Permit

Environmental Protection Act 1994

Environmental authority EPPR00213113

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EA EPPR00213113

Environmental authority takes effect on the day it is issued.

The anniversary date of this environmental authority is 17 February each year. The payment of the annual fee will be due each year on this day.

Environmental authority holder

Name	Registered address
JC & AT Searle Pty Ltd (ACN: 002898893)	Level 1, Nambour Mill Village 9-15 Mill Street NAMBOUR QLD 4560

Environmentally relevant activity and location details

Environmentally relevant activity	Location
ERA 53 - Organic material processing - (a) Processing more than 200t of organic material in a year by composting the organic material	4914 D'Aguilar Highway, WINYA QLD 4515 Lot 4 on Plan SP139982 (formerly Lot 4 on Plan RP888487)

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

ABN 46 640 294 485

Queensland Government

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days)

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority - on the nominated day; or

b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or

c) otherwise on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

The anniversary day of this environmental authority is the same day each year as the original take effect date unless you apply to change the anniversary day. The payment of the annual fee will be due each year on this day.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.



Signature

25 March 2024

Date

Scott Blanchard
Department of Environment, Science and Innovation
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Waste Assessment
Department of Environment, Science and Innovation
Phone: 1300 130 372
Email: palm@des.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Conditions of environmental authority

Condition number	Condition
Authorised activities	
G1	Activities under this environmental authority must be conducted in accordance with the following limitations: (a) activities undertaken on site must be conducted within the designated areas for each activity, as specified in Appendix A: Site Plan; and (b) only the following feedstock can be used in the composting process; i. Sawmill timber residues (untreated pine bark, sawdust, ground wood mulches) ii. Peat Moss iii. Coir peat iv. Washed sands v. Coal ash vi. Peanut shells vii. Topsoil viii. Grain husks ix. Animal manures (composted feedlot manure and poultry manure) x. Paunch xi. Ground rock dust xii. Cut grass and hay.
G2	Prohibited material or feedstock containing prohibited material must not be used in composting.
General environmental protection	
G3	All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused, or likely to be caused, by the activities.
G4	Any contravention of a condition of this environmental authority must be reported to the administering authority as soon as practicable, and within 24 hours of becoming aware of the contravention.
G5	Records of any contravention of this environmental authority must be made including full details of the contravention, all investigations, and any subsequent actions undertaken.
G6	All records required by the conditions of this environmental authority must be provided to the administering authority upon request by the time and in the format requested.
G7	All information and records required by the conditions of this environmental authority must be kept for a minimum of five years.
G8	All plans required by the conditions of this environmental authority must be: (a) developed and endorsed in writing as being compliant with the conditions of this environmental authority by an appropriately qualified person; and (b) implemented in accordance with the requirements stated within the plan; and (c) in effect at all times during the carrying out of the activity; and (d) re-endorsed in writing as being in compliance with the conditions of this environmental authority by an appropriately qualified person at least biennially and (e) provided to the administering authority upon request in the time requested.

G9	All testing and monitoring required by the conditions of this environmental authority: (a) must be carried out in the manner specified by this environmental authority; and (b) must be carried out on samples that are representative of the material being tested; and (c) must be carried out using monitoring devices that are calibrated and maintained according to the manufacturers' specifications; and (d) where testing is carried out by a laboratory, it must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses; and (e) must be carried out, interpreted and recorded by an appropriately qualified person; and (f) for finished compost monitoring required by condition G27, must be carried out in accordance with the test methods listed for the relevant parameters in AS 4454:2012 (Composts, soil conditioners and mulches) or, if a more recent version or replacement of that standard has been released, in accordance with the more recent or replaced standard; and (g) for PFAS monitoring, must: i. use analysis techniques that achieve lowest practicable limits of reporting (LOR <0.5 µg/kg solids; LOR <0.001 µg/L for liquids) and maximise extraction of PFAS from samples; and ii. comply with recommendations in the PFAS National Environmental Management Plan (NEMP)[1] Version 2.0 or more recent editions adopted by the Queensland Government; and iii. incorporate paired standard and Total Oxidisable Precursor (TOP) Assay analysis to determine PFAS concentrations and must include at least: (A) Perfluoroalkyl carboxylic acids (C_4-C_{14}); and (B) Perfluoroalkyl sulfonic acids (C_4-C_{10}); and (C) Perfluorooctane sulfonamide (PFOSA or FOSA); and (D) N-alkyl perfluorooctane sulfonamide (N-MeFOSA, N-EtFOSA) (E) N-alkyl perfluorooctane sulfonamido ethanol (N-MeFOSE, N-EtFOSE; and (F) N-alkyl perfluorooctane sulfonamido acetic acids (N-MeFOSAA, N-EtFOSAA); and (G) n:2 Fluorotelomer sulfonic acids (n= 4, 6, 8 & 10); and iv. incorporate quality assurance checks for Total Oxidisable Precursor (TOP) Assay[2]; and v. give due regard to any advice from the administering authority concerning improvements in analysis techniques for the waste types accepted; and vi. for leachability, be undertaken using the Australian Standard Leaching Procedure (ASLP) with an unbuffered leach solution.
G10	Chemicals and/or fuels in containers of greater than 15 litres capacity must be stored within a secondary containment system.
G11	A weather station must be installed, operated, calibrated and maintained on site which continuously and electronically records: (a) rainfall (mm/day); and

[1] The PFAS NEMP is available online on the Australian Government Department of Agriculture, Water and Environment website at https://www.environment.gov.au/
[2] Refer to recommendations in the Australasian Land & Groundwater Association (ALGA) funded TOP Assay reliability study (Ventia 2019). Ventia (2019) Improving Measurement Reliability of the PFAS TOP Assay. Australasian Land and Groundwater Association Report 20 June 2019, 1-96pp

	(b) wind speed (km/hour); and (c) wind direction (cardinal direction, e.g. north-easterly); and (d) air temperature (degrees Celsius); and (e) relative humidity (%).
G12	The weather station required by condition G11 must be installed in compliance with the Australian/New Zealand Standards: (a) AS/NZS 3580.1.1:2016 (Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment) or, if a more recent version or replacement of that standard has been released, in accordance with the more recent or replaced standard; and (b) AS 3580.14:2014 (Methods for sampling and analysis of ambient air – Meteorological monitoring for ambient air) or, if a more recent version or replacement of that standard has been released, in accordance with the more recent or replaced standard.
G13	A visible and legible sign must be located on the front fence or adjacent to the entrance of the site stating: (a) words to the effect 'To contact the operator of this facility please refer all communication via the following contact details;' and (b) the name of the environmental authority holder; and (c) a business hours and after hours telephone number; and (d) an email address for the environmental authority holder.
G14	The following details must be recorded for all environmental complaints received: (a) date and time the complaint was received; and (b) if authorised by the person making the complaint, their name and contact details; and (c) nature and details of the complaint including date and time the complaint was received; and (d) investigations carried out in response to the complaint as required by G15; and (e) the results of investigations; and (f) measures taken under G16.
G15	An investigation must be undertaken into all environmental complaints within 5 business days of receiving the complaint, or a longer period agreed to in writing by the administering authority, to determine: (a) the potential circumstances and actions on site that may have contributed to the basis of the complaint; and (b) reasonable measures that could be implemented to address the basis of the complaint.
G16	Measures identified under G15(b) must be taken within: (a) four weeks of the investigation required by G15 being finalised; or (b) a longer period agreed to in writing by the administering authority.
G17	Written procedures must be developed and documented upon commencement of the activity that: (a) identify potential risks to the environment from the activity, including during and outside routine operations, during closure and in an emergency (e.g. fire); and (b) identify measures to prevent or minimise the potential for environmental harm for each of the potential risks identified; and (c) establish an inspection and maintenance program for plant and equipment including calibration and servicing that is in accordance with manufacturer's instructions; and

	(d) establish a staff training program on obligations under this environmental authority and the *Environmental Protection Act 1994* to be conducted as part of staff inductions and that training be completed at least biennially; and (e) establish processes to review environmental risks, incidents, performance and complaints.
G18	Written procedures required by condition G17 must be: (a) implemented; and (b) reviewed at least biennially; and (c) provided to the administering authority upon request at the time and in the format requested.
G19	Plant and equipment necessary to comply with the conditions of this environmental authority must be installed, operated and maintained: (a) in a proper and effective manner; and (b) in accordance with any written procedures developed under condition G17 for the plant and equipment.
G20	Records must be kept of all persons trained under condition G17(d) and the date they received the training.
Feedstock management	
G21	A Feedstock Management Plan must be developed for the activity and implemented, which includes: (a) methods for characterising all feedstock and determining its odour rating by reference to: i. "Odour Rating" in Schedule 1—Odour: *Table 1 – Odour rating of composting feedstock*; or ii. if the feedstock is not listed in Schedule 1—Odour: *Table 1 – Odour rating of composting feedstock*, methods to assess the odour potential of the feedstock into one of the following categories taking account of the feedstock's intensity and hedonic tone, including unpleasantness at time of receival and during composting: (A) None (B) Low; (C) Medium; (D) High; (E) Very High; and (b) feedstock storage requirements based on the odour ratings and physical compositions of each type of feedstock; and (c) feedstock processing requirements based on the odour ratings and physical compositions for each type of feedstock; and (d) procedures for the sampling and testing the Carbon to Nitrogen ratio (C:N Ratio) of any feedstock accepted on the site; and (e) procedures to assess whether the feedstock received at the site is suitable for the processing techniques being used; and (f) procedures to assess potential feedstock received at the site to determine whether it is lawfully able to be used as a feedstock, including under the conditions of this environmental authority; and (g) procedures for rejecting unsuitable and/or unlawful feedstock; and (h) procedures for reporting unlawful waste delivery to the administering authority.

<table>
<tr><td>G22</td><td>Feedstock must not be used for the activity unless it is assessed in accordance with the Feedstock Management Plan required by condition G21.</td></tr>
<tr><td>G23</td><td>The following records must be kept for all feedstock received and anything which is rejected as feedstock under the Feedstock Management Plan required by condition G21:
(a) generator and/or transporter of the feedstock including their contact details; and
(b) date feedstock was received at the site; and
(c) description of feedstock; and
(d) weight or volume of feedstock; and
(e) feedstock odour rating as assessed under the Feedstock Management Plan required by condition G21; and
(f) details of any samples taken (including sample ID, laboratory holding time, storage method and storage location); and
(g) measurements, observations and characterisation results of feedstock; and
(h) the name of any person undertaking any measurements, observations or characterisation of feedstock.</td></tr>
<tr><td colspan="2">Compost management</td></tr>
<tr><td>G24</td><td>A Compost Process Plan must be developed to achieve pasteurisation and minimise environmental and nuisance impacts, which includes:
(a) composting process parameters for the feedstock and processing techniques being used on site, which includes process parameters for:
i. C:N ratio; and
ii. porosity or bulk density; and
iii. moisture content; and
iv. oxygen content; and
v. pH; and
vi. temperature range; and
(b) information to support the appropriateness of the composting process parameters with regard to the feedstock and processing techniques being used on site; and
(c) methods and frequencies for monitoring composting material to assess that the composting process parameters are being met; and
(d) at a minimum, biennially reviews of the effectiveness of the composting process parameters at achieving pasteurisation and minimising odour impacts.</td></tr>
<tr><td>G25</td><td>Composting material must comply with composting process parameters identified in the Compost Process Plan required by condition G24.</td></tr>
<tr><td>G26</td><td>The following records must be kept for all monitoring undertaken to assess that the composting process parameters are being met records of any analysis, measurements or observations of composting material and the name/s of the person/s undertaking the assessment.</td></tr>
<tr><td>G27</td><td>All finished compost must be monitored for the quality characteristics and at the frequency listed in Table 2 – Finished Compost Quality Characteristic Limits.
Table 2 – Finished Compost Quality Characteristic Limits
<table>
<tr><th>Quality Characteristic</th><th>Quality Characteristic Limit</th><th>Minimum Monitoring Frequency</th></tr>
<tr><td>pH</td><td>≥5.0</td><td rowspan="2">One composite sample consisting of at least five</td></tr>
<tr><td>Electrical conductivity</td><td>≤10 (dS/m)</td></tr>
</table></td></tr>
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<table>
<tr><td></td><td>
<table>
<tr><td>Arsenic</td><td>≤20 (mg/kg)</td><td rowspan="28">individual grab samples must be collected from each of the finished compost product lines manufactured;
a) that contain paunch and/or animal manure every 90 business days; and
b) that do not contain paunch and/or animal manure every 90 business days until four (4) consecutive sample results are compliant with the quality characteristic limits and then biannually thereafter.</td></tr>
<tr><td>Cadmium</td><td>≤1 (mg/kg)</td></tr>
<tr><td>Chromium (total)</td><td>≤100 (mg/kg)</td></tr>
<tr><td>Copper</td><td>≤150 (mg/kg)</td></tr>
<tr><td>Lead</td><td>≤150 (mg/kg)</td></tr>
<tr><td>Mercury</td><td>≤1 (mg/kg)</td></tr>
<tr><td>Nickel</td><td>≤60 (mg/kg)</td></tr>
<tr><td>Selenium</td><td>≤5 (mg/kg)</td></tr>
<tr><td>Zinc</td><td>≤300 (mg/kg)</td></tr>
<tr><td>DDT/DDD/DDE</td><td>≤0.5 (mg/kg)</td></tr>
<tr><td>Aldrin</td><td>≤0.02 (mg/kg)</td></tr>
<tr><td>Dieldrin</td><td>≤0.02 (mg/kg)</td></tr>
<tr><td>Chlordane</td><td>≤0.02 (mg/kg)</td></tr>
<tr><td>Heptachlor</td><td>≤0.02 (mg/kg)</td></tr>
<tr><td>HCB</td><td>≤0.02 (mg/kg)</td></tr>
<tr><td>Lindane</td><td>≤0.02 (mg/kg)</td></tr>
<tr><td>BHC</td><td>≤0.02 (mg/kg)</td></tr>
<tr><td>PCBs</td><td>Not detected</td></tr>
<tr><td>E.coli</td><td><100 (MPN/gram)</td></tr>
<tr><td>Faecal coliforms</td><td><1000 (MPN/gram)</td></tr>
<tr><td>Salmonella sp.</td><td>Not Detected in 50 grams (dry weight equivalent)</td></tr>
<tr><td>PFOS + PFHxS</td><td>2 (µg/kg)</td></tr>
<tr><td>PFOA</td><td>1 (µg/kg)</td></tr>
<tr><td>Sum of PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTrDA, PFTeDA, 4:2 FTS, 6:2 FTS, 8:2 FTS and 10:2 FTS</td><td>3 (µg/kg)</td></tr>
<tr><td>Sum of PFOSA (or FOSA), N-MeFOSA, N-EtFOSA, N-MeFOSE, N-EtFOSE, N-MeFOSAA and N-EtFOSAA</td><td>1 (µg/kg)</td></tr>
<tr><td>PFAS leachability</td><td>To be kept to minimum practicable (µg/L)</td></tr>
<tr><td>Glass, metal, rigid plastics</td><td>≤0.5 (% dry matter weight/weight)</td></tr>
<tr><td>Plastics – light, flexible, film</td><td>≤0.05 (% dry matter weight/weight)</td></tr>
<tr><td>Viable plant propagules</td><td>Not detected</td></tr>
</table>
</td></tr>
<tr><td>G28</td><td>Finished compost must comply with the quality characteristics limits listed in Table 2– Finished Compost Quality Characteristic Limits.</td></tr>
<tr><td colspan="2">Protecting acoustic values</td></tr>
<tr><td>N1</td><td>Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
</table>

<table>
<tr><td>N2</td><td>In the event of a complaint about noise being made to the administering authority, that the administering authority considers is not frivolous or vexatious, then the emission of noise from the approved place must not result in levels greater than those specified in Table 3 – Noise Limits.

Table 3 – Noise Limits
<table>
<tr><th>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,\ T}$</th><th>Period</th></tr>
<tr><td>Background noise level plus 5 dB(A)</td><td>7 am - 6 pm</td></tr>
<tr><td>Background noise level plus 5 dB(A)</td><td>6 pm - 10 pm</td></tr>
<tr><td>Background noise level plus 3 dB(A)</td><td>10 pm - 7 am</td></tr>
<tr><th>Noise Limits at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,\ T}$</th><th>Period</th></tr>
<tr><td>Background noise level plus 10 dB(A)</td><td>7 am - 6 pm</td></tr>
<tr><td>Background noise level plus 10 dB(A)</td><td>6 pm - 10 pm</td></tr>
<tr><td>Background noise level plus 8 dB(A)</td><td>10 pm - 7 am</td></tr>
</table></td></tr>
<tr><td>N3</td><td>Noise Monitoring must include:
i. $L_{Amax,\ adj,\ T}$;
ii. $L_{Abg,\ T}$ or $L_{A\ 90,\ adj,\ T}$;
iii. The level and frequency of occurrence of any impulsive or tonal noise;
iv. Atmospheric conditions including temperature, relative humidity and wind speed and direction; and;
v. Effects due to extraneous factors such as traffic noise.</td></tr>
<tr><td>N4</td><td>Any monitoring must be in accordance with the most recent version of the administering authority's Noise Measurement Manual.</td></tr>
<tr><td colspan="2">Protecting air values</td></tr>
<tr><td>A1</td><td>Other than as permitted within this environmental authority, odours or airborne contaminants must not cause environmental nuisance to any sensitive or commercial place.</td></tr>
<tr><td>A2</td><td>An Odour Management Plan must be developed for the activity and implemented which includes:
(a) identification of all odour sources, and potential odour sources at the site, including odours and potential odours generated from the activity; and
(b) a requirement that odour investigations be completed by an appropriately qualified person; and
(c) an analysis of routine and non-routine processes and operating conditions that could potentially result in odour emissions; and
(d) measures to avoid the generation and minimise the impacts of odours; and
(e) at a minimum, biennial reviews of the effectiveness of the measures.</td></tr>
</table>

Protecting land values	
L1	Other than as permitted within this environmental authority, contaminants must not be released to land.
L2	Erosion and sediment control measures must be installed and maintained to: (a) allow stormwater to pass across the site in a controlled manner and at non-erosive flow velocities; and (b) minimise the duration that disturbed soils are exposed to the erosive forces of wind, rain, and flowing water; and (c) minimise soil erosion; and (d) minimise sedimentation of contour drains, drainage lines, channels and waterways; and (e) minimise adverse impacts to land, waters or properties downstream to the activities (including roads).
L3	An area that has an impervious barrier to subsoil and groundwater must be used and maintained when conducting any of the following: (a) receiving, mixing and storing feedstock; and (b) processing and storing composting materials; and (c) collecting and storing leachate or stormwater runoff from disturbed areas.
Rehabilitation	
R1	Upon completion of the activity, land that has been disturbed by the activities conducted under this environmental authority must be rehabilitated in a manner such that: (a) there is no visual evidence of erosion or sedimentation occurring; and (b) the potential for environmental nuisance caused by dust is minimised; and (c) the quality of water, including seepage, released from the site does not cause environmental harm; and (d) the quality of water in any residual water body does not have the potential to cause environmental harm; and (e) the landform is in stable condition; and (f) land is re-profiled to a level consistent with the surrounding landform except where the land is to remain as a hardstand and /or dams as agreed by the landowner; and (g) land is vegetated with groundcover which is not a declared pest species, and which is established and actively growing, except where the land is to remain as a hardstand and /or dams as agreed by the landowner.
Protecting water values	
WT1	Other than as permitted within this environmental authority, contaminants must not be released to waters.
WT2	Any stormwater which filters through composting piles or stored feedstock must be managed as leachate.
WT3	Stormwater runoff from disturbed areas generated by a storm event up to and including a 24-hour storm event with an average recurrence interval (ARI) of 1 in 10 years (9.4% annual exceedance probability) must be contained on site and beneficially re-used in the carrying out of the activity.
WT4	Notwithstanding condition WT3, stormwater may be released from the site only after a storm event exceeding a 24-hour storm event with an average recurrence interval (ARI) of 1 in 10 years (9.4% annual exceedance probability) and where:

<table>
<tr><td></td><td>(a) beneficial reuse of contained stormwater runoff on site is not viable; and
(b) the release is required to prevent an exceedance of the stormwater retention capacity required by this environmental authority; and
(c) there are no contaminants present that will, or that are capable of causing environmental harm.</td></tr>
<tr><td>WT5</td><td>An appropriately qualified person must monitor and record all indicators required by and in accordance with Table 4 – Water monitoring and the associated monitoring requirements.

Table 4 – Water Monitoring
<table>
<tr><th>Monitoring point</th><th>Indicators</th><th>Monitoring frequency</th></tr>
<tr><td rowspan="8">Dam F on Appendix A
Latitude -26.934044,
Longitude 152.582082;
and
Dam B on Appendix A
Latitude -26.93643,
Longitude 152.58247</td><td>Total suspended solids (TSS) mg/L</td><td rowspan="8">In the event of an overflow and weekly during an overflow.</td></tr>
<tr><td>pH</td></tr>
<tr><td>Electrical Conductivity (EC) µS/cm</td></tr>
<tr><td>Dissolved Oxygen (DO)</td></tr>
<tr><td>Biochemical oxygen demand for 5 days (BOD_5) mg/L</td></tr>
<tr><td>Total Nitrogen (TN) (mg/L)</td></tr>
<tr><td>Total Phosphorous (TP) (mg/L)</td></tr>
</table>
Associated requirements:
a) monitoring must be in accordance with the methods prescribed in the current edition of the administering authority's Water Quality Sampling Manual; and
b) samples must be taken using representative samples; and
c) all determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic; and
d) all monitoring devices must be correctly calibrated and maintained.</td></tr>
<tr><td>WT6</td><td>(a) Leachate must be collected and stored in aerated ponds that maintain aerobic conditions; or
(b) an enclosed leachate tank; or
(c) a pond that effectively manages potential odour emissions in accordance with condition A1.</td></tr>
<tr><td>WT7</td><td>Leachate collection and storage must be designed, installed, operated and maintained by an appropriately qualified person to:
(a) prevent ponding of leachate in any area other than the designated leachate collection drains or storage ponds; and
(b) prevent leachate being released to waters, other than the designated storage ponds; and
(c) drain leachate away from composting material; and
(d) drain leachate to a collection drain; and
(e) ensure the structural integrity of the impervious barrier is maintained.</td></tr>
</table>

Definitions

Key terms and/or phrases used in this document are defined in this section. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

24-hour rainfall event with an average recurrence interval (ARI) of 1 in 10 years means the maximum depth (mm) from a 24-hour duration precipitation event with an average recurrence interval of once in 10 years (9.4% annual exceedance probability)**.**

Activity means the environmentally relevant activity or activities to which the environmental authority relates.

Administering authority means the Chief Executive administering the *Environmental Protection Act 1994*.

Aerobic conditions is demonstrated by stored leachate having a dissolved oxygen concentration of ≥1 mg/L as measured in-situ at a minimum of three different depths (top, middle and bottom) across the entire water column.

Annual exceedance probability means the probability that a given rainfall total accumulated over a given duration will be exceeded in any one year.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills and experience relevant to the environmental authority requirement and can give authoritative assessment, advice and analysis in relation to the environmental authority requirement using the relevant protocols, standards, methods or literature. Where a requirement relates to odour, the person or persons must have odour assessment qualifications and must be able to demonstrate a calibrated nose or that their sense of smell has not been compromised.

C:N ratio means the ratio of elemental carbon (C) to elemental nitrogen (N) by weight in organic material.

Commercial place means a place or part of a place that is used as a workplace, an office, or for conducting business or commercial activities.

Composting material refers to waste or other material received on the site, which is mixed and undergoing a composting process until it becomes finished compost.

Contaminant as defined under section 11 of the *Environmental Protection Act 1994.*

Declared pest species means a pest species listed as restricted matter in Schedule 2 of the *Biosecurity Act 2014.*

Disturbed area/s include areas:

- That are susceptible to erosion; and/or
- That are contaminated by the activity; and/or
- Upon which stockpiles of soil or other materials are located.

Emergency as defined under section 466B of the *Environmental Protection Act 1994.*

Environmental harm as defined under section 14 of the *Environmental Protection Act 1994.*

Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994.*

Feedstock means the organic material/s used or intended to be used for organic material processing.

Finished compost means an organic product/s that has undergone controlled aerobic and thermophilic biological transformation through the composting process to achieve pasteurisation.

Generator means a person who sells, or gives away, or otherwise provides, a feedstock.

Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

Impervious barrier means a barrier with a thickness of at least 600 mm with an in-situ permeability (K) of less than 10^{-9} ms^{-1}.

LOR means limit of reporting.

Land as defined in Schedule 4 of the *Environmental Protection Act 1994*.

Leachate means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material that contains soluble, suspended or miscible contaminants.

Measures has the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

NATA means National Association of Testing Authorities.

Offensive means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.

Prohibited material includes:

Feedstock Material	Description
Asbestos and asbestos containing materials	
Bilge waters	Sea and fresh water from vessel pump outs.
Biosecurity waste	(a) waste that is goods subject to biosecurity control under the *Biosecurity Act 2015* (Cwlth); or (b) goods under the *Biosecurity Act 2015* (Cwlth) that are or were in contact with waste mentioned in paragraph (a).
Dye waste (water based)	By-product from industrial dying processes.
Effluent waste and wastewater	Liquid industrial or domestic effluents and waste streams, including contaminated groundwater and stormwater, except those of known origin and composition solely containing organic material as defined in the definition of environmentally relevant activity organic material processing ERA 53.
Filter cake and presses	Any concentrated solid and semi-solid waste streams from water treatment process (e.g. centrifuge, filter press), excluding material that complies with *the requirements of End of Waste Code* ENEW07503318.[3]
Filter and ion exchange resin backwash waters	Any backwash and reject water from a filtration (e.g. sand or membrane filter) or ion exchange process, excluding material that complies with *the requirements of End of Waste Code* ENEW07503318.[3]
Forecourt water	Run off from service station forecourts.
Hide curing effluent	Effluent and wastes from tanneries including, but not limited to, the various steps involved in preparing animal hide e.g. washing for removal of hair, fat removal, chemical treatment.
Leachate waste	A liquid that has passed through, or emerged from, or is likely to have passed through or emerged from, a landfill or from a non-organic waste or contaminated soil deposit.
Materials containing persistent organic pollutants including polybrominated diphenyl ethers (PDBEs), polychlorinated biphenyls (PCBs), polyfluorinated organic compounds[4] and polyaromatic Hydrocarbons (PAHs).	
Materials originating from activities or sites associated with PFAS contamination,[5] except where representative analysis results for the load undertaken in accordance with the PFAS monitoring requirements outlined in condition G9, indicate an absence of PFAS.	
Municipal solid waste (excluding segregated compostable organic waste that does not include another prohibited material under this environmental authority).	
Paint and industrial coatings products and wash	Paint and industrial coatings products and water and solvent wash down water containing paint and industrial coatings residues.
Particle board	Any part of an engineered wood panel product, manufactured from wood particles, coated in adhesive resin and pressed together into a finished panel.

[3] Available online at https://environment.des.qld.gov.au/
[4] *Materials containing per and poly-fluoroalkyl substances (PFAS) are considered separately*
[5] Operators should refer to Appendix B of the PFAS NEMP for details of activities associated with PFAS contamination. The PFAS NEMP is available online on the Australian Government Department of Agriculture, Water and Environment website at https://www.environment.gov.au/

Feedstock Material	Description
Sullage waste (greywater)	Greywater / wastewater from domestic or commercial buildings excluding sewage but including waters drained from showers, sinks and laundries.
Treatment tank sludges and residues	Any treatment tank sludge or residue, excluding sludges and residues containing only plant or animal based organic matter or material that complies with *the requirements of End of Waste Code* ENEW07503318.[3]
Treated timber waste	Any treated timber waste that does not meet the requirements of End of Waste Code *ENEW07607119.[3]*
Waste containing restricted stimulation fluids	
Waste known to be contaminated with glass, metal, rubber and coatings that cannot be eliminated though processing	
Waste treated by immobilisation or fixation	
Water based inks	Liquid wastes from ink use or manufacture.
Water and solvent based paints and industrial coatings	Liquid waste paint, including where undiluted.

Records are documents made or issued in respect of this environmental authority, including contravention notifications, written procedures, analysis results, plans, monitoring reports and monitoring programs required under a condition of this authority.

Restricted stimulation fluids as defined in section 206 of the *Environmental Protection Act 1994.*

Secondary containment system means a system designed, installed and operated to prevent any release of **contaminants** from the system, or containers within the system, to land, groundwater, or surface waters.

Sensitive place is any part of the following:

1. a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
2. a motel, hotel or hostel; or
3. a medical centre or hospital; or
5. a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
6. a public park or garden; or
7. for noise, a place defined as a sensitive receptor for the purposes of the *Environmental Protection (Noise) Policy 2019*.

Stable condition for the purposes of this document means the land is safe and structurally stable and there is no environmental harm being caused by anything on or in the land.

Stabilised biosolids means biosolids processed to reduce or eliminate the potential for putrefaction and which, as a result, reduces pathogens, vector attraction and offensive odours.

Transporter means a person who transports feedstock.

Vector means an insect or other organism transmitting germs or other agents of disease.

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

"Witch's hat" odour sampling method means an odour assessment and measurement technique using a hollow cone-shaped device where:

- the base of the device (large diameter) is placed on the surface of the odour source;
- the odour is funnelled through the device and out the top of the device (small diameter); and
- odour samples are collected at the top of the device (small diameter).

You means the holder of the environmental authority.

Schedule 1—Odour rating of composting feedstock

- If a feedstock can fit within multiple listings in *Table 1 – Odour rating of compost feedstock*, the most specific listing applies. For example, 'vegetable waste' could be considered 'Food organics' with a high odour rating. However, as 'vegetable waste' is listed as a specific example under 'Food and food processing waste' the applicable odour rating for 'vegetable waste' is medium.

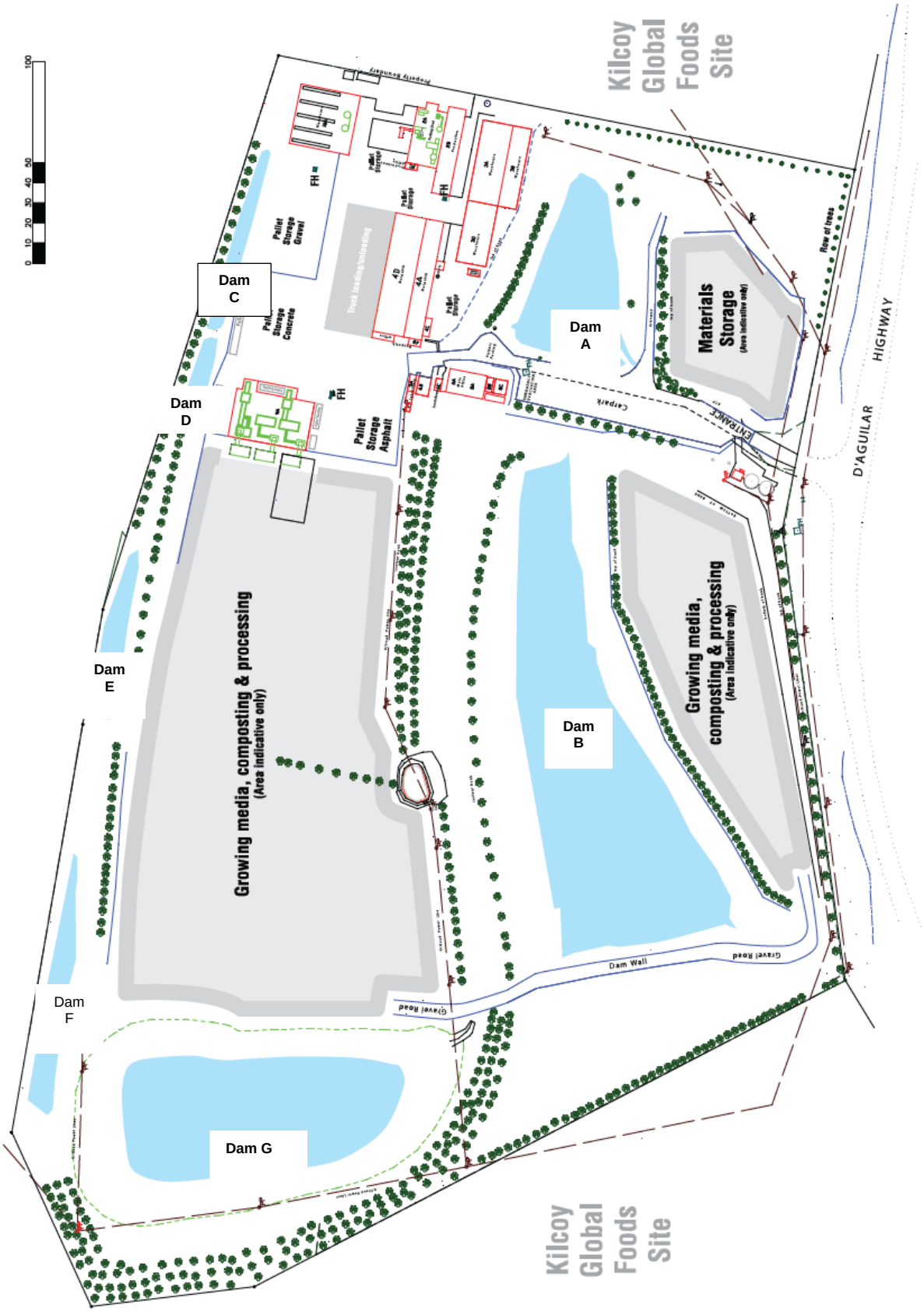
Table 1 – Odour rating of composting feedstock

Feedstock	Examples	Odour Rating
Abattoir waste	Meat processing leftovers, bone material, blood, tallow waste, abattoir waste including animal effluent and residues from meat processing, including abattoir effluent, liquid animal wastes (blood) and sludge	Very high
	Paunch material	High
Animal manure	Horse manure, chicken manure, cow manure, livestock manure, or any manure produced by animals, wastewater from holding yards.	High
Animal waste and animal processing waste	Any dead animals or part/s of dead animals, remains of animals or part/s of remains of animals (e.g. chickens from poultry farms), egg waste, milk waste, mixtures of animal manure and animal bedding organics	Very High
Bark, lawn clippings, leaves, mulch, pruning waste, sawdust, shavings, woodchip and other waste from forest products	Cane and sorghum residues including bagasse, forest mulches, cypress chip, green waste, mill mud[6], pine bark, sawmill residues non-treated (including sawdust, bark, wood chip, shavings etc.), tub ground mulch (from land clearing and forestry waste), peat, seed hulls/husks, straw, and other natural fibrous organics, wood chips (forestry waste and land clearing, household maintenance), wood waste (including untreated pallets, offcuts, boards, stumps and logs); worm castings suitable for unrestricted use	Low
Biosolids	Biosolids that are not stabilised biosolids	Very high
	Stabilised biosolids	Medium
Cardboard and paper waste	Paper mulch	Low
	Paper pulp effluent, paper sludge dewatered	Medium
Compostable polylactic acid (PLA) plastics	Compostable plastics produced in accordance with: (a) AS 4736:2006 (Biodegradable plastics) or the most recent or replaced version of that standard or (b) AS 5810:2010 (Biodegradable plastics - Biodegradable plastics suitable for home composting) or the most recent or replaced version of that standard.	Low
A substance used for manufacturing fertiliser for agricultural, horticultural or garden use	Ammonium Nitrate, dewatered fertiliser sludge	High
	Fertiliser water and fertiliser washings, stormwater from fertiliser manufacturing plants containing fertiliser wash water	Medium

[6] That meets the Resource quality criteria for the approved use in the Sugar Mill By-Products End of Waste Code (ENEW07359817)

Feedstock	Examples	Odour Rating
Fish processing waste	Fish bones and other fish remains/leftovers, wastewater from fish processing	Very high
Food and food processing waste	Expired/past used by date non-protein based food from supermarkets, expired beer, vegetable oil wastes and starches, vegetable waste, yeast waste, food processing effluent (wastewater) and solids (including sludges) from non-protein based food	Medium
	Food processing effluent (wastewater) and solids (including sludges) from protein based food	Very high
	Food organics, expired/past used by date protein based food from supermarkets, brewery and distillery effluent and waste	High
	Expired soft drinks, molasses waste, grain waste (hulls / waste grains), starch water waste, sugar and sugar solutions	Low
Grease trap waste	Oil and grease waste recovered from grease traps	Very high
Green waste	Leaves, grass clippings, prunings, tree branches from household maintenance	Low
Inorganic additives with beneficial properties	Bentonite	None
	Crusher dust	None
	Drilling muds (non-CSG and no additives)	None
	Gypsum	Medium
	Lime and lime slurry (inert)	None
Mushroom compost and mushroom growing substrate		Medium
Poultry processing waste	Feathers, meal and bone leftovers, egg waste including poultry processing poultry abattoir effluent and sludges	Very high
Soils	Acid sulfate soils and sludge	High
	Clean soil, clean mud, sand	None
Stormwater	Low level organically contaminated stormwaters or groundwaters (tested)	Low
Wood waste from untreated timber	Untreated pallets, offcuts, boards, stumps and logs, sawdust, shavings, timber offcuts, crates, wood packaging	Low

Appendix A- Site Plan



END OF ENVIRONMENTAL AUTHORITY