Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L5199/1983/12
Licence holder	Western Australian Meat Marketing Co-operative Ltd
Registered business address	Unit 1/3 De Vlamingh Avenue EAST PERTH WA 6004
DWER file number	DER2014/001668
Duration	16/10/2011 to 15/10/2029
Amendment date	31/07/2024
Premises details	WAMMCO International – Katanning Abattoir Great Southern Hwy KATANNING WA 6317 Legal description – Lot 3 on Diagram 42266 As shown in the premises map in Schedule 1

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed production/design capacity
Category 15: Abattoir	47,000 liveweight tonnes per year
Category 16: Rendering operations	4,900 tonnes per year
Category 55: Livestock saleyard or holding pen	1,200,000 animals per year

This amendment is granted to the licence holder, subject to the attached conditions, on 31 July 2024, by:

Daniel Hartnup

Digitally signed by Daniel Hartnup
Date: 2024.07.31 13:59:28 +08'00'

Daniel Hartnup
SNR ENVIRONMENTAL OFFICER, PROCESS INDUSTRIES
STATE-WIDE DELIVERY
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Ref number	Summary of changes
15/09/2011	L5199/1983/12	Licence renewal
21/06/2012	L5199/1983/12	Licence Amendment
29/04/2016	L5199/1983/12	Notice of Amendment of Licence Expiry Dates – extended Licence expiry date to 15 October 2019
26/06/2019	W6230/2019/1	Upgrade to primary wastewater treatment infrastructure
09/10/2019	L5199/1983/12	Licence amendment application to authorise works for the installation and operation of the RO plant and operation of new DAF plant. Includes CEO initiated amendment to extend the licence expiry date to 15 October 2021, and update licence format.
10/06/2021	L5199/1983/12	Licence amendment application to authorise disposal of brine and purge wastewater from RO plant to evaporation ponds (Pond 6 and Pond 7).
31/07/2024	L5199/1983/12	CEO-initiated amendment to extend the duration by 5 years.

Interpretation

In this licence:

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

Licence conditions

The licence holder must ensure the following conditions are complied with:

Premises operation

Dust – general requirement

1. The licence holder must not allow visible dust to cross the boundary of the premises.

Stack – dark smoke emissions

2. The licence holder must ensure the emission of dark smoke from any chimney stack does not continue for greater than a period of 4 minutes in aggregate in any 1-hour period.

3. The licence holder must ensure the emission of dark smoke from the entire licensed premises does not continue for greater than a period of 20 minutes in aggregate in any 24-hour period.

Rendering plant – Gas treatment system

4. The licence holder must operate the rendering facility such that the gas emission treatment system is operational whenever the cooker(s) is (are) in use.

5. The licence holder must direct all condensable gases from the cooker(s) to the condensers.

Waste material

6. The licence holder must:

   (a) ensure all animal waste material is rendered or disposed off-site within 24-hours of the slaughter of the animal or receival of the material;
   (b) ensure all animal waste material disposed off-site is directed to a licensed landfill or rendering facility; and
   (c) notify the CEO in writing prior to disposing of any animal waste material in accordance with condition 6(b) of this licence.

Wastewater treatment

7. The licence holder must direct all wastewater generated by the abattoir, through a solid trap, rotary screen and fat separation (DAF) equipment prior to discharge to the wastewater treatment ponds.

8. The licence holder must direct all wastewater generated by the rendering facility through a solid trap, rotary screen and fat separation (DAF) equipment prior to discharge to the wastewater treatment ponds.

9. The licence holder must direct all wastewater generated by the lairage run-off and truck washdown through a solid settlement sump prior to discharge to the wastewater treatment ponds.

Discharge to Pinwernying Creek

10. The licence holder must ensure raw, treated or other contaminated wastewaters are not discharged to the Pinwernying Creek or its tributaries.

Management of wastewater treatment ponds (except evaporation ponds)

11. The licence holder must manage and operate the wastewater treatment ponds in a manner such that:

   (a) all uncontaminated stormwater is diverted away from the ponds, to minimise the threat of erosion of pond embankments or flooding;
   (b) leakage from, or overtopping of the ponds does not occur;
   (c) trapped overflows are maintained on the discharge from the anaerobic treatment pond to prevent carry over of surface floating matter to the subsequent treatment ponds;
   (d) aerobic and maturation pond surfaces are kept clear of floating matter and algal mats. Vegetation on inner pond embankments of ponds shall not interfere with the integrity of pond walls or adequate water surface aeration, or mask overtopping or other leakage. Vegetation on the anaerobic pond shall not interfere with the integrity of the crust; and
   (e) a crust is maintained on the anaerobic pond(s) to minimise the emission of offensive odours and to enhance the breakdown of unstable organic matter.

Treated wastewater irrigation

12. The licence holder must dispose of treated wastewaters by irrigation such that:

(a) wastewater is evenly distributed over the irrigation area;
(b) no soil erosion or ponding of wastewaters occurs;
(c) a healthy vegetation cover is maintained over the effluent irrigation areas;
(d) there is no direct runoff, spray drift or discharge beyond the boundaries of the premises; and
(e) irrigation shall not occur onto flooded areas.

13. The licence holder must manage the application of wastewater to the irrigation areas to ensure that the following nutrient loading rates are not exceeded:

(a) nitrogen – less than 250 kg/ha/yr; and
(b) phosphorus – less than 60 kg/ha/yr.

Monitoring

General monitoring

14. The licence holder must ensure that all water samples are collected, preserved and analysed in accordance with AS/NZS 5667.

15. The licence holder must submit all water samples to a laboratory with current NATA accreditation for the analyses specified for analysis in accordance with the current "Standard Methods for Examination of Water and Wastewater-APHA-AWWA-WEF".

16. The licence holder must maintain a device for measuring monthly cumulative volumes of wastewater discharged from the final outlet of the pond system for irrigation to land.

Monitoring of emissions to land

17. The licence holder must, every three months, collect a representative sample of wastewater discharged to the on-site irrigation area, for the following parameters:

(a) pH;
(b) 5-day biochemical oxygen demand (BOD_5);
(c) total suspended solids;
(d) total dissolved solids;
(e) total nitrogen; and
(f) total phosphorus.

Surface water monitoring

18. The licence holder must collect samples of water from Pinwernying Creek ("the creek") of which the premises is part of the headwaters, in accordance with the requirements of Table 1.

Table 1: Pinwernying Creek water sampling requirements

Sampling location	Parameters analysed[1]	Sampling frequency
A = the point where the creek passing under Trimmer Road enters the licensed premises, as shown in Schedule 1 Premises map.	Total nitrogen, Total phosphorus, Oil and grease	**Monthly** (with the sample to be collected on the same day each month). Samples shall also be collected the day following a heavy rainfall event (that is, where more than 25 mm of rainfall is received over a 24 hour period) Sampling shall commence **1 May each year** or the week of first flow in the creek, whichever occurs first, and conclude 30 September each year or when flow in the creek ceases, whichever occurs last.
B = the point where the creek branch that passes through point A leaves the premises, as shown in Schedule 1 Premises map.		

Note 1: All measurements are to be reported in mg/L.

Solid waste removal

19. The licence holder must, aside from those materials referred to in condition 20, remove solid waste generated at the premises (including desludging waste) for off-site disposal.

20. The licence holder must only bury animal carcasses and solid animal waste material on the premises.

21. The licence holder must take the following measures when burying waste referred to in condition 20 on the premises:

    (a) dispose of waste in a defined trench at least 50 m from the premises boundary or a watercourse or a water body;
    (b) cover waste with at least 230 mm of cover material at least weekly;
    (c) ensure the base of the trench is at least two metres above the highest known groundwater table; and
    (d) cover waste with a final soil cover of at least one metre.

Records and reporting

Annual reporting requirements

22. The licence holder must submit to the CEO by 1 February in each year, a copy of an Annual Environmental Report containing data collected during the period beginning 1 January and ending on 31 December the previous year. The report shall contain, but not be limited to:

    (a) monitoring data or other collected data required by any condition of this licence (data should be provided in tables and in graphical format);
    (b) an explanation of the monitoring data in comparison with past monitoring data collected for previous licences issued under Part V of the Act for the premises;
    (c) the number and type of complaints received including complainants name, address, nature of complaint (where appropriate cross referenced with prevailing wind directions) and action taken;
    (d) any changes to site boundaries, location of groundwater monitoring bores, surface drainage channels and on-site or off-site impacts or pollution;
    (e) the monthly number of animals and tonnages of meat processed; and
    (f) the annual tonnage of material rendered.

23. The licence holder must:

    (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and
    (b) prepare and submit to the CEO by **1 February** after the end of that annual period an Annual Audit Compliance Report in the approved form.

Works

Infrastructure and equipment – Reverse Osmosis Plant

24. The licence holder must construct and/or install the infrastructure listed in Table 2 in accordance with the requirements in that table.

Table 2: Design and construction requirements

Infrastructure	Design specifications	Infrastructure location
1 x *Integra* l INT BW30-200 model Reverse Osmosis Plant	4 sets of housings (pressure vessels rated to pressure of 300psi) each containing 3 spiral wound thin film composite polyamide membranes	Schedule 1: Figure 5 - Map of reverse osmosis plant and associated

Infrastructure	Design specifications	Infrastructure location
Pumps[1] and associated infrastructure	1 x low pressure stainless steel feed pump (4kW motor) and low pressure PVC piping (treated wastewater in-feed line)	infrastructure
	1 x 36 inch automatic, back washable filter	
	Depth filters – 2 housings per train with 5 micron and 1 micron cartridge filters. Suspended solids filter housings with 5 x 40 inch filter elements	
	1 x high pressure stainless steel pump (15kW motor)	
Control panel	Control panel including alarm system, on/off auto switch for pumps and LED display for monitored values	
Storage tanks	2 x 50kl feed water tank	
	4 x 50kL permeate tanks	
Permeate distribution pipeline	300 mm diameter PVC pipeline (as shown in Works plan – location of Reverse Osmosis plant and associated infrastructure)	

Note 1: Noise emissions from all operating centrifugal pumps is <85 dB.
Note 2: Quarterly membrane cleaning cycle products consist of a mixture of citric acid, caustic soda and ethylene diamine tetra acetic acid (EDTA).

25. The licence holder must not depart from the requirements specified in Column 2 of Table 2 in condition 24 except:

(a) where such departure does not increase risks to public health, public amenity or the environment; and
(b) all other conditions in this licence are still satisfied.

26. Subject to condition 25, within 30 days of the completion of the works specified in Column 1 of Table 2 in condition 24, the licence holder must provide to the CEO a report from a suitably qualified Engineer, including photographs of specified infrastructure, confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 2 in condition 24 has been constructed with no material defects and to the requirements specified in Column 2 of Table 2 in condition 24.

27. Where a departure from the requirements specified in Column 2 of Table 2 in condition 24 occurs and is of a type allowed by condition 25, the licence holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by condition 25(b).

Works – record keeping

28. The licence holder must maintain accurate books including information, reports and data in relation to the works and the books must:

(a) be legible;
(b) if amended, be amended in such a ways that the original and subsequent amendments remain legible or are capable of retrieval;
(c) be retained for at least 3 years from the date the books were made;
(d) be available to be produced to an inspector or the CEO.

29. The licence holder must comply with a department request within 14 days from the date of the department request or such other period as agreed to by the inspector or the CEO.

Infrastructure and equipment – Evaporation pond liner construction

30. The licence holder must construct and/or install the infrastructure listed in Table 3 in accordance with the requirements in that table.

Table 3: Design and construction requirements

Infrastructure	Design specifications	Infrastructure location
Pond 6 and 7– clay liners	Compacted clay subgrade layer which is constructed in accordance with the requirements specified in Schedule 2	Schedule 1 – Figure 4: Map of wastewater treatment ponds

Works compliance reporting – pond liner

31. The licence holder must, within 30 days of each item of critical containment infrastructure specified in condition 30 being constructed:

(a) undertake an audit of their compliance with the requirements of condition 30; and
(b) prepare and submit to the CEO a Critical Containment Infrastructure Report on that compliance.

32. The report required by condition 31, must include as a minimum:

(a) certification by a suitably qualified engineer that each of the items of critical containment infrastructure, or components thereof, as specified in condition 30, have been constructed in accordance with the relevant requirements specified in that condition;
(b) as constructed plans and a detailed site plan showing the location and dimensions for each item of infrastructure or component thereof, as specified in condition 30;
(c) photographic evidence of the installation of the infrastructure; and
(d) be signed by a person authorised to represent the licence holder and contains the printed name and position of that person.

Works operation – RO plant and evaporation ponds

33. The licence holder may only commence the discharge of RO Plant brine and purge waste water to Ponds 6 and 7 in accordance with condition 34:

(a) where the CEO has notified the licence holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 31 meets the requirements of that condition; or
(b) where at least 5 business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 31 has been submitted to the CEO.

34. The licence holder must ensure that the site infrastructure and equipment listed in Table 3 and located at the corresponding location is maintained and operated in accordance with the corresponding operational requirement set out in Table 4.

Table 4: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
RO Plant – brine and purge waste water	The licence holder must ensure: • all waste water generated as a result of daily flushing and other periodic cleaning of reverse osmosis plant filter membranes is directed to Pond 6 only; and	Schedule 1 – Figure 4: Map of wastewater treatment ponds and Figure 5: Map of reverse osmosis plant

Site infrastructure and equipment	Operational requirement	Infrastructure location
	• waste water from pond 7 is not to be discharged or irrigated to land at any time.	and associated infrastructure
Pond 6 and Pond 7 - Evaporation ponds	The licence holder must ensure: • all uncontaminated stormwater is diverted away from the ponds, to minimise the threat of erosion of pond embankments or flooding; • leakage from, or overtopping of the ponds does not occur; and • vegetation on inner pond embankments of ponds shall not interfere with the integrity of pond walls or mask overtopping or other leakage.	Schedule 1 – Figure 4: Map of wastewater treatment ponds

Ponds 6 and 7 – clay liner requirements

Liner material

35. The liner material must be homogeneous in nature and properties, with no sandy patches exceeding the liner specification or rocks retained on a 37.5 mm sieve. Any non-conforming liner material must be removed and replaced with conforming soil. Where necessary, soils may be blended or have bentonite clay mixed in to achieve desired uniformity and geo-technical characteristics.

36. The liner material properties must not be altered by acidic or alkaline content of the contained waste.

Liner construction

37. Liners must be installed in at least two layers of equal thickness to ensure adequate compaction is achieved and to minimise the risk of leakage. The liner material must be moisture-conditioned to achieve the maximum (in place) design soil density exceeding the 95 per cent maximum dry density (MDD) determined using AS 1289.5.2.1 (2003) and AS 1289 5.4.2 (2007).

38. The minimum thickness of the compacted soil liner must be 300 mm and construction tolerances must be within 50 mm.

39. The completed liner must uniformly cover both the base and perimeter of Pond 6 and 7 to achieve one integrated holding facility.

40. Test cores must be taken from the completed Pond 6 and 7 as follows:

(a) one in the base of each pond, one in each side wall and samples at 30m linear intervals for the length of the one wall that was considered non-compliant;
(b) each soil sample core must have its coefficient of permeability determined via an accredited soil testing laboratory in accordance with AS 1289.6.7.1 (2001). The maximum acceptable core coefficient of permeability is $1x10^{-9}$ m/s when subjected to 1 m pressure head of water; and
(c) core test holes must be filled with cement slurry, bentonite or other suitable sealant.

Definitions

In this licence, the terms in Table 5 have the meanings defined.

Table 5: Definitions

Term	Definition
animal waste material	means blood, bone, fat, offal and condemned carcasses
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website)
annual period	means a 12-month period commencing from 1 January until 31 December in that same year
APHA-AWWA-WEF	means American Public Health Association (APHA) – American Water Works Association (AWWA) – Water Environment Federation (WEF);
AS/NZS	means the most recent version (unless otherwise stated) of the specified Australian and New Zealand Standard as jointly published by Standards Australia International Ltd, Sydney and Standards New Zealand, Wellington
AS/NZS 5667	means the most recent version and the relevant parts of the Australian and New Zealand series of guidance standards on Water Quality Sampling; (see also AS/NZS)
AS 3543	means the Australian Standard AS 3543: *Use of standard Ringelmann and Australian Standard miniature smoke charts*
brine	refers to the concentrated salt waste generated as a result of the automatic daily flushing of filter membranes in the reverse osmosis water treatment plant
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
condition	means a condition to which this licence is subject under s.62 of the EP Act
critical containment infrastructure	means the items of infrastructure listed in condition 30
Critical Containment Infrastructure Report	means a report to satisfy the CEO that works of critical containment infrastructure have been constructed in accordance with condition 30
DAF	means dissolved air flotation and refers to part of the primary wastewater treatment infrastructure used for suspended solids and fats separation and removal
dark smoke	refers to smoke classified in accordance with AS 3543 as having a Ringelmann shade 4 or greater
dB	means decibel, a unit of measurement of sound level
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act
EP Act	means the *Environmental Protection Act 1986* (WA)
gas emission treatment system	refers to the wet scrubber and the condenser unit and associated interconnecting transmission pipelines (treating condensable gases) prior to vapour being emitted to air via the condenser unit outlet as shown in the

Term	Definition
	rendering plant infrastructure plan in Schedule 1
heavy rainfall	means where more than 25 millimetres of rainfall is received over a 24 hour period
irrigation area	means the areas designated for disposal of treated wastewater as depicted in the premises map in Schedule 1
licence	means this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within
licence holder	refers to the occupier of the premises being the person to whom this licence has been granted, as specified at the front of this licence
NATA	National Association of Testing Authorities, Australia
permeate	refers to the portion of the reverse osmosis feedwater collected after it has passed through all the RO membranes, otherwise referred to as the product water
Pond system 1	refers to the series of anaerobic (1) and aerobic ponds (3) for the treatment, storage and evaporation of wastewaters generated by the abattoir and rendering operations and transferred to the ponds following primary treatment through a solids trap, screening and fats separation unit, as shown in the wastewater treatment ponds plan in Schedule 1
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the map in Schedule 1 to this licence
psi	means pounds per square inch, a unit of measurement of pressure
PVC	means polyvinyl chloride
RO	means reverse osmosis
solid waste	means waste that: (a) has an angle of repose of greater than 5 degrees; and (b) does not contain, or is not comprised of, any free liquids; and (c) does not contain, or is not comprised of, any liquids that are capable of being released when the waste is transported; and (d) does not become free flowing at or below 60 degrees Celcius or when it is transported; and (e) is generally capable of being moved by a spade at normal temperatures (i.e. is spadable)
Suitably qualified civil engineer	a person who: (a) holds a Bachelor of Engineering; and (b) has a minimum of five years of experience in the area of civil engineering
treated wastewater/s	refers to wastewater from abattoir and rendering operations that has undergone anaerobic and aerobic treatment prior to reaching the third and final wastewater pond in Pond system 1
works	refers to the installation of a reverse osmosis plant as described in conditions 24 - 27 of this licence
WWTS	means wastewater treatment system
WQPN 27	refers to the document Water Quality Protection Note 27, *Liners for containing pollutants, using engineered soils*, Department of Water, August 2013

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown (red line) in the map below (Figure 1). The yellow lines show the boundaries to authorised irrigation areas.

Figure 2: Map of Katanning abattoir – key infrastructure

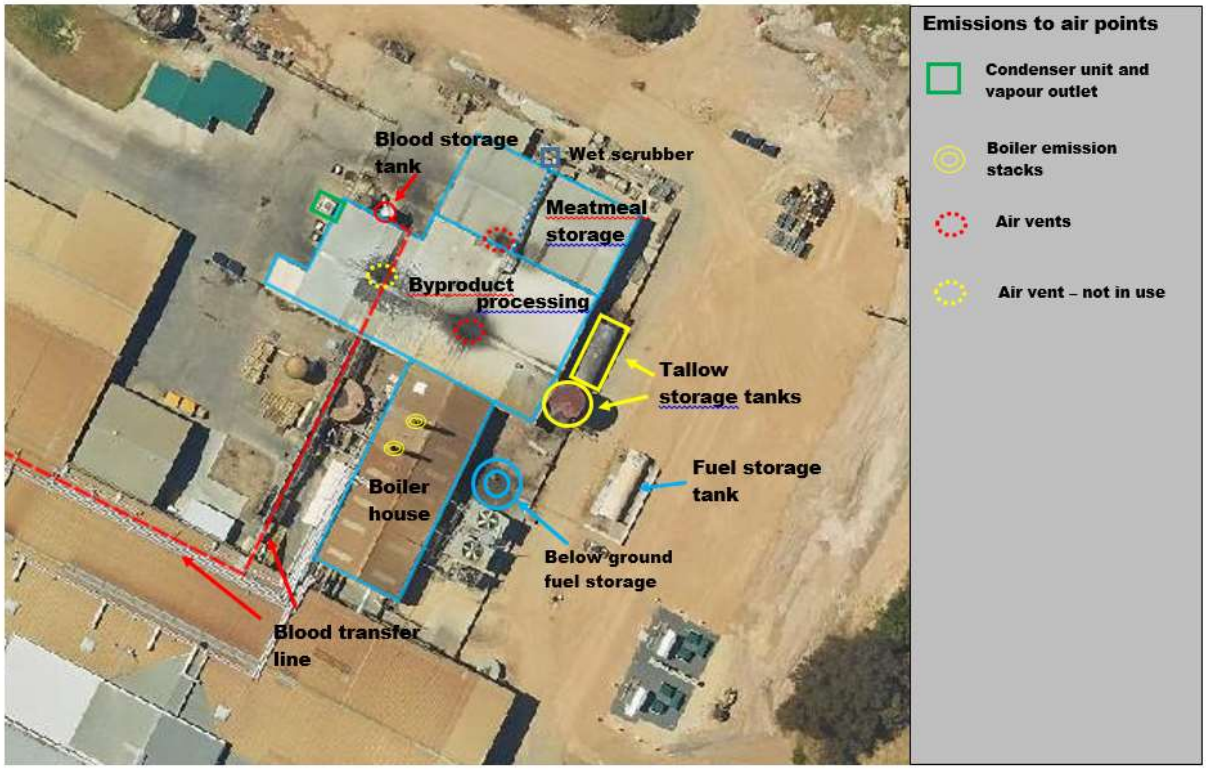

Figure 3: Map of rendering plant – key infrastructure

Figure 4: Map of wastewater treatment ponds – Pond system 1 & Pond system 2

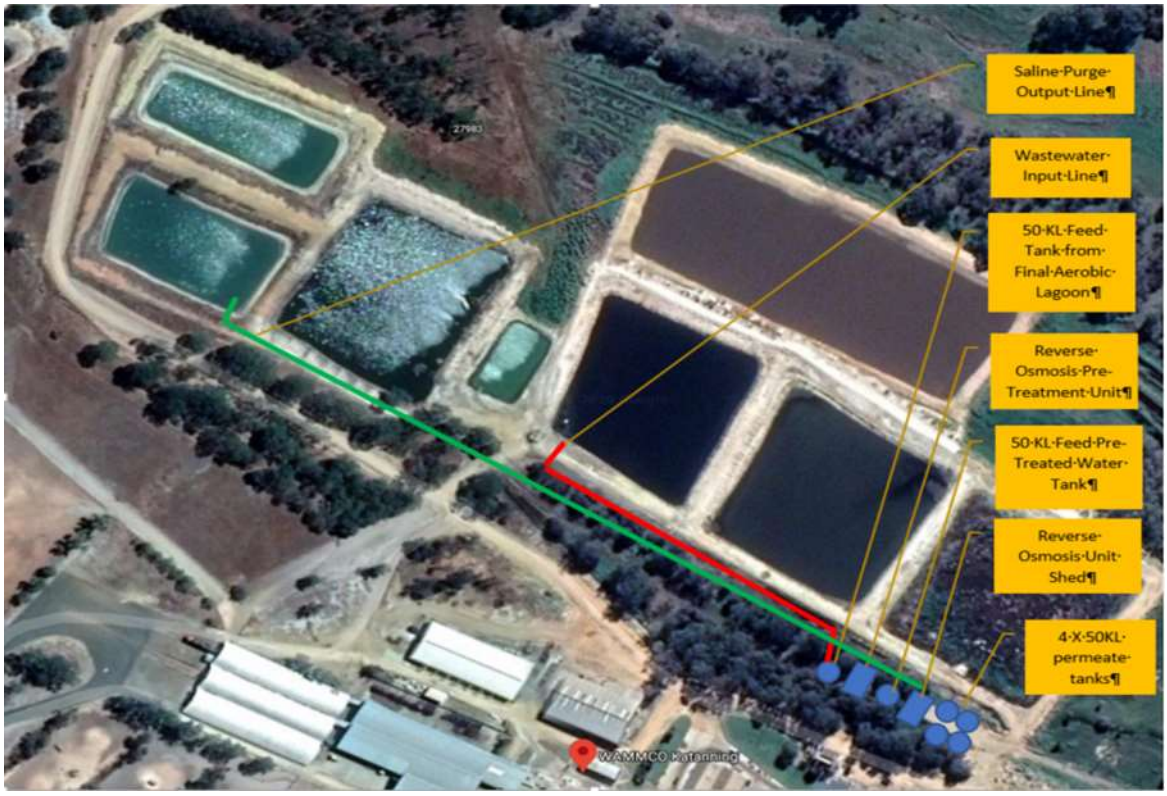

Figure 5: Map of reverse osmosis plant and associated infrastructure