions.
- Investigate any reported employee dust or odour observations.
- Immediately report to the Directors and or Business Manager if dust or odour controls appear ineffective.
- Identifying, reducing and preventing environmental issues.
- Cease production when/if crushing dust suppression system fails.
- Cease production based on weather conditions as specified in this plan (refer **Section 7**).

EMPLOYEES AND SUBCONTRACTORS

- Follow any environmental instructions and procedures that apply to their work;
- Follow all relevant air quality management controls and procedures to ensure their work does not generate dust or odour emissions.
- Immediately report to the Yard Manager if dust or odour controls appear ineffective.

AIR QUALITY MONITORING SUBCONTRACTORS

- Ensuring air quality monitoring is undertaken in accordance with the air quality procedures and relevant Australian Standards.
- Analyse air quality data and relevant weather monitoring data to ensure compliance with outlined parameters and regulated assessment criteria.
- Immediately inform the Business Manager should any non-compliances be identified.
- Complete interim reports as necessary based on the monitoring programme.
- Complete quarterly air quality reports, or any other periodic reports as required.

4 LICENCES, APPROVALS AND LEGISLATIVE REQUIREMENTS

This OAQMP has been compiled in accordance with the SSD Approval Conditions B33h, B36, B37, B38, B39, B41 and C1. The sections in which each of the Condition requirements are addressed is presented below in **Table 1**.

Air quality management at the site is undertaken in accordance with the NSW EPA Environment Protection Licence (EPL) No. 13351.

All air emissions (i.e. dust and odour) from the site must be controlled as outlined in sections 124 – 135 of the *Protection of the Environment Act, 1997* (POEO Act). In addition, Concrush will ensure that their operations do not cause or permit the emission of any offensive odour as outlined in the *Protection of the Environment Act, 1997* (POEO Act).

Table 1 *SSD Approval Conditions and How Addressed in this OAQMP*

Condition No.	Condition	Where Addressed
B33h	The Applicant must ensure: all trucks entering or leaving the site with loads have their loads covered and do not track dirt onto the public road network	**Table 5** and **Table 6**
B36	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	**Section 7**
B37	The Applicant must ensure that: (a) all on-site carparking areas are sealed; (b) water sprinklers at the stacker above the processed stockpile and transfer points are utilised at all times when the plant is operational; (c) the wheel wash at the heavy vehicle egress points is operational at all times; (d) exposed surfaces and stockpiles are suppressed by regular watering; (e) sealed roads are swept regularly; (f) the seal on the main access road from the wheel wash and weighbridge is maintained; (g) a water cart will remain onsite for use on manoeuvring areas in hot and dry weather; (h) cease operations during adverse weather conditions as identified in the RtS; (i) all trucks entering or leaving the site with loads have their loads covered; and (j) trucks associated with the development do not track dirt onto the public road network	**Section 7.1** It is noted that 'stacker' has been taken to mean the crusher/screen which is used by Concrush.
B38	The Applicant must install and operate equipment in line with best practice to ensure that the development complies with all load limits, air quality criteria/air emission limits and air quality monitoring requirements as specified in the EPL applicable to the site	**Section 8**

Condition No.	Condition	Where Addressed
B39	Prior to commencement of Stage 1 operations, the Applicant must prepare an Operational Air Quality Management Plan (OAQMP) to the satisfaction of the Planning Secretary. The OAQMP must form part of the OEMP required by condition C5 and be prepared in accordance with condition C1. The OAQMP must: a. be prepared by a suitable qualified and experienced person(s).	V2 of this OAQMP has been prepared by Martin Belk, an environmental engineer with 20 years' experience in air emissions assessment and management, and reviewed by Fiona Brooker, the manager of RCA Australia's environmental department. The document has also been reviewed by Hugh Madden, principal environmental scientist with WSP.
	b. detail and rank all emissions from all sources of the development, including particulate emissions.	**Table 3** and **Table 4**
	c. describe a program that is capable of evaluating the performance of the operation and determining compliance with key performance indicators.	**Sections 8 to 15** inclusive
	d. identify the control measures that will be implemented for each emission source.	**Section 7, Table 5** and **Table 6**
	e. nominate the following for each of the proposed controls: i. key performance indicator. ii. monitoring method. iii. location, frequency and duration of monitoring. iv. record keeping. v. complaints register. vi. response procedures. vii. compliance monitoring	 **Table 7** **Sections 8.2**, **8.3** and **9** **Sections 8.2**, **8.3** and **9** **Section 12** **Section 13** **Section 13** **Sections 8** and **9**
B41	The Applicant must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).	**Section 7.2**

Condition No.	Condition	Where Addressed
C1	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	
	(a) detailed baseline data.	**Section 5**
	(b) details of:	
	(i) the relevant statutory requirements (including any relevant approval, licence or lease conditions).	**Section 4**
	(ii) any relevant limits or performance measures and criteria.	**Table 7,** weather conditions are detailed in **Section 7**
	(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures.	**Table 7, Section 9.1**
	(c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria.	**Table 5** and **Table 6**
	(d) a program to monitor and report on the:	
	(i) impacts and environmental performance of the development.	**Sections 8** and **9**
	(ii) effectiveness of the management measures set out pursuant to paragraph (c) above.	**Section 12**
	(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible.	**Section 14**
	(f) a program to investigate and implement ways to improve the environmental performance of the development over time.	**Section 15** & **Appendix 3**
	(g) a protocol for managing and reporting any:	
	(i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria).	**Section 14**
	(ii) complaint.	**Section 14**
	(iii) failure to comply with statutory requirements.	**Section 14**
	(h) a protocol for periodic review of the plan.	**Section 15**

Condition No.	Condition	Where Addressed
C8	Within three months of: (a) the submission of an incident report under condition C10. (b) the submission of an Independent Environmental Audit under condition C16. (c) the approval of any modification of the conditions of this consent. (d) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review. the strategies, plans and programs required under this consent must be reviewed, and the Planning Secretary must be notified in writing that a review is being carried out.	**Section 15**
C9	If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review	**Section 15**
C10	The Planning Secretary must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given and reports submitted in accordance with the requirements set out in Appendix 3	**Section 12.1**
C11	The Planning Secretary must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance.	**Section 12.2**
C12	A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.	**Section 12.2**
C13	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance	**Section 12.2**

Condition No.	Condition	Where Addressed
C14	Within three months after the first year of commencement of operation, and in the same month each subsequent year (or such other timing as may be agreed by the Planning Secretary), the Applicant must submit a report to the Planning Secretary reviewing the environmental performance of the development to the satisfaction of the Planning Secretary. The review must: (a) describe the development that was carried out in the previous year, and the development that is proposed to be carried out in the current year; (b) include a comprehensive review of the monitoring results and complaints records from the previous year, including a comparison of these against the: (i) relevant statutory requirements, limits or performance measures/criteria (ii) requirements of any plan or program required under this consent; (iii) monitoring results of previous years; and (iv) the relevant predictions in the EIS and Response to Submissions; (c) identify any non-compliances and any incidents which occurred over in the previous year, and describe what actions were (or are being) taken to rectify the non-compliance or incident and avoid recurrence; (d) identify any trends in the monitoring data over the life of the development; (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and (f) describe what measures will be implemented over the next year to improve the environmental performance of the development.	**Section 15**

5 DESCRIPTION OF OPERATIONS

Concrush Pty Ltd recycle construction and demolition waste materials such as concrete, aggregate and sand mixtures, bricks, tiles, gravel, asphalt and road base. Green waste is also processed.

The construction/demolition waste is processed in accordance with the *Concrush Recovered Aggregate Order (2020) and Concrush Recovered Aggregate Exemption (2020)* which allow for the crushing and testing of materials for application to land for use as road base material, drainage aggregates and bedding dust. Screening and grading of the recycled materials is also undertaken to produce products which meet various industry specifications and/or the requirements of the customer. Pavement materials such as recycled concrete base, recycled blended base and recycled concrete crusher dust are produced, in addition to concrete drainage aggregates and cobble. These products are used for civil and building construction works in commercial, domestic and household applications.

Pasteurised garden organics are processed in accordance with *The Pasteurised Garden Organics Order (2016).* Under this Order, garden organics such trees, stumps, logs, branches, bush trimmings and grass clippings are shredded and pasteurised to reduce the number of plant and animal pathogens. The pasteurised garden organic materials are then screened to produce Coarse (forest) mulch and Fine (premium) mulch for supply to domestic households and commercial industry.

The site has the capacity of up to 250,000t of waste processing per year with a maximum storage of 150,000t per year.

5.1 BASELINE DUST EMISSIONS

Dust monitoring has been undertaken at the site for a number of years: WSP have been undertaking dust monitoring at the site since August 2018 and prepared the *Yearly Depositional Dust Summary Report 2019* which detailed the annual monitoring results for the 2019 calendar year. The WSP monitored locations are presented in **Figure 1** below as extracted from the report.

Figure 1 *Dust Monitoring Locations, 2019 Calendar Year.*

Results indicate that the average dust for DD1, DD2 and DD4 were in excess of the relevant NSW EPA criterion of an annual average of 4g/m^2/month. A summary of the results is presented in **Table 2** based on the details provided in the 2019 summary report.

Table 2 *Summary of Depositional Dust Gauge Monitoring Results 2019 Calendar Year*

Location	Component	Maximum (Month)	Minimum	12 Month Average
DD1	Insoluble Solids	8.7 (August)	1.6 (December)	**5.54**
	Ash	6.2 (August)	1 (December)	3.63
	Combustible Solids	5.3 (January)	0.6 (December)	1.79
DD2	Insoluble Solids	12 (November)	1.6 (July)	**4.65**
	Ash	7.3 (November)	0.7 (September)	2.85
	Combustible Solids	4.4 (November)	0.6 (July)	1.75
DD3	Insoluble Solids	6.6 (November)	1 (June)	3.83
	Ash	4.6 (November)	0.6 (June)	2.49
	Combustible Solids	2.4 (April)	0.4 (June)	1.35
DD4	Insoluble Solids	27* (December)	2.6 (May)	**12.15**
	Ash	24* (December)	1.9 (July)	9.19
	Combustible Solids	3.6* (December)	0.2 (January)	1.86

All units in g/m^2/month

* Higher results (40, 33, 6.4) recorded in September 2019 however considered invalid by WSP and not included in the 12 Month Average calculations.

5.2 BASELINE ODOUR EMISSIONS

There is no analytical data available for odour at the site however monthly inspections undertaken by Concrush have indicated nil to minor odours at the site boundary. There were no odour complaints in the 2019 calendar year.

6 POTENTIAL AIR EMISSION SOURCES AND MODELLED POTENTIAL IMPACT

The Concrush Teralba site has the potential to generate dust and odour emissions during the processing of recycled construction and demolition waste, and garden organic materials.

The following sections outline the sources and other details, for each potential air emission from the site.

6.1 DUST EMISSIONS

Activities and sources of potential dust emissions are described in and have been ranked in order (highest to lowest) potential contribution in **Table 3** below. The control measures for each dust emission source are shown in **Section 7.1**.

Table 3 *Sources of Air Emissions – Dust*

Location/ Operation/ Activity	Description	Dust Emission Type
Roads and Hardstand areas	Incoming/moving plant and car traffic on the site has the potential to generate dust emissions. Winds also have the potential to generate dust.	Fugitive source.
Material unloading	Trucks unloading raw materials.	Point sources.
Crushing Plant – NGW, including action of taking stockpiled material to crushing plant by front end loader, and using conveyors	Construction and demolition waste is transferred from the construction and demolition materials stockpile to the crusher using an excavator and conveyors. The materials are then crushed and screened.	Point and fugitive sources.
Material Stockpiles – Non Green Waste (NGW)	Material that has been crushed and screened is transferred to stockpile according to product type. The stockpiles may be mixed.	Fugitive source.
Material Dispatch/loading	Product is loaded for the customer at the point of sale. A loader is used to load the crushed material (concrete/organics) into a trailer or truck.	Point sources.
Shredding and screening operation – green waste	The materials are shredded and screened.	Point source.
Pug mill (possible future inclusion to allow fast mixing of materials to produce products such as road base)	The materials will be mixed.	Point source.
Open and unsealed areas	Winds have the potential to generate dust from areas other than access roads.	Fugitive source.

Modelling of potential air emissions was undertaken in an air quality impact assessment (AQIA) undertaken as part of the application for the Project based on the above sources and submitted with the environmental impact statement for the Project (Appendix I).

The results of the air modelling show that all impact assessment criteria for dust can be met at key locations (e.g. residences) providing that Concrush implement the air emission controls (refer **Section 7.1**) for the above identified dust emission sources. The results of the modelling for PM_{10} and $PM_{2.5}$ dust emissions are shown in **Figure 2** and **Figure 3** below.

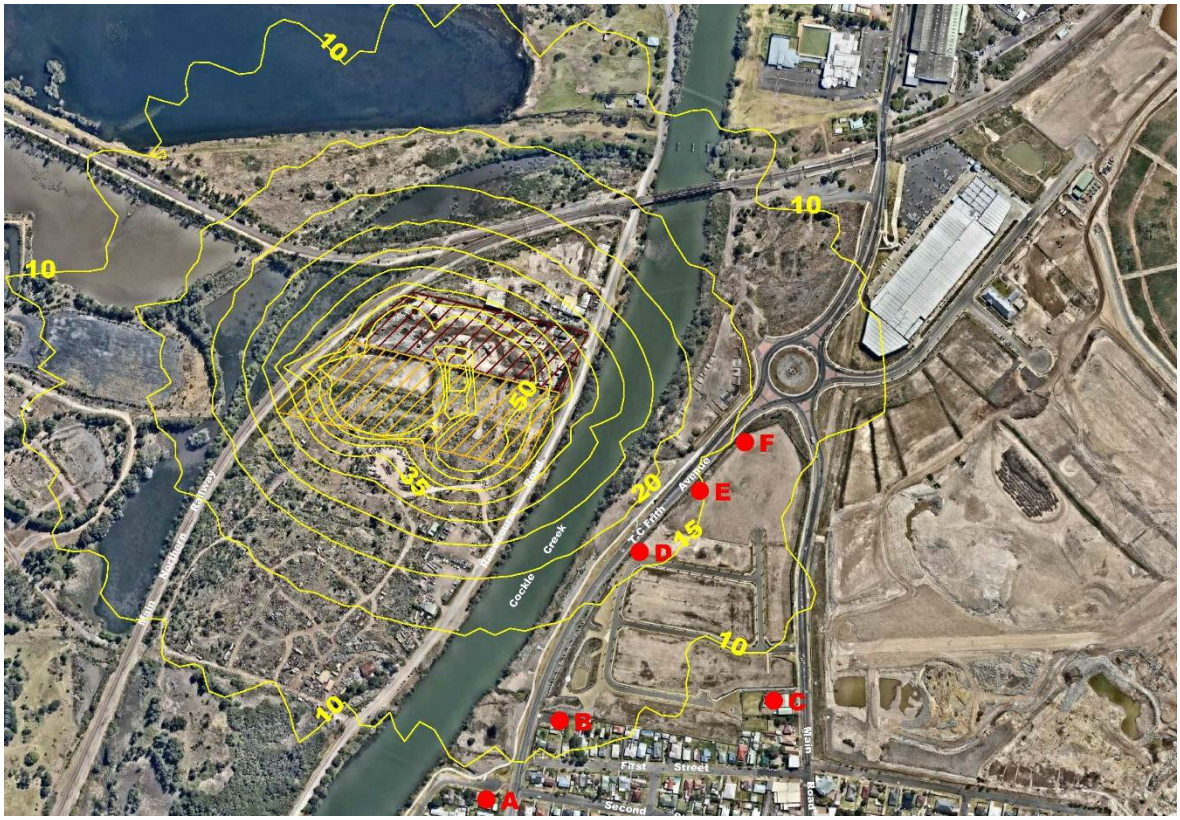


Figure 2 *Dust modelling results - PM_{10} dust component (criterion 50μg/m^3, ● indicates receptor position).*

Figure 3 *Dust modelling results - $PM_{2.5}$ dust component (criterion 25μg/m^3, ● indicates receptor position.*

6.2 ODOUR EMISSIONS

Activities and sources of potential odour emissions are described and ranked in order (highest to lowest) potential contribution in **Table 4** below with the results of the modelling shown in **Figure 4**. The control measures for each dust emission source are shown in **Section 7.2**.

Table 4 *Sources of Air Emissions – Odour*

Location/ Operation/ Activity	Description	Odour emission type
Material Stockpiles - Garden Organics	This includes the raw garden organics windrow and mulched windrows that are undergoing pasteurisation.	Fugitive source.
Shredding and screening operation – green waste	The materials are shredded and screened.	Point source.
Material Stockpiles – green waste	Stockpiled green waste material that has been shredded and screened (see below).	Fugitive source.
Action of stockpiling of green waste by front end loader	Material that has been shredded and screened is stockpiled according to product type.	Point source.
Removal of wastes from site	Materials are placed in containers/trucks and removed from the site.	Fugitive source.
Material Dispatch/loading - Garden Organics	Product is loaded for the customer at the point of sale. A loader is used to load the crushed material (concrete/organics) into a trailer or truck.	Fugitive source

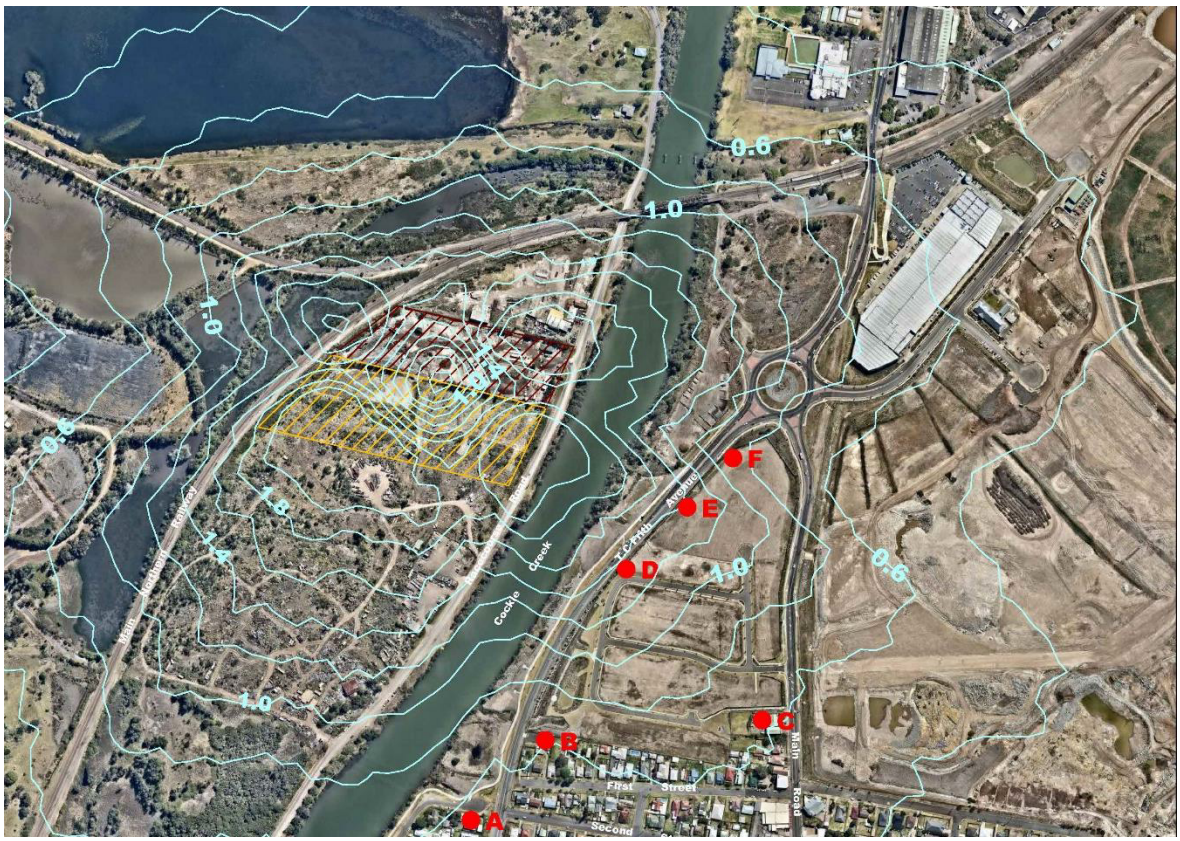


Figure 4 *Odour modelling results (criterion 2 odour units, ● indicates receptor position*

7 AIR QUALITY MANAGEMENT AND CONTROL MEASURES

7.1 DUST EMISSIONS

The following air quality management controls will be implemented at Concrush Teralba site to ensure dust emissions are minimised. A general description of the controls for dust is as follows:

- Monitor weather conditions (via weather station and personal observation) to aid in the management of site operations to avoid dust generation.
- The use of atomising water sprays on crushing equipment. These shall be attached to the crushing point and conveyor belt discharge point to control point source dust emissions whenever the equipment is in operation;
- Two coat seal on haul roads and car parking areas. The seal will be maintained to ensure it remains a barrier to the generation of dust from the surface of the site;
- All heavy vehicles to exit via a wheel wash from the northern access driveway such that dirt is not trafficked onto Racecourse Road. In the event that the wheel wash becomes inoperable, or is identified to not be working, Concrush personnel will utilise a hand held, high pressure hose to clean off heavy vehicles prior to egress to Racecourse Road until such time that the issue is rectified;
- Minimisation of the drop heights between the excavator or loader bucket and trailers/truck during loading to reduce dust generation;
- Dust suppression of stockpiles by water spraying on an as needed basis and when the following meteorological conditions occur:
    - An average wind speed greater than 18km/h is recorded continuously over a 15 minute period from a north or north westerly direction.
- Maintenance of clean access drives as required to minimise dry dust on road;
- The use of an on-site water cart to water roads and hardstand areas to assist in the control of fugitive dust emissions on an as needed basis, or when the following meteorological conditions occur:
    - An average wind speed greater than 18km/h is recorded continuously over a 15 minute period from a north or north westerly direction.
- Cessation of dust emitting activities shall occur during the following conditions:
    - An average wind speed greater than 36km/h is recorded continuously over a 15 minute period from a north or north westerly direction; or
    - Dust suppression measures appear visually ineffective.

The control measures to be applied to each dust source are shown in **Table 5**.

Table 5 *Control Measures Air Emissions – Dust*

Location/ Operation/ Activity	Dust Control Measures
Roads and Hardstand areas	Application of a two coat seal to haul roads and car parking areas. Control vehicle speeds along access roads: limit of 10km/h Wheel wash for all outgoing heavy vehicles. Operation to be visually monitored by Concrush site personnel and contingencies enacted in case of ineffective performance. Water cart to be available at site for use as required. Application of water to unsealed roads and hardstand areas to assist in the control of fugitive dust emissions on an as needed basis, or when the average wind speed greater than 18km/h is recorded continuously over a 15 minute period from a north or north westerly direction. Maintenance of clean entry drive as required to minimise dry dust on road. Condition of Racecourse Road to be visually monitored by Concrush site personnel and contingencies enacted in case of dirt trafficked from site onto Road.
Material unloading (raw materials)	Minimisation of the drop height from trucks. Control of the tipping speed.
Material Stockpiles – NGW	Dust suppression of stockpiles by water spraying on an as needed basis or when average wind speed greater than 18km/h is recorded continuously over a 15 minute period from a north or north westerly direction. Water spraying equipment and system to be routinely maintained to ensure operational capacity. Any issues to be rectified (repair/replacement) as soon as practicable and contingencies for alternatives enacted until rectification achieved.
Crushing Plant – NGW, including action of taking stockpiled material to crushing plant by front end loader, and using conveyors	Minimisation of the drop heights between the excavator or loader bucket and trailers/truck during loading and unloading to reduce dust generation. The use of atomising water sprays on all conveying, crushing and screening equipment. These shall be attached to the crushing point, screening point and conveyor belt discharge point to control point source dust emissions.
Shredding and screening operation – green waste	Minimisation of the drop heights between the excavator or loader bucket and unit to reduce dust generation.
Pug mill (possible future inclusion to allow fast mixing of materials to produce products such as road base)	The use of atomising water sprays on the pug mill to control dust emissions. Water spraying equipment and system to be routinely maintained to ensure operational capacity. Any issues to be rectified (repair/replacement) as soon as practicable and contingencies for alternatives enacted until rectification achieved.
Open and unsealed areas	Water cart to be available at site for use as required. Water cart to these areas to assist in the control of fugitive dust emissions on an as needed basis, or when average wind speed greater than 18km/h is recorded continuously over a 15 minute period from a north or north westerly direction.
Material Dispatch/loading	Minimisation of the drop heights between the excavator or loader bucket and trailers/truck during loading and unloading to reduce dust generation. Loads leaving site are to be covered with a tarp.

7.2 ODOUR EMISSIONS

The following odour control methods identify the temporary measures which can be employed at the site to reduce odour generated from the transport and stockpiling of materials at the Concrush site. A general description of the controls for odour is as follows:

- Monitor weather conditions (via weather station and personal observations) – to aid in the dispersion and dilution of odour emissions away from residential areas:
  - Avoid conducting potential odour generating activities when the wind direction is blowing towards nearby residential areas. This usually occurs during south westerly or westerly winds;
  - Avoid conducting potential odour generating activities during early morning periods (earlier than 10am) and under low wind speed conditions.
- Use of covers or tarps – to aid in the fugitive emission of odours during transport of potential odour generating products:
  - Cover transported loads leaving site with a tarp.
- Turn windrows during the pasteurisation stage on a frequency as defined by the *Pasteurised Garden Organic Materials Management Plan* – to prevent the build-up of odours.
- Removal of wastes from site – to prevent odour generation from stored waste products:
  - Ensure timely removal of putrescible waste products from site.

The control measures to be applied to each odour source are shown in **Table 6**.

Table 6 *Control measures – Odour Air Emissions*

Location/ Operation/ Activity	Odour Control Measures
Material Stockpiles – Garden Organics	Manage in accordance with *Pasteurised Garden Organic Materials Management Plan for Concrush Pty Ltd Teralba Facility.* Turn the windrows periodically in accordance with that plan.
Shredding and screening operation – green waste	Not to be undertaken if winds are from the south west or from the west. Not to be undertaken in early morning (before 10am) when low wind is present.
Material Stockpiles – green waste	
Action of stockpiling of green waste by front end loader	Not to be undertaken if winds are from the south west or from the west. Not to be undertaken in early morning (before 10am) when low wind is present. Loads leaving site are to be covered with a tarp.
Removal of wastes from site	Ensure timely removal of putrescible waste products from site. Ensure all containers/loads are covered to minimise odour emissions.
Material Dispatch/loading – Garden Organics	Minimisation of the drop heights between the excavator or loader bucket and trailers/truck during loading and unloading to reduce odour generation.

8 DUST EMISSIONS MONITORING PROGRAMME

8.1 INTRODUCTION AND OBJECTIVES

The objectives of the dust monitoring programme at the Concrush Teralba site are to:

- To quantify the amount of dusts potentially leaving the site.
- Check compliance with the KPI for dust emissions as defined by the air quality assessment criteria as shown in **Table 7** below.
- To assess the effectiveness of the dust control measures (**Section 7.1**) – this will be also done by checking compliance with the air quality criteria. If necessary, control measures and work procedures may need to be changed so that the criteria are met.

There are currently no requirements for air quality monitoring stipulated in the site DA, EPL and the SSD Approval does not specify the form or extent of monitoring that is required. The air quality monitoring developed for this OAQMP is based on the above factors, due diligence, and NSW EPA protocol.

Air quality assessment criteria for the dust emissions from the Concrush site are summarised in **Table 7**. These criteria are sourced from the NSW EPA *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, 2016, Section 7,* in the absence of criteria in the DA, EPL and SSD Approval.

Table 7 *Air Quality Monitoring Assessment Criteria – Dust emissions*

Dust Emission	Averaging Period	Assessment Criteria
Depositional Dust – Insoluble Solids	Annual	4g/m^2/month
Total Suspended Particulates (TSP)	Annual	90 µg/m^3
The sub – 10 micron fraction of particulate matter (PM_{10})	24 hour	50 µg/m^3
	Annual	25 µg/m^3
The sub – 2.5 micron fraction of particulate matter ($PM_{2.5}$)	24 hour	25 µg/m^3
	Annual	8 µg/m^3

Dust monitoring will be undertaken with dust depositional bottles and with real time dust monitors.

8.2 DEPOSITIONAL DUST MONITORING

8.2.1 METHODOLOGY

Eight (8) dust depositional gauges have been installed at four (4) boundary locations (i.e. two (2) gauges per location) around the Concrush Teralba site (refer **Figure 5**) to meet the objectives for dust emissions for the site. At each of the nominated boundary locations, two (2) gauges will be installed in accordance with the AS/NZS 3580.1.1:2016: *Guide to siting air monitoring equipment* ensuring that these are positioned to ensure no interference from the other gauge.

As part of the assessment of dust emissions at the site, one of the bottles at each of these locations will be modified to enable dust collection only when Concrush is operational. These are denoted as "B" in **Figure 5** below and have been identified in the field with a blue paint mark on the stand. The modified sampling will require the placement of a cover over the top of the funnel at the end of each day and the removal of that cover at the beginning of each day. This will be the responsibility of the Yard Manager and a record of the actions must be maintained (refer **Appendix 1**).

Figure 5 *Placement of Dust Deposition Gauges.*

8.2.2 MONITORING & ANALYSIS SCHEDULE

Sampling of each of the gauges will be undertaken by a suitably qualified environmental professional. The depositional dust gauge sampling and analysis will be undertaken in accordance with AZ/NZS 3580.10.1:2016: *Determination of particulate matter – deposited matter* and will comprise collection of the dust bottle after a period of 30 ± 2 days and replacement with a new bottle.

Samples shall be submitted under chain of custody documentation to a NATA accredited laboratory for analysis of insoluble solids, ash and combustible matter, in accordance with *AZ/NZS 3580.10.1 (2016)*.

8.3 REAL TIME DUST MONITORING

8.3.1 METHODOLOGY

Concrush will undertake real time monitoring utilising a *DustMaster* monitor to measure dust components by laser in a targeted manner to achieve the objectives for dust air emissions monitoring.

Initially, one (1) *DustMaster* monitoring unit will be installed at the weighbridge to assess the suitability of this unit for the Concrush Teralba site and comparison with the assessment criteria. Concrush propose to install additional units in the future and these will most likely be positioned at the same locations as the dust depositional gauges for the purposes of consistency, and to provide a better understanding about the behaviour of dust at the site.

The real time monitoring unit will continuously monitor TSP, PM_{10}, $PM_{2.5}$ and will allow remote download of results during monitoring. In addition, other dust components (PM_4 and PM_1) will be measured by the real time monitoring unit to provide Concrush with a better understanding about the behaviour of dust at the site. The unit will have the capability to alert Concrush (by an alarm signal) if particulate concentrations exceed a nominated threshold. The unit will also be connected to a Lufft *WS502* weather station sensor to provide real time temperature, wind speed and direction, and humidity.

The monitoring unit will incorporate the following features:

- The averaging periods shown in **Table 7** (24 hour or annual averaging).
- The assessment criteria as shown in **Table 7** such that the monitor can trigger the 'alarm' (by the Concrush modem system) if criteria are exceeded (*note: the monitor and system will be set up so that instantaneous dust readings will not trigger this alarm system unnecessarily, as the criteria are based on averages over longer periods, e.g. 24 hours*).

8.3.2 MONITORING & ANALYSIS SCHEDULE

No laboratory analysis of the real time monitors is currently proposed; however, it may be undertaken in response to incidents or to assist in the understanding of dust conditions at the site at the discretion of the Business Manager.

If undertaken, monitoring would comprise the collection of the filter paper from the real time monitor and replacement with a calibrated paper in accordance with the *DustMaster* manufacturer's instructions. A maintenance inspection will be undertaken at the same time.

The samples shall be submitted under chain of custody documentation to a NATA accredited laboratory for analysis of TSP and an analysis of the particle size distribution.

9 ODOUR EMISSIONS MONITORING PROGRAMME

9.1 INTRODUCTION AND OBJECTIVES

The objectives of the odour monitoring programme at the Concrush Teralba site are to:

- Check compliance with the KPI for odour emissions which is ensure that the development does not caused or permit the emission of any offensive odour in accordance with the requirements of the *Protection of the Environment Act, 1997* (POEO Act) and SSD Approval Condition B41.
- To assess the effectiveness of the odour control measures (**Section 7.2**) – this will be also done by checking compliance with the odour management criteria. If necessary, control measures and work procedures may need to be changed so that the criteria are met.

Odour monitoring will be undertaken on an as-required basis for the purpose of:

- Investigating odour emissions following the detection of an odour on-site by Concrush personnel, or
- As a result of an odour complaint.

9.2 METHODOLOGY

When an employee detects an odour at the Concrush site that has sufficient strength that it could be detected off-site, it will be reported to Yard Manager who will investigate to determine the source and report it to the Business Manager. Boundary odour observations will then be undertaken by the Yard Manager and Business Manager, or an appropriately trained Concrush employee.

The boundary odour observation will consist of the employee walking along the Concrush site boundary, in a downwind position from the suspected odour source, to determine the odour strength. The odour strength at four, evenly spaced downwind boundary locations shall be determined using the following scale:

- ***Strong Odour*** – A strong odour is detected. At this level, odour complaints are likely outside of the Concrush site boundary, even under favourable weather conditions. Refer to **Section 9.3** for actions.
- ***Mild Odour*** – Odour is present but not strong. At this level, odour complaints are possible outside of the Concrush site boundary however the detection of odour at a residence will depend on factors such as wind direction and speed. Actions as detailed in **Section 9.3** may be undertaken at the discretion of the Business Manager.
- ***Weak Odour*** – An odour is 'just' able to be detected. At this level, odour complaints are not likely outside of the Concrush site boundary, but the observations should be still highlighted in case odour strength increases. Mitigation actions may be implemented at the discretion of the Business Manager.
- ***No Odour*** – No odour is able to be detected at the location.

Site conditions such as the processes occurring at the time of odour monitoring; the weather conditions (including temperature, wind speed and direction) as well as odour strength; the observation time, and the name of the person undertaking the observations shall be recorded on the Boundary Odour Observation field sheet (**Appendix 2**). The records and outcomes will also be documented in the Concrush Air Quality Monitoring Database.

9.3 INVESTIGATIVE ODOUR MONITORING

In the event that, following initial investigation and implementation of the odour control measures as shown in **Table 6**, the odour is still considered to pose a risk of complaint a suitably qualified environmental professional shall be contracted to undertake further investigative monitoring and recommend additional odour controls.

Specific odour monitoring will be undertaken by a suitably qualified environmental professional for the purpose of investigating odour emission sources following an odour complaint when odour monitoring by site personnel at the boundary locations have determined a "strong" odour is present, and the odour is unable to be eliminated or reduced by the way of actions in **Table 6**.

10 METEOROLOGICAL MONITORING

In addition to the visual monitoring of weather as detailed in Section 7, the meteorological conditions at the Concrush Teralba site will be measured using an on-site automatic weather station maintained and managed by the Business Manager.

The Concrush Teralba weather station (Lufft *WS502*) will record wind speed, wind direction, rainfall, air temperature and pressure, and relative humidity at 15-minute intervals based on the requirements of AS 2923 – 1987: *Ambient air – Guide for measurement of horizontal wind for air quality applications*. Data recorded by the weather station shall be saved remotely ("cloud" storage system) using the *Met Master Pro 1000* system.

Additionally, the weather station will be set up to alert the Business Manager (by an alarm signal and by way of text message) if the weather conditions become unfavourable for air emissions from the site such that the nominated air control measures can be put in place and immediately. The triggers that the weather station will issue alarms for will be:

- An average wind speed greater than 36km/h is recorded continuously over a 15 minute period.

The Business Manager will then determine whether the weather conditions represent a risk of dust or odour generation based on the activities being undertaken on site and will enact appropriate contingency items. The alarm occurrence and actions undertaken will be documented in the Air Quality Monitoring Database.

The weather data will be incorporated into the dust monitoring reports as detailed in **Section 12.3**.

11 IMPLEMENTATION AND TRAINING

Concrush employees and relevant subcontractors are trained in environmental awareness via site specific inductions that incorporate air emission awareness, training, risk assessments and communication at meetings/tool box talks.

All employees and contractors will be made aware of the relevant site procedures and controls as part of day to day operations at the Concrush Teralba site including the following:

- The potential for dust emission generation from all sources: when the crushing plant is operating, from the stockpiles, roads, hard stand areas and use of the loader or excavator for loading/unloading materials;
- The importance in using dust controls at the sources: for example, ensuring the water sprays on the crushing plant are working efficiently at both the crushing point and the conveyor belt discharge point;
- The potential for odour emission generation from all sources: raw garden organics windrow and mulched windrows; green waste stockpiles, use of the loader or excavator for loading/unloading materials, transport of products and waste materials off site;
- The importance in using odour controls at the sources: for example, cover transported loads leaving site with a tarp; turning of raw garden organics windrow and mulched windrows;
- Training in the identification of increased or abnormal dust/odour generation at the site;
- Training in the identification of unexpected events that may also create abnormal dust/odour generation at the site – for example adverse weather events;
- Training in the triggers which require changes in work methodology and cessation of works.
- Training in the types of mitigation measures that may be required, notification within Concrush regarding issues and who is responsible for the implementation of mitigation measures.

- Action and notification procedures in the event of a dust/odour complaint.

Records of all training will be maintained by Concrush in the Training Records System.

12 REPORTING & DOCUMENTATION

12.1 ENVIRONMENTAL INCIDENT REPORTING

Environmental incidents will be dealt with in accordance with the site Pollution Incident Response Management Plan (PRIMP) which details the way pollution incidents are reported, managed and communicated to the general community and regulatory authorities.

In accordance with the Protection of the Environment Operations Act 1997 all pollution incidents will be reported to the NSW EPA, NSW Health, Fire and Rescue NSW, SafeWork NSW and Lake Macquarie City Council should material harm to the environment be caused or threatened. Notification of an incident must be made immediately after the person(s) become aware of the incident.

Concrush must provide written details notifying the NSW EPA of any environmental harm within seven (7) days of the date on which the incident occurred.

Concrush must notify the Planning Secretary by email (compliance@planning.nsw.gov.au) immediately after becoming aware of the incident in accordance with Approval Condition C10. The SSD reference, location and nature of the incident must be identified. Further reporting is required within seven (7) days of Concrush being aware of the incident and is to include:

- The development and application number;
- Details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
- How the incident was detected;
- When the applicant became aware of the incident;
- Any actual or potential non-compliance with conditions of consent;
- What immediate steps were taken in relation to the incident;
- Further action(s) that will be taken in relation to the incident; and
- The project contact for further communication regarding the incident.

It is noted that the above reporting requirement applies even in the event an event which is initially notified to the Planning Secretary is determined, after further consideration/investigation to not be an incident.

A further report is to be provided to the Planning Secretary, and any relevant public authorities as determined by the Planning Secretary, within thirty (30) days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, and must include, although not necessarily be limited to:

- A summary of the incident;
- Outcomes of an incident investigation, including identification of the cause of the incident;
- Details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
- Details of any communication with other stakeholders regarding the incident.

12.2 ENVIRONMENTAL NON-CONFORMANCE

In the event that Concrush becomes aware of a non-conformance with relation to air quality, which has not resulted in an incident that is notified in accordance with **Section 12.1**, Concrush must notify the Planning Secretary by email (compliance@planning.nsw.gov.au) within seven (7) days of becoming aware of the incident in accordance with Approval Condition C11. The SSD reference, Approval Condition which was not conformed with, the reason for the non-conformance and corrective actions that have been/are intended to be undertaken must be identified in accordance with Approval Condition C12.

It is noted that any incident reported under Approval Condition C11 does not need to also be reported as a non-compliance under Approval Condition C12 (as identified by Approval Condition C13).

12.3 DUST REPORTING

Immediately upon receival of analytical laboratory results the environmental professional undertaking the monitoring will check the dust concentrations against the assessment criteria shown in **Table 7**. In the event of an exceedance of the air quality monitoring criteria the Business Manager will immediately be notified and provided a copy of the results. Concrush will act upon any dust emission exceedances by:

- Investigating the source and cause of the dust emissions.
- Checking dust emission controls for the source(s) involved – and applying the dust control as shown in **Table 5**; or a change to work procedures.

Any changes to the control measures work procedures that were required must be notified to the Business Manager and also included in the periodic report for dust emissions, refer below.

An air quality monitoring report will be prepared by the air quality monitoring subcontractor on a quarterly basis. The report will comprise:

- Results of insoluble matter, ash, combustible matter, TSP, PM_{10} and $PM_{2.5}$;
- Comparison of results with the assessment criteria shown in **Table 7** of this report;
- Comparison of depositional dust readings between the two (2) gauge results at each location to provide an indication of the impact of regional dust conditions;
- Meteorological readings and consideration of the relationship with the monitored dust conditions;
- A comparison of the most recent dust monitoring data with both (a) the data obtained in previous monitoring rounds; and (b) the baseline data (refer **Section 5**);
- A summary of any exceedance and response measures as well as updates and improvements to procedures and control measures will be documented in the quarterly report;
- A summary of any dust complaints, and the management measures taken by Concrush;
- Discussion of the effectiveness of implemented dust control measures.

The monitoring report will be reviewed by the Business Manager and the results of the dust depositional gauges published on the Concrush website. A record of the quarterly report and the file location shall be documented in the Air Quality Monitoring Database.

12.4 ODOUR REPORTING

Boundary odour observations shall be documented on the Boundary Odour Observation field sheet (**Appendix 2**) and shall detail information including the processes occurring at the time of odour monitoring; the weather conditions (including temperature, wind speed and direction); odour strength; the observation time, and the name of the person undertaking the observations..

Any odour investigation reports undertaken by specialist odour professionals shall:

- Include a comparison of the odour information (observations and measurements) with information obtained in previous investigation events;
- Include consideration of weather events at the time of the odour occurrence;
- Discuss the management measures implemented and the effect with relation to odour;
- Discuss potential measures to be implemented to prevent re-occurrence.

The report will be reviewed by the Business Manager and any recommended changes to procedures considered necessary will be implemented.

Boundary Odour Observation field sheets and external reports shall be filed in the administration office, and documented in the Air Quality Monitoring Database.

13 COMPLAINTS

All complaints received from the community are recorded in the site Complaints Register. The Complaints Register documents the details of the complaint including the method received (phone, letter, email), the date, time, name and address of the complainant, in addition to the specific nature of the concern. The register also allows for the documentation of the actions was taken to address the concern, the feedback provided, and any response received.

All air quality complaints will be investigated and an initial response provided to the complainant within 48 hours.

All concerns/complaints from the public are fully documented and auditable and are required to be kept for a period of at least 4 years.

The number and nature of complaints are also reported to the EPA in the Annual Return document.

13.1 DUST COMPLAINT INVESTIGATION

All dust complaints received will be investigated immediately, or, as soon as is reasonably practical following receipt of the complaint. This is to include consideration of the activities being undertaken at site at the time of complaint, visual inspection of those to assess each as the potential cause and implementation of actions to stop or mitigate the dust generation. Works are to cease if the dust generation cannot be controlled from the source even with the controls in place.

Real-time monitoring of fine particulate matter (PM_{10}) may be conducted on an as-required basis for the purpose of investigating dust emission sources following continued dust exceedances; or upon receipt of an air quality complaint. When required, a suitably qualified environmental professional may have to be contracted to undertake this investigative monitoring.

Where the complaint relates to dust, a summary of the complaints, scope of investigation, identified source of the complaint and weather conditions will be included in the quarterly report as detailed in **Section 12.3**.

13.2 ODOUR COMPLAINT INVESTIGATION

All odour complaints received will be investigated immediately, or, as soon as is reasonably practical following receipt of the complaint. This is to include consideration of the activities being undertaken at site at the time of complaint, inspection of those to assess each as the potential cause and implementation of actions to stop or mitigate the odour generation. A boundary odour observation will be undertaken by the Business Manager, or by an appropriately trained Concrush employee, using the methodology described in **Section 9.3** and using the Boundary Odour Observation field sheet. Works are to cease if the odour generation cannot be controlled from the source even with the controls in place.

Where the complaint relates to odour, a summary of the complaints, scope of investigation, identified source of the complaint and weather conditions is to be completed by the Yard Manager and reviewed by the Business Manager.

14 CONTINGENCY PLAN

The contingency plan for this OAQMP will be used to manage any unpredicted impacts or events from air emissions (dust or odour) or weather conditions that may make the air emissions unacceptable off site. The plan is also a summary of the actions previously outlined in this OAQMP, and can be used to source the correct air emission control measure or procedure and as quickly as possible. The “trigger” circumstances and actions for the contingency plan are shown in **Table 8** below.

Table 8 *Contingency Plan Actions for Unexpected Events – Air emissions*

Unexpected event and possible impact	Trigger circumstances for contingency to occur	Contingency action for Concrush	Section within this OAQMP
Adverse weather could cause unacceptable dust levels	An average wind speed greater than 36km/h is recorded continuously over a 15 minute period from a north or north westerly direction.	Cessation of dust emitting activities; investigate controls and modify before operation recommences. Continue to monitor weather conditions.	7.1
Unfavourable wind directions could cause unacceptable odour levels	When the wind direction is blowing towards nearby residential areas – this usually occurs during south westerly or westerly winds.	Avoid conducting potential odour generating activities when the wind direction is blowing towards nearby residential areas. This usually occurs during south westerly or westerly winds	7.2
High dust level observed on site.	Visual observation	Cessation of dust emitting activities; implement controls and modify before operation recommences.	7.1
High dust level as recorded by monitoring	Assessment criteria exceeded	Investigate the source and cause of the dust emissions; Check dust emission controls for the source(s) involved – and implement dust control measures, change to work procedures or cease work; Document actions and improvements in reports, and for follow up.	Table 7
Unacceptable dust levels	Complaint received		13
Dust suppression and control methods not effective, based on visual impact	Visual observation	Cessation of ***any*** dust emitting activities; investigate controls and modify before operation recommences.	7.1
Wheel wash ceases working leading to dirt/dust being trafficked onto Racecourse Road.	No, or insufficient, water and/or pressure to effectively clean wheels. May be identified by presence of dirt on Racecourse Road at exit point.	Dirt to be removed from Racecourse Road to the extent practicable noting that traffic control may be required to undertake effectively. Concrush personnel to identify and rectify issue with system or engage appropriate contractor to undertake the works. Concrush personnel to be allocated to job of cleaning exiting vehicles until such time that wheel wash is operational.	7.1
Deterioration of 2 coat seal such that dust may be generated by site traffic.	Cracking indicative of the start of pothole formation or loss of seal over a trafficked area.	Seek advice from geotechnical consultant regarding the cause of the cracking. Divert traffic from the affected area to the extent possible. Monitor the deterioration.	7.1

Unexpected event and possible impact	Trigger circumstances for contingency to occur	Contingency action for Concrush	Section within this OAQMP
		Undertake temporary fix by additional coat seal until permanent correction methodology has been derived and can be implemented	
Unacceptable odour levels within site boundary	Concrush observation	Report odour results or observations immediately to Yard Manager; Investigate odour source(s), report to Business Manager; Carry out boundary odour observations; For strong odour observations, inform Yard Manager. Initiate odour controls and/or cease work; If strong odours cannot be controlled, engage an odour professional to investigate further.	9.2 Table 6 9.3
Unacceptable odour levels outside site boundary	Complaint received	Investigate the complaint immediately and record in complaints register; Carry out boundary odour observations; Initiate odour controls and/or cease work; If strong odours cannot be controlled, engage an odour professional to investigate further.	13 9.3

15 REVIEW OF THIS PLAN

Concrush have as part of their ongoing business programme, a protocol to review all management plans with the objectives of meeting environmental standards including those for air emissions. As such Concrush will review this OAQMP within two (2) weeks from the commencement of the operations at the site works and then every month for the first three (3) months of operations.

The review will consider:

- Observations at the site re work practices and environmental controls;
- Comments provided by Concrush, Council or others;
- Any complaints;
- Records of environmental non-conformance;
- Changes in organisational structure;
- Changes in construction methodology;
- Changes in legislation and standards;
- Opportunities for improvement / refinement of the management of air quality at the Concrush Teralba site.

The Air Quality Improvement programme is presented in **Appendix 3**.

A report shall be compiled after one year of operation, based on the above reviews and potentially including another review, in accordance with Approval Condition C14 and will include:

- Description of the development that was carried out in the previous year, and the development that is proposed to be carried out in the current year;
- A comprehensive review of the monitoring results and complaints records from the previous year, including a comparison of these against the:
    - Relevant statutory requirements, limits or performance measures/criteria
    - Requirements of any plan or program required under this consent;
    - Monitoring results of previous years; and
    - The relevant predictions in the EIS and Response to Submissions;
- Any non-compliances and any incidents which occurred over in the previous year, and describe what actions were (or are being) taken to rectify the non-compliance or incident and avoid recurrence;
- Any trends in the monitoring data over the life of the development;
- Any discrepancies between the predicted and actual impacts of the development, and analysis of the potential cause of any significant discrepancies;
- Description of measures to be implemented over the next year to improve the environmental performance of the development.

The report will be provided to the Planning Secretary and Council with three (3) months and will be made available on the Concrush website.

Additional review of this OAQMP will be undertaken in accordance with Approval Condition C8 within three (3) months of any of the following events:

- The submission of an incident report under Approval Condition C10 (refer **Section 12.1**);
- The submission of an Independent Environmental Audit undertaken in accordance with Approval Condition C16 one year after commencement of operations and every three (3) years after;
- The approval of any modification of the conditions of this consent;
- The issue of a direction of the Planning Secretary under Approval Condition A2(b) which requires a review.

In the event that the Plan is required to be amended based on the above review, the amended Plan will be submitted to the Planning Secretary within six (6) weeks of the review in accordance with Approval Condition C9.

Appendix 1

Dust Gauge Adjustment Record

concrush
Reducing our impact on the environment

Dust Gauge Adjustment Record

Date	Time	DG1	DG2	DG3	DG4	Personnel Initials
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					
	Uncovered					
	Covered					

Appendix 2

Boundary Odour Observation Field Sheet

21 Racecourse Rd, Teralba, NSW 2284
PO Box 312, Warners Bay, NSW 2282
Phone: 02 4958 3777
Fax: 02 4958 8179 (Admin)

Boundary Odour

Observation Sheet

Form No . COC-002

Observation Date: _____ **Time:** _____ **Observation Completed by:** _____

Wind Speed at Time of Observation: _____ **Wind Direction at Time of Observation:** _____

Reason for Inspection: ☐ Odour Detected by Concrush Staff ☐ Odour Complaint received ☐ Other _____

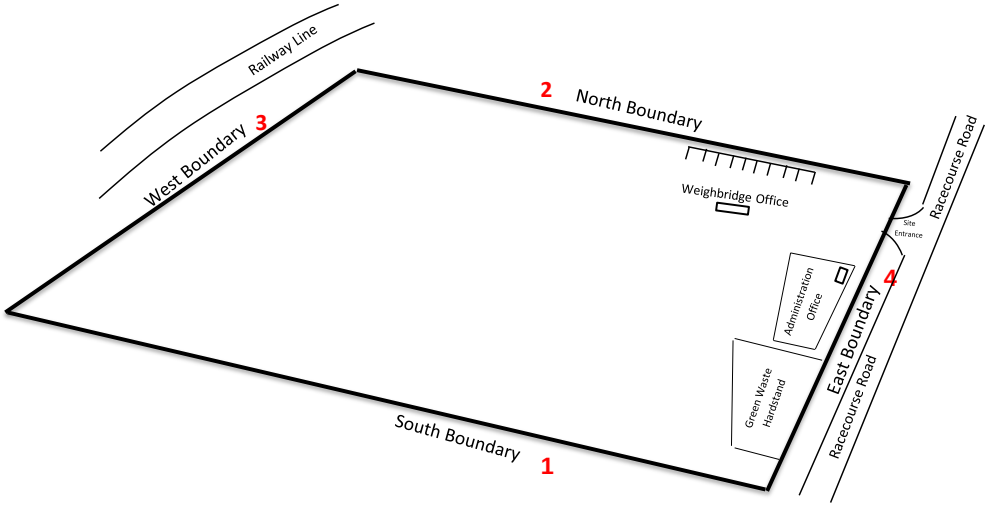
OBSERVATION DETAILS:

Use the **map** provided to indicate the boundary where the Odour Observations were made, and to mark the approximate location of the 4 Odour Observation Locations.

Use the **definitions** provided to determine the Odour Strength detected at each Observation Location.

Downwind Location at Site Boundary	Boundary	Location on Map	Odour Strength Detected	Actions Required?	Comments / Actions Required	Date Action Completed
Observation Location 1		1	☐ Stong ☐ Mild ☐ Weak ☐ None	☐ Yes ☐ No		
Observation Location 2		2	☐ Stong ☐ Mild ☐ Weak ☐ None	☐ Yes ☐ No		
Observation Location 3		3	☐ Stong ☐ Mild ☐ Weak ☐ None	☐ Yes ☐ No		
Observation Location 4		4	☐ Stong ☐ Mild ☐ Weak ☐ None	☐ Yes ☐ No		

Mark the four Odour Observation Locations on the Map below:



Odour Strength Definitions:

Strong Odour: A strong odour is detected. At this level, odour complaints are likely outside of the Concrush site boundary, even under favorable weather conditions.

Mild Odour: An odour is present but not strong. At this level, odour complaints are possible outside of the Concrush site boundary but the detection of odour at a residence will depend on factors such as wind direction and speed.

Weak Odour: An odour is 'just' able to be detected. At this level, odour complaints are not likely outside of the Concrush site boundary, but the observations should be still highlighted in case odour strength increases.

No Odour: No Odour is detected at the location.

DISTRIBUTION: A copy of this inspection has been given to:

☐ Administration (for filing) ☐ Yard Manager (for repair works / actions to be completed) ☐ Other _____

Signed: _____ **Date:** _____

Appendix 3

Air Quality Improvement Programme

Air Quality Improvement Programme

INTRODUCTION

This Air Quality Improvement Programme has been prepared for Concrush Pty Ltd to implement as part of the air quality management at the site.

The aim of this programme is to satisfy consent condition C1, Part (f): *a program to investigate and implement ways to improve the environmental performance of the development over time.*

PROGRAMME

This will be achieved by adhering to the actions shown in the main OAQMP document, namely:

- Implementing control measures to eliminate or minimise air emissions;
- Following response procedures to eliminate or minimise air emissions;
- Investigating ways to improve emission controls, and to keep within the air quality criteria;
- Reviewing all outcomes on a regular basis, and documenting the changes that were made on site. In this way, the improvement of the air quality performance of the Concrush Resource Recovery Facility can be achieved over time. In order to achieve the desired outcomes, the actions taken will be documented in the table shown below.

Item addressed	Actions taken / Control measure	Responsibility	Follow up action / Date of review
(example: unacceptable wind generated dusts from access roads)	(example: use of water carts; schedule completion of sealing the unsealed sections)	Yard and Business Managers	

TIMING

Concrush will, as part of the Expansion of the Concrush Resource Recovery Facility:

- Review this program monthly and update all actions as shown in the table above.

Progress the improvements required to be made.