



Works approval number W5903/2015/1

Works approval holder Aussie Organics Garden Supplies Pty Ltd
ACN 079 338 711
Suite 29, Level 1

Registered business address 22 St Quentin Avenue
CLAREMONT WA 6010

DWER file number DER2015/002159

Duration 11/09/2020 to 10/09/2024

Date of issue 11/09/2020

Premises details Aussie Organics
Legal description -
76 Punrak Road
SERPENTINE WA 6125

Being Lot 815 on Plan 202654 as depicted in
Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production capacity
Category 67A: Compost Manufacturing and Soil Blending – premises on which organic material (excluding silage) or waste is stored pending processing, mixing, drying or composting to produce commercial quantities of compost or blended soils.	10,500 tonnes per annual period.

This works approval is granted to the works approval holder, subject to the attached conditions, on 11 September 2020, by:

Stephen Checker
MANGER WASTE INDUSTRIES
REGULATORY SERVICES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Interpretation

In this works approval:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:
 - (i) if dated, refers to that particular version; and
 - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

Construction phase

Infrastructure and equipment

1. The works approval holder must:
 - (a) construct and/or install the infrastructure and/or equipment;
 - (b) in accordance with the corresponding design and construction / installation requirements; and
 - (c) at the corresponding infrastructure location as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Infrastructure size	Design and construction / installation requirements	Infrastructure location
Stage 1				
1.	All	N/A	<ul style="list-style-type: none"> All storage infrastructure, transfer pipelines and conveyance infrastructure must be free of leaks or defects, and have the capacity to determine if containment failure or seepage is occurring. All vehicles and machinery used at the premises must be specified as low noise emission devices. 	N/A
2.	Greenwaste Storage hardstand	600 m ²	<ul style="list-style-type: none"> To be constructed of a minimum 200 mm layer of limestone to achieve a permeability of $\leq 1 \times 10^{-5}$ m/s. To be graded at a slope greater than 1:200 towards the compost production hardstand To adjoin the compost production hardstand To have three bunds on the sides not adjoining the compost production hardstand, which are a minimum of 300 mm high. 	As depicted in Schedule 1, Map 2
3.	Compost production pad	5,000 m ²	<ul style="list-style-type: none"> To be constructed with a minimum 200 mm layer of compacted limestone topped with a 40 mm layer of asphalt to achieve a permeability of $\leq 1 \times 10^{-9}$ m/s All sides of the hardstand are to 	As depicted in Schedule 1, Map 2

	Infrastructure	Infrastructure size	Design and construction / installation requirements	Infrastructure location
Stage 1				
			<p>have a 300 mm high bund</p> <ul style="list-style-type: none"> To be graded at a slope of greater than 1:200 towards the capture basin To be constructed to contain all leachate generated and drained from the windrows via the capture basin to the evaporation pond To contain piping to allow for the static forced air technology operation through the use of blowers able to maintain oxygen levels above 10% at all times (aerobic state) To include a spray system along each windrow designed to produce large droplets Designed to allow the ability to monitor each windrow temperature through the use of temperature probes, in accordance with AS 4454 To have sited on the hardstand a 'Powerscreen Trommel 511' or equivalent for the screening of cured windrows. 	
4.	Spray system	N/A	<ul style="list-style-type: none"> Designed to discharge water from the on-site production bore or recycled water from the capture basin To produce large droplets to minimise aerosols and dissemination of potential odours through the discharge of liquid waste onto the windrows To operate under low pressure Piping to be installed along each windrow on the compost production pad hardstand, and equipped with plugging nozzles 	As depicted in Schedule 1, Map 2
5.	Capture basin and spillway to overflow pond	70 m ²	<ul style="list-style-type: none"> To be constructed of concrete To have a concrete spillway adjoining the capture basin to the overflow pond To be designed to ensure no uncontaminated surface water run 	As depicted in Schedule 1, Map 2

	Infrastructure	Infrastructure size	Design and construction / installation requirements	Infrastructure location
Stage 1				
			<p>off enters the pond</p> <ul style="list-style-type: none"> To be designed so that no uncontaminated surface water run off can enter the pond Capture basin dimensions to be 10 m long, 7 m wide and 1 m deep, with a series of concrete blocks and screens to slow flow through the basin allowing suspended particulates to drop out in the basin, prior to liquids entering the overflow pond via a spillway. Capture basin to allow the capture of liquid off the compost production pad only Capture basin designed to allow the easy removal of sediments captured within the basin for reuse on the windrows. 	
6.	Overflow pond and enclosed pipeline to evaporation pond	2,500 m ²	<ul style="list-style-type: none"> To have a minimum holding capacity of 3,115.5 m³ (inclusive of a 500 mm freeboard) To be lined with fibre-reinforced geo synthetic clay liner Bentofix NSP 4000 (permeability of $\leq 2 \times 10^{-11}$ m/s) and a smooth high density polyethylene geomembrane HD150 (1.5mm) liner To include an enclosed pipeline that transfers captured liquid wastes from the overflow pond to the evaporation pond with the assistance of a pump system. To be designed so that no uncontaminated surface water run-off enters the pond. To be constructed to maintain a separation distance of greater than 2 m from the highest groundwater level. 	As depicted in Schedule 1, Map 2
7.	Evaporation pond	7,500 m ²	<ul style="list-style-type: none"> To have a holding capacity of 14,500 m³ (inclusive of a 500 mm freeboard) To be lined with fibre-reinforced geo synthetic clay liner Bentofix 	As depicted in Schedule 1, Map 2

	Infrastructure	Infrastructure size	Design and construction / installation requirements	Infrastructure location
Stage 1				
			<p>NSP 4000 (permeability of 2×10^{-11} m/s) and a smooth high density polyethylene geomembrane HD150 (1.5 mm) liner</p> <ul style="list-style-type: none"> To be constructed to maintain a separation distance of greater than 2 m from the highest groundwater level. To contain a pipeline and a pump to allow for the reuse of collected liquid wastes stored within the evaporation pond, on the windrows. 	
8.	Wash down pad and holding tank	<p>8 m2 (pad)</p> <p>5,000 L holding tank</p>	<ul style="list-style-type: none"> The wash down pad is to be constructed of concrete and bunded. The wash down pad is to be graded at a slope of 1:200 towards a concrete sump, from which wastewater is pumped through an enclosed pipeline to a 5,000 L holding tank located within the tank farm The holding tank is to be constructed of impermeable material for the capture and storage of all wash down water. 	As depicted in Schedule 1, Map 2
9.	Site office and storage shed	N/A	<ul style="list-style-type: none"> No specification 	As depicted in Schedule 1, Map 2
10.	Internal Roads	N/A	<ul style="list-style-type: none"> To be constructed of compacted limestone Low speed signage (≤ 25 km) or similar speed control measures to be installed. 	As depicted in Schedule 1, Map 2
11.	Groundwater monitoring bores	N/A	<p><u>Well design and construction:</u></p> <ul style="list-style-type: none"> Designed and constructed in accordance with <i>ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores.</i> Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination¹. Where temporary/seasonal perched features are present, wells must be nested, and the 	As depicted in Schedule 1, Map 1 (blue dots)

	Infrastructure	Infrastructure size	Design and construction / installation requirements	Infrastructure location
Stage 1				
			<p>perched features individually screened.</p> <p><u>Logging of borehole:</u></p> <ul style="list-style-type: none"> • Soil samples must be collected and logged during the installation of the monitoring wells. • A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726. • Any observations of staining / odours or other indications of contamination must be included in the bore log. <p><u>Well construction log:</u></p> <ul style="list-style-type: none"> • Well construction details must be documented within a well construction log to demonstrate compliance with <i>ASTM D5092/D5092M-16</i>. The construction logs shall include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations. <p><u>Well development:</u></p> <ul style="list-style-type: none"> • All installed monitoring wells must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the well screen to ensure the hydraulic functioning of the well. A detailed record should be kept of well development activities and included in the well construction log. <p><u>Installation survey:</u></p> <ul style="list-style-type: none"> • the vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor. <p><u>Well network map:</u></p> <ul style="list-style-type: none"> • A well location map (using aerial 	

	Infrastructure	Infrastructure size	Design and construction / installation requirements	Infrastructure location
Stage 1				
			image overlay) must be prepared and include the location of all monitoring wells in the monitoring network and their respective identification numbers.	
Stage 2				
12.	Expansion of Compost Production pad	2,500 m ²	<ul style="list-style-type: none"> As described in row 3 above. 	As depicted in Schedule 1, Map 3

Note 1: refer to Section 8 of Schedule B2 of the *Assessment of Site Contamination NEPM* for guidance on well screen depth and length.

2. The Works Approval Holder must not discharge any green waste or manure to any part of the infrastructure listed in Condition 1 during the construction phase of Stage 1 under this works approval.

Monitoring

3. The Works Approval Holder must ensure that:
 - (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
 - (b) all groundwater samples are collected and preserved in accordance with AS/NZS 5667.11;
 - (c) all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and
 - (d) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.
4. The Works Approval Holder must undertake the monitoring specified in Table 2

Table 2: Monitoring of ambient groundwater

Monitoring point reference	Parameter	Units	Averaging Period	Frequency
Monitoring bores: MB1, MB2 and MB3	Standing water level	mBGL	Monthly	Monthly
	Biochemical Oxygen Demand	mg/L	Spot sample	Minimum of three samplings during the construction phase, at least one month
	Total Dissolved Solids			
	Total Nitrogen			

Monitoring point reference	Parameter	Units	Averaging Period	Frequency
	Total Phosphorous			apart, and prior to operation of the premises.
	Total recoverable hydrocarbons			
	Oil and Grease			
	pH ¹	-		
	<i>Escherichia coli</i> (<i>E. coli</i>) ²	cfu/100ml		
	Aluminium, Arsenic, Cadmium, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Vanadium, Zinc.	mg/L		

Records and reporting

5. The works approval holder must, within 60 calendar days of the monitoring wells being constructed, submit to the CEO a well construction report evidencing compliance with the requirements of condition 1 (Table 1, Item 11).
6. The works approval holder must within 30 calendar days of Stage 1 and Stage 2 of infrastructure or equipment specified in condition 1 being constructed and/or installed:
 - (a) undertake an audit of their compliance with the requirements of condition 1 for that stage; and
 - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
7. The Environmental Compliance Report required by condition 6, must include as a minimum the following:
 - (a) certification by a suitably qualified professional engineer confirming that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1 (Table 1);
 - (b) a list of departures (if any) from the requirements specified in condition 1, and certification by a suitably qualified professional engineer confirming that any departures are not materially different, or that the departure achieves the same function;
 - (c) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1;
 - (d) a summary of the monitoring results recorded under condition 4;

- (e) a list of any original monitoring reports (including bore logs and monitoring data) submitted to the Works Approval holder from third parties for the construction period; and
 - (f) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person; and
 - (g) is accompanied by a construction quality assurance report for condition 1, Table 1, items 3, 6, 7, and/or 8 (as relevant to the particular construction stage), that:
 - (i) is written and certified by a suitably qualified professional engineer who has undertaken construction quality assurance on the completed works; and
 - (ii) confirms the details of construction requirements reported by the Works Approval Holder under (a) and (b).
- 8.** The works approval holder must record the following information in relation to complaints received by the works approval holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
- (a) the name and contact details of the complainant, (if provided);
 - (b) the time and date of the complaint;
 - (c) the complete details of the complaint and any other concerns or other issues raised; and
 - (d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.

Definitions

In this works approval, the terms in Table have the meanings defined.

Table 3: Definitions

Term	Definition
AS 4454	means the Australian Standard AS 4454 <i>Composts, soil conditioners and mulches</i>
AS1726	means the Australian Standard AS1762 <i>Geotechnical site investigations</i> , as amended from time to time
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples</i>
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling – Guidance on sampling of groundwaters</i>
Assessment of Site Contamination NEPM	means the <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i> , as amended from time to time
ASTM D5092/D5092M-16	means the ASTM international standard for <i>Standard practice for design and installation of groundwater monitoring wells (Designation: ASTM D5092/D5092M-16)</i> , as amended from time to time
Averaging period	means the time over which a limit or target is measured or a monitoring result is obtained
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.

Term	Definition
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986 (WA).</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA).</i>
NATA	means the National Association of Testing Authorities, Australia
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis
premises	the premises to which this works approval applies, as specified at the front of this works approval and as shown on the premises map in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
Schedule 1	means Schedule 1 of this Works Approval unless otherwise stated
Spot sample	means a discrete sample representative at the time and place at which the sample is taken;
Stage 1 and Stage 2	means the construction of infrastructure as defined within Condition 1, Table 1.
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Map 1: Premises boundary map and groundwater monitoring bores

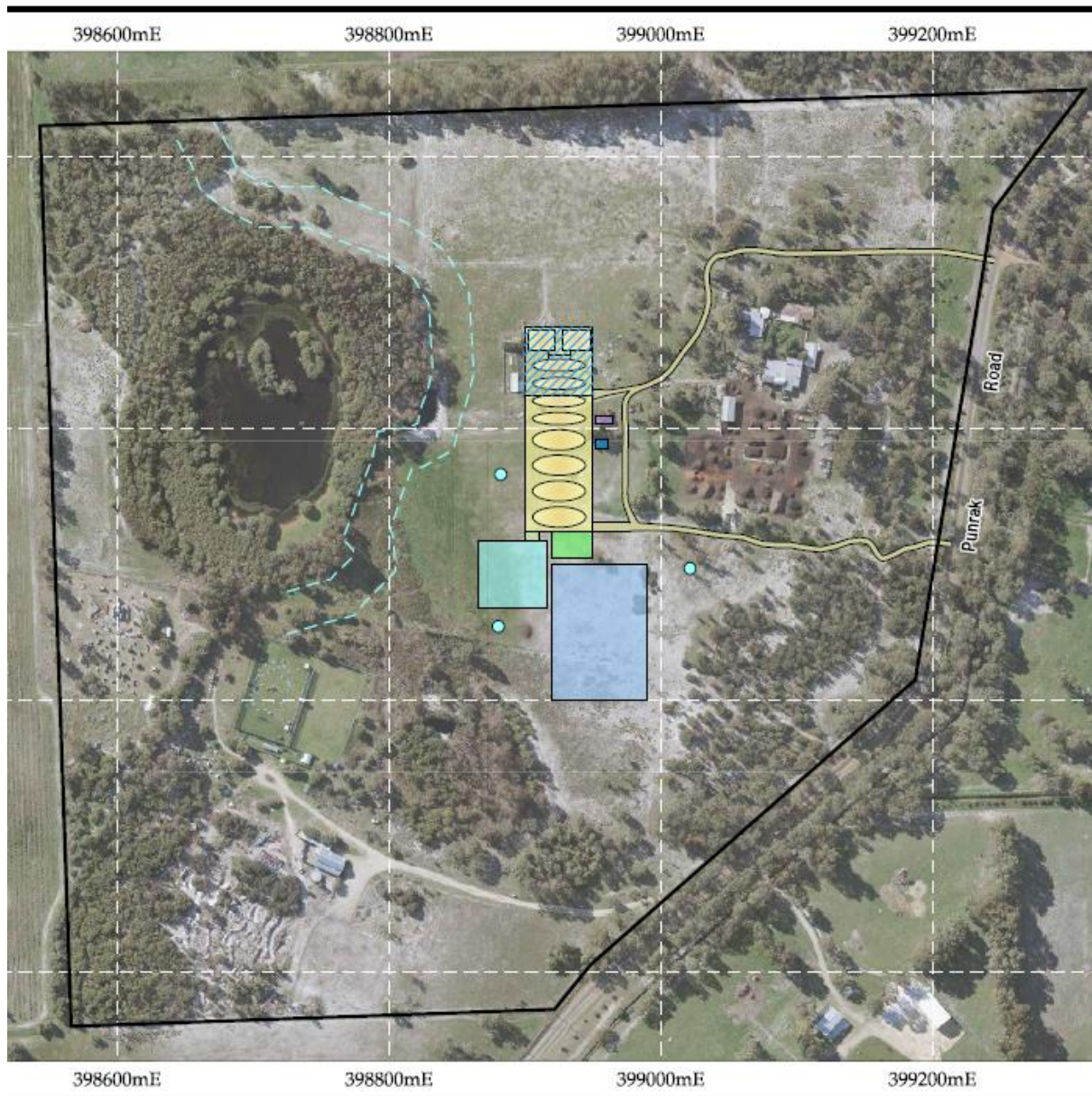


Figure 1: Map of the boundary of the prescribed premises and groundwater monitoring bore locations (depicted as blue dots)

Map 2: Premises construction layout – Stage 1

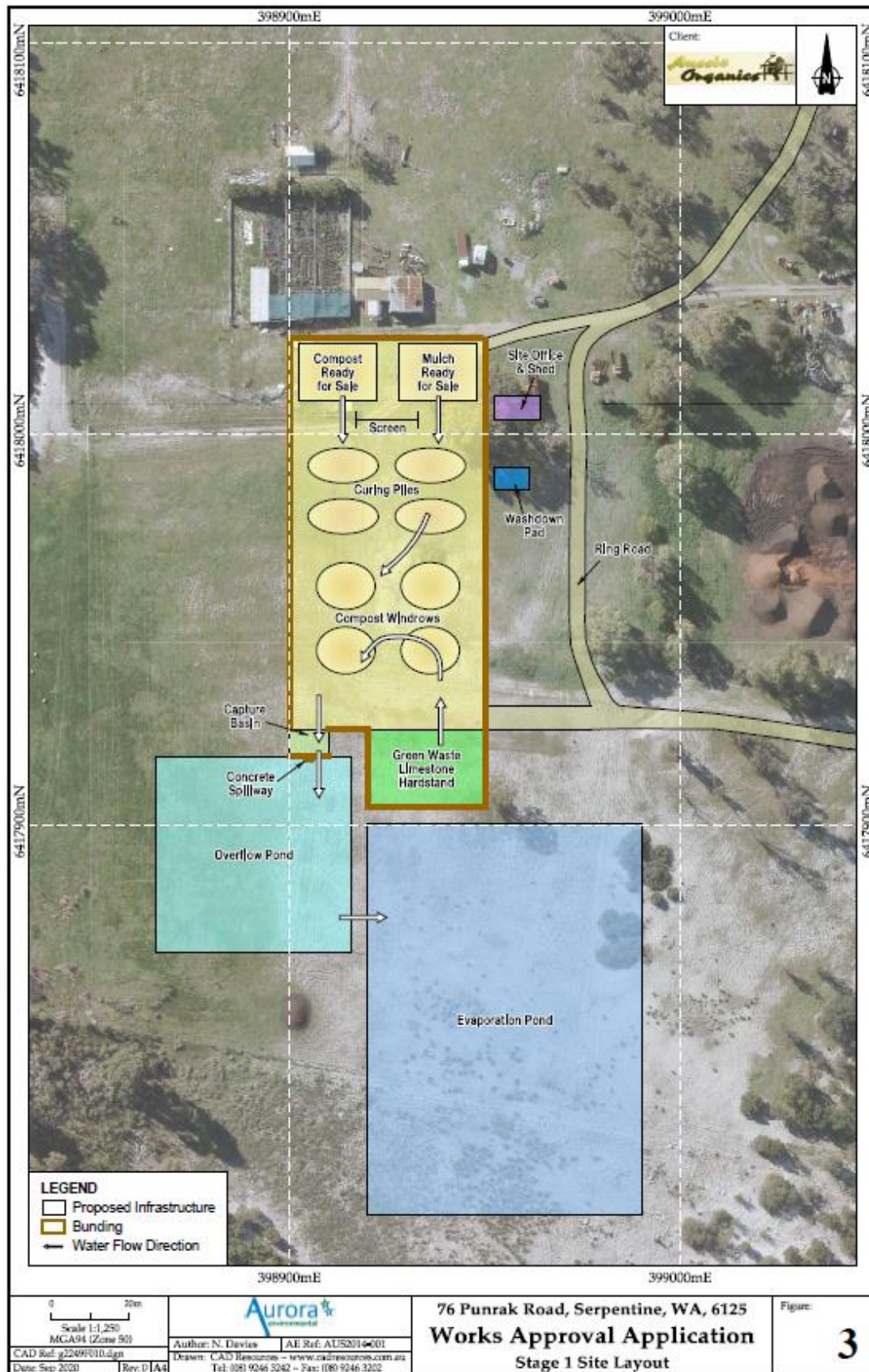


Figure 2: Layout of Stage 1 infrastructure

Map 3: Premises construction layout – Stage 2

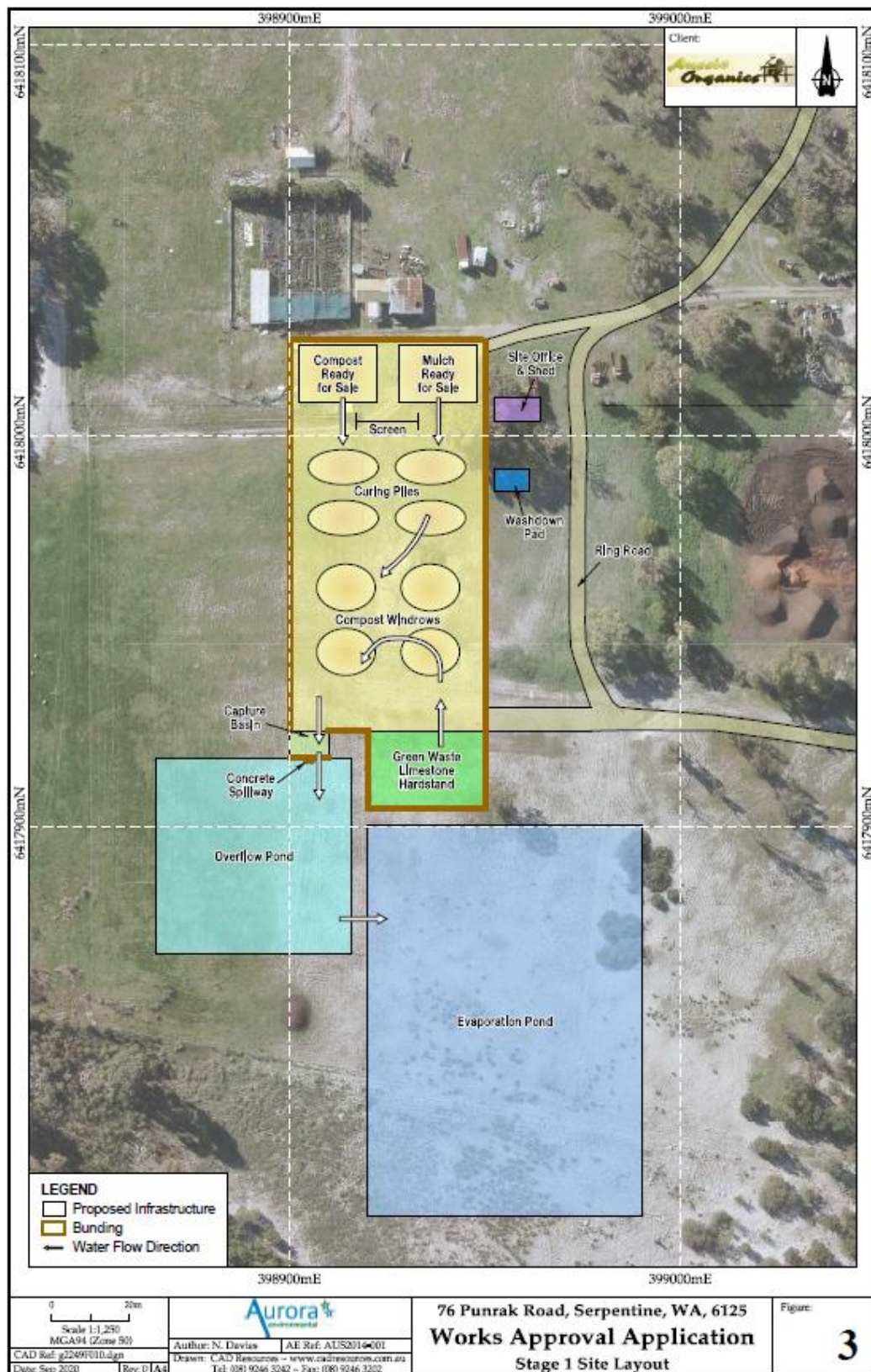


Figure 3: Layout of Stage 2 infrastructure

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IR-T05 Works approval template (v5.0) (February 2020)

Premises boundary

The Premises boundary is defined by the coordinates in Table .

Table 4: Premises boundary coordinates

Latitude	Longitude
32.36834 S	115.92155 E
32.36817 S	115.92972 E
32.37208 S	115.92836 E
32.37423 S	115.92553 E
32.37431 S	115.92172 E