Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6452/2020/1
Works approval holder	Ausvision Rural Services Pty Ltd
ACN	106 075 763
Registered business address	Unit 6, 78-84 Catalano Circuit CANNING VALE WA 6151
DWER file number	DER2020/000477 APP-0028859
Duration	14/06/2021 to 31/12/2027
Date of amendment	19/05/2025
Premises details	Beaufort River Meats 46 Macri Road BEAUFORT RIVER WA 6394 Legal description – Part of Lot 508 on Plan 418913 as defined by the premises map in Schedule 1

Prescribed premises category description **(Schedule 1, *Environmental Protection Regulations 1987*)**	**Approved production or design capacity**
Category 15: Abattoir: premises on which animals are slaughtered.	34,675 tonnes per annual period (liveweight)
Category 55: Livestock saleyard or holding pen: premises on which live animals are held pending their sale, shipment or slaughter.	825,000 animals per annual period

This works approval is granted to the works approval holder, subject to the attached conditions, on 19 May 2025 by:

Caron Goodbourn
Digitally signed by Caron Goodbourn
Date: 2025.05.19 10:47:59 +08'00'

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

Works Approval History

03/06/2021	W6452/2020/1	New works approval granted to construct a new anaerobic pond
14/12/2023		Works approval holder-initiated amendment to: • Construct a HDPE lined sludge dewatering pad area completed with bund wall and HDPE lined leachate collection sump; • Installation of 3 x GF36-20 Geoflow Geotextile dewatering containers (geobags) on the sludge dewatering pad; • Dewatering of the sludge removed from the existing anaerobic pond; and • Use of a mobile floating dredging unit within the ponds to remove sludge
19/05/2025		Works approval holder-initiated amendment to extend duration of works approval.

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 critical containment infrastructure;

(b) in accordance with the corresponding design and construction requirements; and

(c) at the corresponding infrastructure location;

as set out in Table 1.

Table 1 Design and construction requirements

	Infrastructure	Design and construction requirements	Infrastructure location
1	New Anaerobic Pond 2	(a) Constructed with a minimum capacity of 4050m^3, excluding the allowance of 500 mm from the top of the pond embankment to the position of the outlet pipe. Pond dimensions to be approximately 42 m long by 42 m wide by 5 m deep. (b) Internal pond wall embankment slopes of 3:1	Labelled as "secondary anaerobic pond" in Schedule 1, Figure 2

	Infrastructure	Design and construction requirements	Infrastructure location
		(horizontal: vertical). (c) Inlet pipe to be installed such that, once the anaerobic pond is operational, it will be submerged. (d) Outlet pipe to be installed 500 mm below the top of the anaerobic pond retaining banks or structure at their lowest point. (e) Outlet pipe to include a trapped overflow (T-piece) to prevent the carry-over of surface floating matter into the aerobic pond(s) during operation. (f) Constructed with an access of approximately 10 m around the perimeter of the pond to allow for future desludging activities. (g) Constructed such that the: (i) HDPE liner is installed in accordance with the requirements specified in Schedule 2; or (ii) clay liner is constructed in accordance with the requirements specified in Schedule 3; to achieve a minimum hydraulic conductivity (permeability) of 1 x 10^{-9} m/s across the base and perimeter of the anaerobic pond.	
2	Sludge dewatering pad (geobag laydown area)	(a) Constructed on a stable sub base of at least 300mm thickness and at least 2m above the highest wet season water table; (a) 41m long x 43m wide with a 500mm bund wall and a 1 m x 1m x 1m sump pit to enable the collection and recovery of wastewater; (b) Lined with a 0.5mm HDPE liner to extend over the entire dewatering pad base, the bund embankments and leachate sump to shall achieve a permeability of 10-9m/s or less; (c) The HDPE liner shall be installed in accordance with the requirements specified in Schedule 2. (d) the base of the pad area to be inclined to direct the leachate towards the sump area so it can be recovered and directed back to the primary pond (e) All pipework, fittings and joins are to be constructed of impervious material and are to be free from leaks and defects.	Labelled as “proposed dewatering area for desludging of ponds” in Schedule 1, 2
3	Existing Anaerobic Pond 1	(a) The liner shall be subject to liner integrity assessment following desludging activities and prior to reuse as a wastewater containment pond; (b) If the liner integrity assessment shall occur via visual assessment and a seepage rate test as specified in Ham and Baum, 2009 or Parker et al, 2009[1]. (c) Where the inspection and liner integrity assessment and seepage test rate identified damage or deterioration that may affect containment performance, the pond shall be	Labelled as “primary anaerobic pond” in Schedule 1, Figure 2

	Infrastructure	Design and construction requirements	Infrastructure location
		decommissioned from use or relined; (d) Pond is required to be relined with either: (i) a HDPE liner installed in accordance with the requirements specified in Schedule 2; or (ii) a clay liner constructed in accordance with the requirements specified in Schedule 3;	

Note1: in-field non- NATA accredited testing methodologies

Compliance reporting

2. The works approval holder must within 30 calendar days of the critical containment infrastructure identified by condition 1 being constructed.

(a) undertake an audit of their compliance with the requirements of condition 1; and

(b) prepare and submit to the CEO a Critical Containment Infrastructure Report on that compliance.

(c) If the pond listed in row 3 of Table 1 is not relined; a report containing the Liner Integrity Assessment and Seepage Report shall be submitted to the CEO.

(d) The report detail in part (c) of this condition shall contain estimations of the total volume of seepage from that pond per year based on:

(i) the designed hydraulic conductivity of the pond liner and the hydraulic head pressure;

(ii) the current condition of the pond liner, where a seepage rate test was completed;

(iii) estimations of the total mass of nitrogen and phosphorus emitted from that pond per year via seepage, based on the estimated annual seepage volume/s of the pond liner and the nitrogen and phosphorus concentrations measured within the wastewater; and

(iv) a copy of the calculations/methods undertaken to produce the estimations required by parts (d)(i) and (d)(ii) of this condition.

3. The Critical Containment Infrastructure Report required by condition 2 must include as a minimum the following:

(a) certification by a third party qualified professional engineer that the anaerobic pond, sludge dewatering pad, any relined pond and their components, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1;

(c) photographic evidence of the installation of the infrastructure; and

(d) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

(e) The information contained within the Liner Integrity Assessment and Seepage Report, as specified in Condition 2(c), shall be certified by a third party qualified professional engineer.

Time limited operations phase

Commencement and duration

4. The works approval holder may only commence time limited operations for an item of critical containment infrastructure identified in condition 6 where:

(a) the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 2 meets the requirements of that condition; or

(b) at least 10 business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 2 has been submitted to the CEO.

5. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 6:

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 4 for that item of infrastructure: or

(b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 5(a).

Time limited operations requirements

6. During time limited operations, the works approval holder must ensure that the premises infrastructure listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2 Infrastructure requirements during time limited operation

	Infrastructure	Operational requirement	Infrastructure location
1	Anaerobic pond	(a) Freeboard of at least 500 mm must be maintained; (b) The trapped overflow (T-piece) is maintained on the discharge to prevent carry-over of surface floating matter into the aerobic pond; (c) HDPE or clay lined on the base and walls maintained to achieve a minimum hydraulic conductivity (permeability) of 1 x 10^{-9} m/s.	Labelled as "secondary anaerobic pond" in Schedule 1, Figure 2
2	Sludge dewatering pad (geobag laydown area) 500mm bunding around pad	(a) The sludge dewatering pad must be managed so that stormwater runoff is prevented from entering the compound; and (b) Maintain a minimum 300mm freeboard at all times in the sludge dewatering compound.	Labelled as "proposed dewatering area for desludging of ponds" in Schedule 1, 2
3	Geobags 3 x GF36-20 Geoflow Geotextile dewatering containers	(a) to be operated on the sludge dewatering pad only (b) All sludge from desludging activities must be stored within the sludge drying bed area at all times prior to offsite disposal to waste facility that is licensed to accept this waste type	Not applicable

	Infrastructure	Operational requirement	Infrastructure location
4	Leachate sump	(a) The leachate sump is to be maintained to ensure leachate from the sludge drying bed is directed back to the inlet section of the primary facultative pond (Pond 1A). and (b) The Leachate sump shall be contained within the dewatering pad area;	
5	Sludge and wastewater conveyance pipes, pumps, drains and valves	(a) Shall be managed and maintained to prevent spills, leaks, burst, blockages and ruptures.	

Specified actions

7. The licence holder must undertake visual inspections of the infrastructure specified in Table 3:

Table 3: Inspections of critical containment infrastructure

Infrastructure (refer to Table 2)	Type of inspection	Information requirements	Frequency
All pipes, pumps, drains and valves conveying wastewater and sludge between the wastewater treatment ponds and the desludging pad	To confirm integrity i.e. no visible damage to infrastructure or leaks Confirm no blockages of interconnecting wastewater pond pipeline	A record of the inspector's name, signature, date and time of inspection and observations recorded in a logbook and made available upon request	Daily
Freeboard marker on sludge dewatering pad	Record freeboard in mm		

Compliance reporting

8. The works approval holder must submit to the CEO a report on the time limited operations within 30 calendar days of the completion date of time limited operations or 30 calendar days before the expiration date of the works approval, whichever is sooner.

9. The works approval holder must ensure the report required by condition 8 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of wastewater processed;

(b) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable);

(c) a review of operational performance and compliance against the conditions of the works approval; and

(d) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

10. 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.

11. The works approval holder must maintain accurate and auditable books that include the following records, information, reports, and data required by this works approval:

(a) the works conducted in accordance with condition 1;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 6 of this works approval; and

(c) complaints received under condition 10.

12. The books specified under condition 11 must:

(a) be legible;

(b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;

(c) be retained by the works approval holder for the duration of the works approval; and

(d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in Table 3 have the meanings defined.

Table 3: Definitions

Term	Definition
annual period	The inclusive period from 1 January until 31 December in the same year.
AS 1289.3.1.2	means the Australian Standard 1289.3.1.2-2009 *Methods of testing soils for engineering purposes – Soil classification tests – Determination of the liquid limit of a soil – One point Casagrande method (subsidiary method)*, as amended from time to time.
AS 1289.3.3.1	means the Australian Standard 1289.3.3.1-2009 *Methods of testing soils for engineering purposes – Soil classification tests – Calculation of the plasticity index of a soil*, as amended from time to time.

Term	Definition
AS 1289.3.6.1	means the Australian Standard 1289.3.6.1-2009 *Methods of testing soils for engineering purposes – Soil classification tests – Determination of the particle size distribution of a soil – Standard method of analysis by sieving*, as amended from time to time.
AS 1289.3.8.1	means the Australian Standard 1289.3.8.1:2017 *Methods of testing soils for engineering purposes – Soil classification tests – Dispersion – Determination of Emerson class number of a soil*, as amended from time to time.
AS 1289.5.2.1	means the Australian Standard 1289.5.2.1:2017 *Methods of testing soils for engineering purposes – Soil compaction and density tests – Determination of the dry density / moisture content relation of a soil using modified compactive effort*, as amended from time to time.
AS 1289.5.4.2	means the Australian Standard 1289.5.4.2-2007 *Methods of testing soils for engineering purposes – Soil compaction and density tests – Compaction control test – Assignment of maximum dry density and optimum moisture content values*, as amended from time to time.
AS 1289.6.7.1	means the Australian Standard 1289.6.7.1-2001 *Methods of testing soils for engineering purposes – Soil strength and consolidation tests – Determination of permeability of a soil*, as amended from time to time.
AS 3798	means the Australian Standard 3798-2007 *Guidelines on earthworks for commercial and residential developments, as amended from time to time.*
ASTM D638	means the ASTM international standard *Standard test method for tensile properties of plastics (Designation: ASTM D638-14)*, as amended from time to time.
ASTM D1238	means the ASTM international standard *Standard test method for melt flow rates of thermoplastics by extrusion plastometer (Designation: ASTM D1238-20)*, as amended from time to time.
ASTM D1505	means the ASTM international standard *Standard test method for density of plastics by the density – gradient technique (Designation: ASTM D1505-18)*, as amended from time to time.
ASTM D1603	means the ASTM international standard *Standard test method for carbon black content in olefin plastics (Designation: ASTM D1603-20)*, as amended from time to time.
ASTM D5321-D5321M-20	means the ASTM international standard *Standard test method for determining the shear strength of soil-geosynthetic and geosynthetic-geosynthetic interfaces by direct shear (Designation: ASTM D5321/D5321M-20)*, as amended from time to time.
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 *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
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.
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	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structure at their lowest point.
geobag	means a geotextile dewatering bag that allows solids to dewater over time while containing the solid component.
Ham and Baum, 2009	means the document Ham, J.M. and Baum, K.A., 2009. Measuring seepage from waste lagoons and earthen basins with an overnight water balance test. Transactions of the American Society of Agricultural and Biological Engineers, 52(3), 835-844.
HDPE	high density polyethylene
In-field measurement	means a measurement taken in the field which does not require laboratory testing.
leachate	means liquid released by or water that has percolated through waste and which contains some of its constituents.
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
Parker et al., 2009	means Parker, D.B.; Eisenhauer, D.E.; Schulte, D.D.; and Nienaber, J.A., 1999. Seepage Characteristics and Hydraulic Properties of a Feedlot Runoff Storage Pond. Biological Systems Engineering: Papers and Publications, 179
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
qualified professional engineer	means a person who: (a) holds a tertiary academic qualification specialising in civil engineering; and (b) has a minimum of 2 years of experience working in the area of civil engineering; or is otherwise approved by the CEO to act in this capacity.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
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

Premises map

The boundary of the prescribed premises is shown in the map below.

Figure 1: Premises boundary

New infrastructure location map

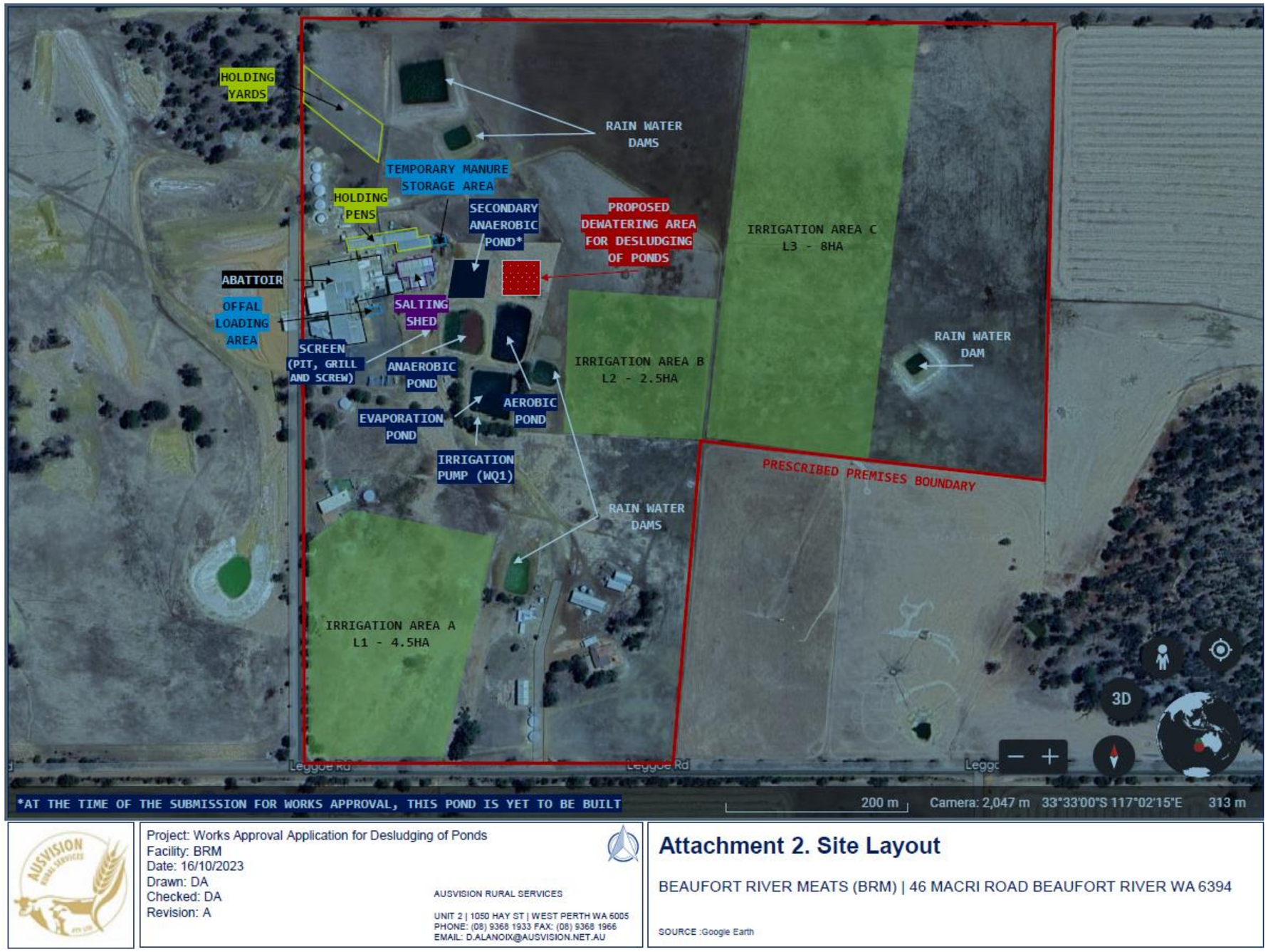

Figure 2: Location of the proposed secondary anaerobic pond and proposed sludge dewatering pad (geo bag laydown area)

Source: Application supporting information Attachment 2 (Ausvision, 2023)

Schedule 2: HDPE liner requirements

Compacted subgrade requirements

Compacted subgrade material

1. Soils used for the compacted subgrade layer must conform to a design specification for an effective water retaining structure. The soils must be free from plant roots and reactive, soluble and organic matter. The layer material must comprise of clay and must be moisture conditioned to meet the minimum criteria described in Table 4.

Table 4: Minimum criteria for compacted subgrade

Soil characteristic	Acceptability criterion	Testing frequency	Test method
Modified maximum dry density (MMDD)	>95%	Testing frequency for the compacted clay subgrade layer shall be whichever requires the most tests from the following: (a) 1 per 500 m^3; or (b) 1 per 2,500 m^2; or (c) 3 tests per lot (as defined in Section 1.2.8 of AS 3798-2007).	AS 1289.5.2.1:2017; and AS 1289.5.4.2 – 2007
Optimum moisture content (OMC)	±2%		

Compacted subgrade construction

2. The compacted subgrade layer must be installed in at least two layers of equal thickness to ensure adequate compaction is achieved and to minimise the risk of leakage.
3. The minimum thickness of the compacted soil layer must be 300 mm and construction tolerances must be within 50 mm.

Liner material

4. The high density polyethylene (HDPE) liner must meet the minimum criteria described in Table 5.

Table 5: HDPE liner properties

Liner characteristic	Test method
Minimum thickness of 1.5 mm (tolerance up to 5%) with heat welded joints	-
Specific gravity ≥0.94	ASTM D1505
Melt index of 0.05 g to 0.30 g in 10 minutes	ASTM D1238, condition E 190/2.16
Carbon black content of 2-3%	ASTM D1603
Minimum tensile strength at yield of 16,000 kN/m^2	-
Minimum tensile strength at break of 550 kN/m^2	ASTM D638, type IV 2
Minimum elongation at yield of 10%, and at break 300%	ASTM D638

Liner construction

5. The liner must be fabricated to form the shape of the excavation. All seams and joins made on site must be continuous. Panels of the liner must be overlapped by a minimum of 100 mm, prior to heat welding.
6. All seams and joins must be constructed and tested as watertight over their full length using a vacuum test unit or air pressure testing.
7. The HDPE liner shear resistance must be tested in accordance with ASTM D5321/D5321M-20.

Schedule 3: Clay liner requirements

Liner material

1. Soils used for the lining must conform to a design specification for an effective water retaining structure. The soils must be free from plant roots and reactive, soluble and organic matter. The selected liner material must consist of an inert and insoluble blend of sand, clay and silt particles that meet the minimum criteria described in Table 6.

Table 6: Minimum criteria for soil liners

Soil characteristic	Acceptability criterion	Test method
Percentage fines	>25% passing a 75 µm sieve	AS 1289.3.6.1 – 2009
	>15% passing a 2 µm sieve	
Liquid limit	30% to 70%	AS 1289.3.1.2 – 2009
Plasticity index	>15	AS 1289.3.3.1 – 2009
Emerson class number	5 to 6	AS 1289.3.8.1:2017

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

Liner construction

4. 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% maximum dry density determined using AS 1289.5.2.1:2017 and AS 1289.5.4.2 – 2007.
5. The minimum thickness of the completed compacted liner must be 300 mm and construction tolerances must be within 50 mm.
6. The completed liner must uniformly cover both the base and perimeter of the anaerobic pond to achieve one integrated holding facility.
7. Test cores must be taken from the completed anaerobic pond as follows:
   (a) tests must be conducted based on a four-by-four grid equally spaced over the base of any repaired sections; and
   (b) one full depth core test per 30 lineal m of perimeter embankment;
   (c) 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 10^{-9} m/s when subjected to 1 m pressure head of water; and
   (d) core test holes must be refilled with cement slurry, bentonite or other suitable sealant.
8. The anaerobic pond must be proof-tested to confirm the initial seepage from each containment module is less than 4 kL/ha/day of contained area under 1 m water pressure (head) 24 hours after flooding.