Amendment Report

Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L8410/2009/2
Licence Holder	WA Composts Pty Ltd
ACN	078 383 856
File Number	DER2015/001436-1
Premises	C-Wise 230 Gull Road NAMBEELUP WA 6027 Legal description – Part of Lot 89 on Plan 741 Certificate of Title Volume 1112 Folio 243 As defined by the coordinates in Schedule 1 of the Revised Licence
Date of Report	**6/10/2023**
Decision	Revised licence granted

Steve Checker

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Date: 2023.10.06 17:48:36 +08'00'

Steve Checker
MANAGER WASTE INDUSTRIES
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L8410/2009/2 is held by WA Composts Pty Ltd (Licence Holder) for the C-Wise composting facility (the Premises), located at 230 Gull Road, Nambeelup.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L8410/2009/2 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents.

2.2 Background

The Premises operates within the greater Nambeelup Farm premises, which also consists of the Derby Industries Pty Ltd (CM Farms) piggery and the Mushroom Exchange Pty Ltd composting facility. The Premises accepts solid and liquid wastes from CM Farms for use in their composting process.

2.3 Application summary

On 25 July 2023, the Licence Holder submitted an application to the department to amend Licence L8410/2009/2 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- A reduction to the currently authorised waste acceptance throughput for 'piggery wastewater and sludge' from the adjacent CM Farms premises from 42,090 tonnes to a maximum of 10,000 tonnes per annual period;
- An increase to the premises currently authorised waste acceptance throughput for other liquid wastes from 60,000 tonnes to 80,000 tonnes per annual period;
- The removal of specific waste types currently authorised to be accepted at the premises where approval is no longer required; and
- The authorisation for static composting where animal mortalities are introduced into composting windrows.

No changes to the currently approved premises throughputs for Category 61 (Liquid waste facility) or Category 67A (Composting manufacturing and soil blending) are being requested as a part of this amendment.

Details regarding the Licence Holder's proposed amendments are outlined below.

2.3.1 Reduction in waste acceptance of piggery waste

The Licence Holder is seeking a reduction to the waste acceptance specification for piggery wastewater and sludge as the new requested volume of 10,000 tonnes per annual period will

meet the operational needs of both CM Farms and the Premises.

The previously approved volume of 42,090 tonnes which has been historically utilised at the Premises was linked to the production of organically certified compost. The Licence Holder has advised that there is a reduced need to generate organically certified product for the foreseeable future, and therefore the need for this volume of feedstock from CM Farms is also reduced.

The ongoing management of piggery wastewater and sludge produced at the CM Farms premises will be managed under the CM Farms Licence (L6932/1988/11).

2.3.2 Increase in liquid waste acceptance

The Licence Holder anticipates that the waste types listed in Table 1 will be received in higher volumes than in previous years under the proposed increase in liquid waste acceptance.

Table 1: Liquid waste types acceptance volumes

Liquid waste type and controlled waste code	Rationale
B100 - Acidic Wash waters	Expected to be received in larger volumes due to contractual obligations. Whilst this waste type only encompasses a small percentage of total waste volumes received, there has been substantial increase in the acceptance of this waste over the past few years. Waste accepted as 'Acidic Wash water' will be classified as having a pH below 6. Wastes with a pH above 6 and below 10 will be accepted as 'Industrial wash waters'. There should be no difference in contaminant concentrations between these two waste types, except a slightly higher level of Sulphates present within 'Acidic Wash waters'.
C100 - Alkali Wash waters	Expected to be received in larger volumes due to contractual obligations. Whilst this waste type only encompasses a small percentage of total waste volumes received, there has been substantial increase in the acceptance of this waste over the past few years. Waste accepted as 'Alkali Wash water' will be classified as having a pH above 10. Wastes with a pH above 6 and below 10 will be accepted as 'Industrial wash waters'. There should be no difference in contaminant concentrations between these two waste tyes, except a slightly higher level of Sodium present within 'Alkali Wash waters'.
D300 - Non-Toxic Salts	Expected to be received in larger volumes due to working relationships with fertilizer suppliers across the state. This waste naturally contains beneficial compounds and elements for incorporation into the composting process resulting from the fertilizer process they are produced through. The waste acceptance volume for Non-Toxic salts has increased over the last few years with this increase expected to continue. This waste type has previously encompassed 24 – 45% of the total

	waste volumes received to the Premises.
L150 - Industrial wash waters	Expected to be received in much larger volumes due to contractual obligations. Increased volume will include stormwater run-off contaminated with salts (e.g. Sulphates and Nitrates) which are beneficial for the composting process. Wastes are subject to testing on arrival to the Premises to ensure they meet Premises specific parameters assigned for this waste type. There has been substantial increase in the acceptance of this waste over the past few years, however it is not anticipated to account for more than 50% of the total annual acceptance volume.
M130 - Organic chemicals	Expected to be received in larger volumes due to the recent closure of other similar facilities. These wastes contain beneficial carbon for use in the composting process and are not expected to contain any other contaminants. There has been substantial increase in the acceptance of this waste over the past few years.
N205 - Sludges	Expected to be received in larger volumes due to the anticipated increase in acceptance volume for industrial wash waters. Waste accepted as 'Industrial wash water' may be reclassified to 'Sludges' if the solids limit defined by the Premises of 10% total solids (oven dried 105◦C / 24hrs) is exceeded. Solids within this waste are likely to include leaves and sand.

The Delegated Officer notes that an increase in the currently approved premises throughput for liquid waste has not been sought through this amendment as the Licence Holder has advised the current throughput will be sufficient to facilitate the increase acceptance of liquid waste. However, to demonstrate the current pond capacity at the premises is sufficient to contain additional volumes of liquid waste, the Licence Holder has provided a water balance for the Premises. The water balance has been calculated with regard to the advice outlined in the *Guideline: Better practice organics recycling* (December 2022) and confirms that the current pond network has theoretical capacity to contain liquid waste whilst maintaining freeboard at the throughput specified on the Licence when a nominally wet rainfall year is considered. This capacity will be subject to effective onsite management and ultimately adherence to freeboard conditions and other licence controls must be adhered to in the first instance in the management of liquid waste acceptance onsite.

2.3.3 Removal of waste types

The Licence Holder is requesting the waste types listed in Table 2 below be removed waste acceptance specifications within the Licence as these waste types will no longer be required at the Premises.

Table 2: Waste types to be removed from the Licence

Description	Controlled Waste Type
Inorganic sulphides	D330
Phosphorus	D360

Aqueous based waste from the production, formulation and use of resins, latex, plasticisers, glues and adhesives	F100
Solvent based water from the production, formulation and use of resins, latex, plasticisers, glues and adhesives	F130
Non halogenated organic solvents	G110
Waste from production, use and formulation of organic solvents not otherwise specified	G160
Tannery wastes not containing chromium	K140
Wool scouring wastes	K190
Fly ask excluding fly ash generated from Australian coal fired power stations	N150
Waste from production or formulation of photographic chemicals or processing materials	T120

Waste types listed in Table 2 will be considered as 'non-standard feedstocks' in line with the *Guideline: Better practice organics recycling* (December 2022). The Delegated Officer considers that the removal of non-standard feedstocks from the composting process will reduce the risk and uncertainty regarding the potential consequence of emissions arising from these feedstocks, where the components of these feedstocks are not well characterised.

2.3.4 Static composting

Conditions within the existing licence require the Licence Holder to maintain an aerobic state within all composting windows by turning the material a minimum of every three days or by placing the material on an aeration system. However, the Licence Holder has advised that when animal mortalities are incorporated into composting windrows they must be held in a static pile and remain undisturbed to permit adequate decomposition.

Waste components will emit a plume of odour during the turning of composting windrows. As composting timeframes lengthen, each turning phase will progress to a peak of odour release which will then taper during subsequent turns. The Licence Holder has advised that if static windrow piles containing animal mortalities are turned at a minimum of every three days as current required under the Licence, then the animal mortalities will continue to decompose in open air, resulting in the release of high concentrations of odour as the mortalities are no longer encapsulated within the windrows.

To support an amendment to Licence conditions where composting windrows containing animal mortalities can remain static, the Licence Holder has provided background industry research into the best practices for composting animal mortalities. Findings indicate that:

- Nearly all best practice methods share distinct procedures that isolate the mortalities from the environment (i.e. open air) until they decompose, with the most common process being composting whole mortalities in passively aerated windrow piles;
- Mortalities should be surrounded with carbon rich and moisture absorbing feedstock layer 30-45 cm thick so that any gases released from the anaerobic zones of the animal mass are trapped in the aerobic carbon rich feedstock layer, where they will be converted to carbon dioxide and water by microorganism during the decomposition process. In this regard, the carbon rich feedstock layer will act as a biofilter for odours;
- Particle size of the composting materials should range between 3.1 to 12.7 mm in

diameter and the pile should not be too wide or too dense to ensure proper aeration through natural ventilation; and

- Static pile composting in early phase of mortalities composting helps to retain ammonia which can then be assimilated by bacteria

The Licence Holder intends to undertake static composting in windrows with introduced animal mortalities for a minimum of 6 weeks to ensure adequate decomposition has occurred. At the end of this 6 week period, the windows will be related to a Mobile Aerated Floor (MAF) aeration system already in use at the premises to undergo aerobic composting in line with current Licence conditions.

2.3.5 Final product composition

The Licence Holder has provided the advice outlined in Table 3 on how the proposed changes to the composting process through static pile composting and the acceptance of greater volumes of specified liquid waste types are not expected to impact final product composition. The Licence Holder will continue to undertake specific category testing for new and current waste streams both prior to and after receival as well as within the process, products and dams to better understand any contaminant, safety or odour risks.

Table 3: Impacts to final products from proposed amendments

Proposed amendment	Impacts to final product
Static pile composting	The Licence Holder anticipates that static pile composting will have a beneficial impact to final product quality as: • Static composting will prevent the calcification of animal bones and instead allow bones to be subject to biological breakdown, adding nutrients to the product; • Static composting will ensure vermin will not be able to access animal mortalities and prevent biological contamination of the final product in the form of pathogens; and • The static treatment of animal mortalities is well documented as a viable method for removing pathogens, disease and other contamination from final product.
Increased acceptance of B100 - Acidic Wash waters	Waste type is not expected to have any major effect on the pH of the receival dams or product, as both have a natural ability to return to a neutral-mildly alkaline pH due to naturally occurring biological and chemical activity. An increase in sulphur will be expected in the final product. The larger amount of incoming Alkali Wash waters will also assist to pH neutralise and balance the Acidic Wash waters (and vice versa), with the balance falling slightly on the more alkaline side of neutral which is preferable regarding odours, product and processing.
Increased acceptance of C100 - Alkali Wash waters	Waste type is not expected to have any major effect on the pH of the receival dams or product as both have a natural ability to return to a neutral-mildly alkaline pH due to naturally occurring biological and chemical activity. An increase in sulphur will be expected in the compost product and a slight increase in sodium, which will be monitored as to not jeopardize the product limits.
Increased acceptance of	An increase in nutrients and trace elements is expected.

D300 - Non-Toxic Salts	Small amounts of sodium and chloride may also occur, which will be monitored as to not jeopardize the product limits.
Increased acceptance of L150 - Industrial wash waters	Expected to be received in much larger volumes due to contractual obligations. Increased volume will include stormwater run-off contaminated with salts (e.g. Sulphates and Nitrates) which are beneficial for the composting process. Wastes are subject to testing on arrival to the Premises to ensure they meet Premises specific parameters assigned for this waste type. There has been substantial increase in the acceptance of this waste over the past few years, however it is not anticipated to account for more than 50% of the total annual acceptance volume.
Increased acceptance of M130 - Organic chemicals	The product is expected to have an increase in both carbon and to a lesser extent nitrogen. No other significant contaminants are expected.
Increased acceptance of N205 - Sludges	Organic solids within sludges (leaves etc.) will naturally break down. Inert solids (sand etc.) can be present within final product unaltered but is favourable for certain products such as those applied to lawns, landscaping, and potting mixtures. Sludge loads are closely scrutinized (as are new L150 loads) and problematic contaminants are expected to be low and well understood.

2.3.6 Authorisation for use of turkey nests

On 7 September 2021, the Licence Holder advised DWER that they had constructed two temporary turkey's nest dams to ensure the existing dams at the premises maintained their freeboard during a very wet winter. The turkey's nests were each constructed within the asphalt hardstand area of the premises with a capacity of 1.8 ML and were lined with a 1mm HDPE liner. The Licence Holder provided construction design drawings and photographs of the finished ponds as requested by DWER at the time of notification. Initially, the Licence Holder advised that the turkey's nests would be decommissioned by 1 December 2021.

DWER undertook a compliance inspection at the premises on 18 April 2023, where it was found that the turkey's nests were still in operation. It was advised by DWER during this inspection that the turkey's nests should be decommissioned by 1 September 2023 and that the Licence Holder should provide confirmation that decommissioning has occurred.

The Licence Holder is currently investigating end use options and treatment/recycling options for water and is considering storing this water in the turkey's nests to facilitate this investigation. This would prevent the Licence Holder having to construct additional infrastructure for treated recycled water storage at the premises. The turkey's nests currently contain stormwater whilst the Licence Holder is finalising decisions around treated recycled water, however the Licence Holder does not have approximate dates as to when the turkey's nests will receive treated recycled water, when this process will be finalized, and when the ponds will be decommissioned.

As such, the Delegated Officer considers that the use of the ponds should be authorised on the Licence through this Licence amendment. Compliance issues surrounding the initial construction of the turkey's nests without approval will be followed up separate to the Licence by DWER's Compliance and Enforcement branch.

The Licence Holder still considers the turkey's nests as temporary structures and plans on decommissioning the structures as soon as possible so the space occupied by the turkey's nests can be utilised for composting. Decommissioning would be undertaken by pumping out treated recycled water, disposing of the HDPE liner and material used to build the turkey's nests

(should this material be tested and found unsuitable as a saleable product) and diverting residual liquid to the dam capture system.

2.3.7 Other amendments

The Licence Holder has requested the removal of conditions throughout the Licence where the requirements of the Licence conditions have been met. This includes:

- Condition 5 – confirmation of hardstand operational requirements
- Condition 21 – seepage rate or integrity testing for ponds at the Premises
- Condition 22 – submission of results for the seepage rate or integrity testing for ponds at the Premises
- Condition 23 – submission of a depth to groundwater report showing the estimated separation distance between the base of the ponds and the maximum groundwater level
- Condition 24 – single groundwater and pond monitoring event for PFAS parameters
- Condition 25 – submission of results for the single groundwater and pond monitoring event for PFAS parameters
- Condition 26 – liquid waste stream characterisation and identification of role in composting process
- Condition 27 – composting product identification, specification and compliance with standard contaminant limits
- Condition 28 - liquid waste stream characterisation and identification of role in composting process for wastes not accepted and characterized prior to 15 February 2019
- Condition 30(d) – books maintained for monitoring undertaken in accordance with condition 24 (single groundwater and pond monitoring event for PFAS parameters)

The Delegated Officer has confirmed that compliance with the above conditions has been achieved through the submission of reports containing the information and data requested. As such, the Delegated Officer will remove these conditions under this Licence amendment.

It should be noted that conditions 26, 27 and 28 were included on the existing Licence as the information requested through these conditions had not been previously provided to DWER in sufficient detail. On receipt of this information, given the potentially variable nature of liquid waste streams accepted for use as feedstocks, the Delegated Officer has determined that aspects of the requirements of these conditions will be carried over into the revised Licence. This will ensure that an overview of non-standard feedstocks (as defined in the *Guideline: Better practice organics recycling*) for use in the composting process will continue to be provided to DWER, along with confirmation that utilising non-standard feedstocks is not resulting in a negative impact on final compost product quality.

In amending the licence to remove these now redundant conditions, the CEO will also:

- update the format and appearance of the Licence;
- revised licence condition's numbers and realigned condition numbers for numerical consistency; and
- corrected clerical mistakes and unintentional errors.

Previously issued amendment notices and reports will remain on DWER's website as a record of the decision making process in relation to this Licence.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in

Table 4 below.

Table 4 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 4: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Liquid waste	Overtopping of storage ponds	Overland runoff Seepage to land	Minimum freeboards of 300mm are maintained in all ponds. All ponds have 1.5mm HDPE geomembrane lining. Water balance provided by Licence Holder has demonstrated the ponds capacity to contain the specified throughput of liquid waste whilst maintaining freeboard during a nominally wet rainfall year.
Leachate	Mixing of solid feedstock and liquid waste	Seepage to land	Current mixing ratio of 1m^3 liquid to every 1m^3 of compost to be maintained to minimise leachate generation. Mixing to be undertaken on asphalt hardstand.
	Composting process		Composting to be undertaken on asphalt hardstand. Hardstands drain to storage ponds for collection of leachate.
Odour	Solid feedstock acceptance, handing and storage	Air / windborne pathway	Reduction in piggery wastewater and sludge accepted to the premises from 42,090 tonnes per annum period down to 10,000 tonnes. Animal mortalities immediately covered with carbon rich material on receipt at the premises. Animal mortalities incorporated into composting windrows within 24hrs of receipt at the premises and immediately covered with a carbon rich layer within the composting windrows. on receipt at the premises.
	Composting		Animal mortalities immediately covered with

Emission	Sources	Potential pathways	Proposed controls
	process		carbon rich material on receipt at the premises. Animal mortalities incorporated into composting windrows within 24hrs of receipt at the premises and immediately covered with a carbon rich layer within the composting windrows. on receipt at the premises. Windrows containing animal mortalities to remain static for a minimum period of 6 weeks to allow for adequate decomposition and prevent the release of odour. After the minimum 6 week period, composting windrows containing animal mortalities will be turned a minimum of once every 3 times to ensure windrows remain in an aerobic state.
Pathogens and other contaminants within product	Final compost product	Human contact with compost Direct application to land	Turning / mixing schedule, monitoring and testing currently in place at the Premises will continue to ensure current final composting product qualities are maintained. The Licence Holder has accounted for minor changes in composting product as a result of the incorporation of greater quantities of specific liquid waste types as feedstock and will ensure product limits are not exceeded as a result of these minor changes.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 5 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental siting* (DWER 2020)).

Table 5: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Murrayfield Airport	Approximately 500m south of the Premises boundary
Rural residential premises 1	Approximately 1,100 m south-west of the Premises
Rural residential premises 2	Approximately 1,990 m south-east of the Premises
Nearest residential development (Stake Hill)	Approximately 3,160 m north-west of the Premises
Southern portion of Stake Hill residential area	Approximately 3,300 m north-west of the Premises

Barrangup residential area	Approximately 3,750 m south-west of the Premises
Environmental receptors	**Distance from prescribed activity**
Nature reserve	Crown land vested in the Conservation Commission of Western Australian for the conservation of flora and fauna is located approximately 700 m to the south west of the Premises
Threatened Ecological Communities and Priority Ecological Communities	A threatened ecological community is located approximately 5km to the south west of the Premises
Rare flora	The Premises is located within an area approximately 20km by 9km known to contain declared rare flora.
Environmental Protection Peel Inlet – Harvey Estuary Policy 1992	The Premises is within the Policy area
Rights in Water and Irrigation Act 1914 • Surface Water (Serpentine River System) • Groundwater (Murray)	Premises within Proclaimed areas
Groundwater	Groundwater is generally less than 2m from the ground surface across the Premises area. The regional direction of groundwater flow may be in a west to north-westerly direction towards the Serpentine River. There may be local variations in flow direction near Nambeelup Farm due to the presence of water table management drains, seepage from ponds, and local groundwater abstraction. There are several abstraction bores within the vicinity and down hydraulic gradient from the Premises which are used for livestock watering and irrigation.
RAMSAR wetland	Peel-Yalgorup System (Peel Estuary Harvey Inlet) located over 11km west south west of the Premises
Geomorphic Wetlands	There are five conservation category wetlands within 1km of the Premises operational areas: • One approximately 1km southwest of the Premises; • Two approximately 800m and 600m south-east of the Premises; and • Two approximately 400m and 800m north of the Premises.
Waterbodies	The Nambeelup Brook is located approximately 2km east of the Premises. The Serpentine River is located approximately 2.5km west of the Premises. Goegrup Lake is approximately 5km south west of the Premises and is fed by both the Serpentine River and Nambeelup Brook. All three waterbodies are Conservation category

	wetlands (western end of Nambeelup Brook only) and ultimately drain to the Peel Harvey Estuary.

Figure 1: Distance to sensitive residential receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 6.

The Revised Licence L8410/2009/2 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. static composting and ongoing liquid waste acceptance.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 6. Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Composting process including solid feedstock acceptance, handing and storage	Leachate	Seepage to land causing impacts to soil and underlying groundwater	Peel-Yalgorup RAMSAR Wetland/Peel Inlet and Harvey Estuary EPP area Groundwater (abstraction bores) Geomorphic Wetlands – Conservation category wetlands Nambeelup Brook Serpentine River Nature reserve Threatened Ecological Communities and Priority Ecological Communities	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Conditions 4, 6, 7, 17, 24, 25 26	N/A
	Odour	Air / windborne pathway causing impacts to health and amenity	Residential receptors Patrons of air field located 500m south	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Conditions 2, 3, 4, 14, 15, 16, 18, 19, 24, 25, 26	N/A
Acceptance of additional volumes of liquid waste	Liquid waste	Overtopping of ponds resulting in direct discharge to land	Groundwater (abstraction bores) Geomorphic Wetlands – Conservation category wetlands Nambeelup Brook Serpentine River Nature reserve Threatened Ecological Communities and Priority Ecological Communities	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Conditions 4, 8, 24, 25, 26	N/A

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Composting product	Pathogens	Human contact with compost that may contain pathogens causing impacts to public health	End users	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 22	N/A
	Contaminants within product	Direct application to land causing contamination of soil	Premises where product is applied to land	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 22	N/A

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 7 provides a summary of the consultation undertaken by the department.

Table 7: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website (18/09/2023). Direct Stakeholder consultation	No comments received. C-wise client directly consulted and confirmed revised waste acceptance criteria meets their operational needs.	N/A
Shire of Murray advised of proposal (14/09/2023)	No comments received	N/A
Licence Holder was provided with draft amendment (19/09/2023)	Comments were received on 22 September and are outlined in Appendix 1.	Outlined in Appendix 1.

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 8 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 8: Summary of licence amendments

Condition no.	Proposed amendments
N/A Front page	Format updated in line with current licensing formatting. Coordinates removed and incorporated into revised Schedule 2. Category description table included.
N/A Explanatory notes	Redundant text removed in line current licensing formatting.
N/A Licence History	Added in line current licensing formatting.
N/A Definitions and interpretation	Definitions moved to table at the end of conditions in line current licensing formatting. Interpretation section updated to new terminology in line current licensing formatting.

1 (Table 1)	Reference to redundant conditions deleted. Reference to previous Schedule 2 deleted.
3 (Table 2)	Piggery wastewater and sludge quantity limit reduced to 10,000 tonnes per annual period. Other liquid waste quantity limit increased to 80,000 tonnes per annual period. Removal of waste types from waste acceptance specifications where no longer required by the Licence Holder.
4 (Table 3)	Inclusion of turkey's nest and operational requirements.
5 (previous Licence)	Redundant condition removed – requirements have been demonstrated.
8	Inclusion of freeboard requirements for turkey's nests.
9 (previous Licence)	Condition removed and requirements incorporated into new condition 15
15	New condition included to specify animal mortality static composting requirements.
16	Condition updated to specify windrow turning requirements for composting windrows which have incorporated animal mortalities.
17	New condition to incorporate ongoing feedstock characterisation requirements previously outlined in Conditions 26 and 28 (previous Licence).
18	New condition to incorporate testing requirements for feedstocks where characterisation against waste acceptance criteria cannot be demonstrated.
19 (Table 5)	Note added specifying where in field non-NATA analysis is permitted.
12 (Table 6)	Note added specifying where in field non-NATA analysis is permitted.
21 (previous Licence)	Redundant condition removed – requirements have been demonstrated.
22 (previous Licence)	Redundant condition removed – requirements have been demonstrated.
23 (previous Licence)	Redundant condition removed – requirements have been demonstrated.
24 (previous Licence)	Redundant condition removed – requirements have been demonstrated.
25 (previous Licence)	Redundant condition removed – requirements have been demonstrated.
26 (previous Licence)	Redundant condition removed – reporting requirements have been demonstrated. Ongoing feedstock characterisation requirements incorporated into Condition 17.
27 (previous Licence)	Redundant condition removed – reporting requirements have been demonstrated. Ongoing product characterisation requirements incorporated into Condition 21.

28 (previous Licence)	Redundant condition removed – reporting requirements have been demonstrated. Ongoing feedstock characterisation requirements incorporated into Condition 17.
22, Tables 7 and 8	New condition to incorporate ongoing product characterisation requirements in line with contaminant limits previously outlined in Condition 27 (previous Licence).
23	Reference to redundant condition deleted.
24	Reference to redundant condition deleted. Inclusion of bookkeeping for verification testing on Liquid Waste Streams.
N/A Definitions	New table incorporated into licence in line with current licensing formatting. Definitions updated as required.
N/A Schedule 1	Figure references included. Premises map updated to reflect inclusion of turkey's nests
N/A Schedule 2	'General description' Schedule removed from licence in line with current licensing formatting. New Schedule 2 included outlining Premises boundary coordinates previously on from page of licence, in line with current licensing formatting.
N/A Schedule 3	Minimal analytical suite updated to remove waste types no longer accepted to the premises.
N/A Schedule 4	Reference to submission requirements relating to redundant conditions removed from licence.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
4 (Table 3)	Recycled water is defined as 'water sourced from Dams 31 or 32 which have undergone wastewater treatment'. The storage of this water in the turkey's nests is considered low risk as it sits on hardstand which can direct all water to the dams.	The Delegated Officer notes that the primary intent of Dams 31 and 32 is to accommodate winter rainfall events, and that the Licence Holder considers that the dams act as polishing ponds to allow biodegradable material to be degraded. The turkey's nests are temporary structures that are located on a hardstand which will direct run off to other dams. The turkey's nests are HDPE lined to the same specification as Dams 31 and 32 and will also be required to maintain a freeboard as the dams are. As such, the Delegated Officer will permit the storage of stormwater or water sourced from Dam 31 or Dam 32 in the turkey's nests through conditions in the Revised Licence.
Condition 17	The original wording of the draft condition could be interpreted so as C-Wise is required to undertake ongoing testing and assessment of all Liquid Waste Streams. C-Wise believes that it is DWER's intention for the draft condition for C-Wise to assess Liquid Waste Streams that are unfamiliar to our operations and therefore have not previously been assessed for suitability. C-Wise proposes to amend the wording to require feedstock characterisation for unfamiliar liquid waste streams only. The amended wording ensures characterisation requirements are limited to those waste streams which are unfamiliar to C-Wise. Our process currently aligns to this practice.	In light of comments from the Licence Holder, the Delegated Officer has amended previous condition wording to remove ongoing testing and assessment of liquid waste streams so long as the Licence Holder can adequately characterise the waste stream to ensure that it meets the controlled waste category specification for that Liquid Waste as outlined in the waste acceptance criteria. This does not add additional regulatory burden to the Licence Holder. Where the Licence Holder cannot characterise a liquid waste stream against waste acceptance specifications, the Licence Holder will be required to undertake verification testing for that waste stream in line with the previous condition wording. This aligns with the Licence Holder's recommendation to only assess 'unfamiliar' waste streams.

Condition	Summary of Licence Holder's comment	Department's response
Condition 21	It is understood that DWER's intention to assign contaminant limits is to ensure that products are fit for purpose. However, the use of limits to achieve this outcome has unintended outcomes that DWER may not fully appreciate. The limits listed align to AS4454, however it would be an unnecessary imposition to trace each instance where C-Wise has not aligned to the limits noting that AS4454 states 'Non-conformance with this Standard does not indicate that the product may not otherwise be suitable for a range of specified applications that comply with other state or territory government regulations, guidelines, or specified end user requirements'. While it is acknowledged that DWER is not enforcing compliance with the AS4454, tracking and justifying every instance of non-conformance will have a significant impact on our operations. C-Wise currently works with many farmers who are dealing with soils deficient in micronutrients listed in Table 7 as "contaminants" table e.g. Boron, Copper, Zinc. Enforcing limitations on "contaminants" creates an unnecessary barrier in comparison with competing soil amendments. Please note, C-Wise is not requesting that the condition be removed as we currently undertake regular testing of our products to ensure they meet the intended use and to monitor product quality. C-Wise is seeking flexibility to undertake testing which is not commercial restrictive. Ideally this would mean Table 7 and Table 8 are not required.	The Delegated Officer notes that previous licence conditions required the Licence Holder to submit a report which: • identified all Compost Products produced on the Premises and each product's proposed end use(s); • detailed the product specification for each of the products; • identified the extent to which the product specification of each product met the product standards outlined in AS4454; and • demonstrated, where the product specification for any product deviated from the product standards, how the product specification ensured the product was suitable for its intended end use(s). This report was submitted to DWER on 15 March 2019. In light of comments from the Licence Holder, the Delegated Officer has amended previous condition wording to remove ongoing requirements for the Licence Holder to demonstrate products standards against the limits within AS4454. As the product report submitted on 15 March 2019 contains detailed standards for each product produced by the Licence Holder, the Licence Holder will instead be required to identify the extent to which each compost product meets the product standards within this report, being 'DWER Compost Product Report Mar19 FINAL (A1772667)'.
	Additional comments received 27 September 2023 The revised wording and requirements of the condition would be more onerous than the previous wording. We request reverting to the previous wording.	The Delegated Officer will revert condition wording back to that originally proposed as requested.

Condition	Summary of Licence Holder's comment	Department's response
Condition 27	Annual reporting on feedstock characterisation and product quality is not something previously required and would significantly increase our current testing, administration and reporting requirements, and consequently add to the cost of doing business. These tasks are undertaken as they are a part of standard operations.	The Delegated Officer acknowledges the additional regulatory burden imposed by additional reporting conditions and as such has removed these requirements from the revised Licence. A requirement will be added to Condition 24 of the revised Licence to ensure the Licence Holder keeps record of any verification testing of liquid waste streams. However, there will be no reporting obligation associated with this additional requirement.
N/A – Definitions, Table 9	The Previous Licence was not restrictive on the source of animal mortalities. Our current practice is to accept animal mortalities from CM Farms and other sources that are beneficial to our process.	Specification has been added to the definition to allow the acceptance of animal mortalities from other suitable premises.
N/A – Schedule 1	As requested, a new premises map has been provided showing the location of the turkey's nests.	New premises map has been incorporated into the revised Licence.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
Application type					
Amendment to licence	☒	Current licence number:	L8410/2009/2		
		Relevant works approval number:		N/A	☒
Date application received		25 July 2023			
Applicant and Premises details					
Applicant name/s (full legal name/s)		WA Composts Pty Ltd			
Premises name		C-Wise			
Premises location		230 Gull Road NAMBEELUP WA 6207			
Local Government Authority		Shire of Murray			
Application documents					
HPCM file reference number:		DER2015/001436-1~5			
Key application documents (additional to application form):		C-Wise DWER RFI Response C-Wise DWER Annual Monitoring Report 2022			
Scope of application/assessment					
Summary of proposed activities or changes to existing operations.		Amendment sought to change waste acceptance specifications and quantities, remove requirement for turning of windrows every three day to permit sufficient decomposition of animal mortalities, and remove redundant licence conditions where condition requirements have been demonstrated.			

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	**Assessed production or design capacity**	**Proposed changes to the production or design capacity (amendments only)**
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	90,000 tonnes per annual period	No change to throughput proposed.
Category 61 – Liquid waste facility: Premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	93,300 tonnes per annual period	No change to throughput proposed.

Legislative context and other approvals		
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes ☐ No ☒	Referral decision No: Managed under Part V ☒ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☐ No ☒	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	General lease ☒
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A ☒	Previously provided to DWER
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☐ No ☒	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No ☒	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☒ No ☐	Licence/permit No: GWL166732
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☒ No ☐	Name: Murray Groundwater Area / Murray System Type: Proclaimed Groundwater Area / Surface Water Area Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☒ Regional office: Kwinana Peel

Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☒
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☒ No ☐	*Environmental Protection (Unauthorised Discharge) Regulations 2004*
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☒ No ☐	*Environmental Protection Peel Inlet – Harvey Estuary Policy 1992*
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☒ No ☐	Classification: contaminated – restricted use (C–RU) Date of classification: 1 June 2018