Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6791/2023/1
Works approval holder	Paul Terrence & Nicole Sharina Reilly
Registered business address	Lot 1983 Boyup Brook-Kojonup Road SCOTTS BROOK WA 6244
DWER file number	DER2023/000221
Duration	14/08/2023 to 13/08/2026
Date of issue	14/08/2023
Premises details	'Denninup Vale' Cattle Feedlot 4029 Boyup Brook-Kojonup Road SCOTTS BROOK WA 6244 Legal description – Lot 3 on Plan 68178 and part of Lot 2343 on Plan 125737 (feedlot) Lot 1 on Plan 68177, Lot 1984 on Plan 123649, Lot 1985 on Plan 123648, Lot 1988 on Plan 123651 and part of Lot 2343 on Plan 125737 (manure utilisation areas)

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed design capacity
Category 1: Cattle feedlot: premises on which the watering and feeding of cattle occurs, being premises – (a) situated more than 100 metres from a watercourse; and (b) on which the number of cattle per hectare exceeds 50.	1,772 animals (1,434 Standard Cattle Units equivalent) at any one time

This works approval is granted to the works approval holder, subject to the attached conditions, on 14 August 2023, by:

Caron Goodbourn

Digitally signed by Caron Goodbourn
Date: 2023.08.14 13:15:28 +08'00'

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

Works approval history

Date	Ref number	Summary of changes
11/04/2011	W4875/2011/1	Works approval granted for original set of feedlot pens
14/08/2023	W6791/2023/1	Works approval granted for 13 new pens and decommissioning of original pens

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 construct the infrastructure listed in Table 1:

(a) in accordance with the corresponding design and construction requirements; and
(b) at the corresponding infrastructure location,

as set out in that table.

Table 1: Design and construction requirements

	Infrastructure	Design and construction requirements	Infrastructure location
1	Feedlot pens	(a) Must construct one row of 13 pens with the following dimensions: (i) Pen 8 must not exceed 24 m x 36 m; (ii) Pens 9-17 must not exceed 20 m x 40 m; (iii) Pens 20-22 must not exceed 12 m x 12 m; (b) Pen floors and cattle laneways must be constructed with: (i) a fall of at least 3% towards the relevant effluent catch drain; and	"New pens", "Existing pens", "Cattle laneway", "Laneway" and "Sheds", as shown in Schedule 1: Map of infrastructure

	Infrastructure	Design and construction requirements	Infrastructure location
		(ii) a lining system comprising at least 300 mm of clay or other suitable compactable soil constructed in two 150 mm layers following compaction with an in-situ coefficient of permeability of 3 x 10^{-9} m/s or less. (c) Must construct a roof over each group of pens, with the following design requirements: (i) Pens 1-8 – roof must cover the full length of each pen (24 m) with a width of at least 10 m; (ii) Pens 9-17 – roof must cover the full length of each pen (20 m) with a width of at least 10 m; (iii) Pens 18-19 – roof must cover the full length of each pen (23 m) with a width of at least 10 m; (iv) Pens 20-22 – roof must cover the full length of each pen (12 m) with a width of at least 10 m;	
Controlled Drainage Area 1			
	Controlled Drainage Area 1 (CDA1)	(a) Must comprise all operational areas relating to pens 1-8 and pens 9-17, including pen areas, hard catchment (feed roads, cattle laneways, western half of the cattle yard area, effluent catch drain, effluent holding pond 1) and soft catchment; (b) Area must be sloped to facilitate drainage of surface water runoff to effluent holding pond 1;	As per description
2	Effluent catch drain (Pens 1-17)	(a) Must construct an effluent catch drain at the lowest point between the cattle laneways for pens 1-8 and pens 9-17, with minimum dimensions: 10.0 m bed width, 1V:4H batter and 0.5 m depth; (b) Drain must be constructed with a long fall of at least 0.5% and be connected to effluent holding pond 1; (c) Drain must be constructed with a 2 m wide concrete spillway at the lowest point, and a minimum 1.5 m diameter drain to convey effluent from the spillway into the pond; (d) Drain must be constructed with a lining system comprising at least 300 mm of clay or other suitable compactable soil constructed in two 150 mm layers following compaction with an in-situ coefficient of permeability of 3 x 10^{-9} m/s or less;	"Sedimentary drain", as shown in Schedule 1: Map of infrastructure
3	Effluent holding pond 1	(a) Must construct an effluent holding pond downgradient of CDA1, with a holding capacity of at least 4,495 m^3 (including minimum operational freeboard of 0.5 m); (c) Pond floor and walls must be constructed with a lining system comprising at least 300 mm of clay or other suitable compactable soil constructed in two 150 mm layers following compaction with an in-situ coefficient of permeability of 3 x 10^{-9} m/s or less;	"Effluent holding pond 1", as shown in Schedule 1: Map of infrastructure
Controlled Drainage Area 2			
4	Controlled Drainage Area 2 (CDA2)	(a) Must comprise all operational areas relating to pens 18-22, including pen areas, hard catchment (existing cattle yards, feed road, cattle laneway, eastern half of the cattle yard area, effluent catch	As per description

	Infrastructure	Design and construction requirements	Infrastructure location
		drain, effluent holding pond 2) and soft catchment; (b) Area must be sloped to facilitate drainage of surface water runoff to effluent holding pond 2;	
5	Effluent catch drain (Pens 18-22)	(a) Must construct an effluent catch drain at the lowest point of pens 18-19, with minimum dimensions: 3.0 m bed width, 1V:4H batter and 0.5 m depth; (b) Drain must be constructed with a long fall of at least 0.5% and be connected to effluent holding pond 2; (c) Drain must be constructed with a lining system comprising at least 300 mm of clay or other suitable compactable soil constructed in two 150 mm layers following compaction with an in-situ coefficient of permeability of 3 x 10^{-9} m/s or less;	"Sedimentary drain", as shown in Schedule 1: Map of infrastructure
6	Effluent holding pond 2	(a) Must construct an effluent holding pond downgradient of CDA2, with a holding capacity of at least 487 m^3 (including minimum operational freeboard of 0.5 m); (b) Pond floor and walls must be constructed with a lining system comprising at least 300 mm of clay or other suitable compactable soil constructed in two 150 mm layers following compaction with an in-situ coefficient of permeability of 3 x 10^{-9} m/s or less;	"Effluent holding pond 2", as shown in Schedule 1: Map of infrastructure
Controlled Drainage Area 3			
7	Controlled Drainage Area 3 (CDA3)	(a) Must comprise all operational area relating to storage of manure, including storage pad, hard catchment (pad access lane, effluent catch drain); (b) Area must be sloped to facilitate drainage of surface water runoff to effluent holding pond 1;	As per description
8	Manure storage area	(a) Must construct a manure storage pad, with a minimum surface area of 2,175 m^2; (b) Pad must be constructed with a lining system comprising at least 300 mm of clay or other suitable compactable soil constructed in two 150 mm layers following compaction with an in-situ coefficient of permeability of 3 x 10^{-9} m/s or less;	"Manure stockpile", as shown in Schedule 1: Map of infrastructure
9	Effluent catch drain (manure pad)	(a) Must construct an effluent catch drain at the lowest point of the manure storage pad, with minimum dimensions: 1.5 m bed width, 1V:4H batter and 0.5 m depth; (b) Drain must be constructed with a long fall of at least 0.5% and be connected to effluent holding pond 1; (c) Drain must be constructed with a lining system comprising at least 300 mm of clay or other suitable compactable soil constructed in two 150 mm layers following compaction with an in-situ coefficient of permeability of 3 x 10^{-9} m/s or less;	As per description

Construction materials testing

2. The works approval holder must ensure that:

(a) clay materials used in the construction of infrastructure specified in condition 1 are well graded and tested for conformance against the particle size distribution,

plasticity index and other characteristics listed in Schedule 2; and

(b) permeability and compaction requirements for clay and gravel materials used to comply with the requirements specified in condition 1 are demonstrated by geotechnical testing conducted by a qualified professional engineer and in accordance with AS 1289.

Compliance reporting

3. The works approval holder must, within 28 calendar days of the infrastructure specified in condition 1 being constructed:

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

(d) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

4. The Environmental Compliance Report required by condition 3, must include as a minimum:

(a) certification by a suitably qualified engineer, whether the items of infrastructure or components thereof, 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) results of clay materials testing and geotechnical testing required by condition 2; and

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

5. Subject to condition 4(a), where an item of infrastructure or component of infrastructure has been certified as not being constructed, or does not comply with the corresponding requirements, or contains material defects, the works approval holder must:

(a) correct the non-compliant or defective works, prior to re-certifying in accordance with condition 4(a); or

(b) provide to the CEO a description of, and explanation for, any departures from the requirements specified in Table 1 that do not require rectification and do not constitute a material defect along with the Environmental Compliance Report required by condition 3.

Time limited operational phase

Commencement and duration

6. The works approval holder may only commence time limited operations for a set of pens where:

(a) the following infrastructure within the controlled drainage area for that set of pens has been constructed:

(i) the roof;

(ii) the effluent catch drain; and

(iii) the effluent holding pond;

(b) the Environmental Compliance Report as required by condition 3 has been submitted by the works approval holder for all the infrastructure listed in condition 6(a) for that set of pens.

7. The works approval holder may conduct time limited operations:

(a) for a period not exceeding 180 calendar days from the date the works approval holder meets the requirements of condition 6; or

(b) until such time as a licence is granted in accordance with Division 3, Part V of the *Environmental Protection Act 1986*,

whichever is sooner.

Infrastructure and equipment

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

Table 2: Infrastructure requirements during time limited operations

	Site infrastructure	Operational requirement
1	Feedlot pens	(a) Stocking density must not exceed 9 m^2/SCU within pens 8-17 and 7 m^2/SCU within pens 20-22; (b) Pens must be cleaned out after every rotation or every 10 – 13 weeks, whichever is sooner; (c) Manure and spoilt bedding material removed from pens must only be stockpiled on the manure storage pad (CDA3);
2	Controlled Drainage Areas	(a) Must be maintained to ensure all leachate and surface water runoff from within the CDAs can flow freely to the relevant effluent holding pond without scouring;
3	Effluent catch drains	(a) Must be maintained such that each drain flows freely after rainfall events; (b) Must be cleaned of solids before sludge takes up more than 10% of the design capacity of the drain; (c) Solids removed from the drains must only be stored within the manure storage area;
4	Effluent holding ponds	(a) Must be operated to ensure clean stormwater runoff, including roof runoff, is excluded from entering the ponds; (b) An operational freeboard of at least 0.5 m must be maintained at all times;
5	Manure storage area	(a) Must be maintained to ensure all leachate and surface water runoff can flow freely to effluent holding pond 1; (b) Must be operated to ensure clean stormwater runoff is excluded from entering the hardstand pad;
6	Carcass disposal pit	(a) Deceased animals must be placed within the pit within 24 hours of death; (b) Carcasses must be buried at least 2 m above the highest known groundwater table; (c) All carcasses must be covered with at least 300 mm of soil immediately after being disposed within the pit.

Decommissioning works

9. The works approval holder must:

(a) destock and decommission the original set of feedlot pens within 3 months of commencing time limited operations of pens 8-17; and
(b) provide to the CEO within 30 days of completion, evidence to confirm the original set of feedlot pens have been destocked and decommissioned.

Backgrounding

10. During time limited operations, the works approval holder must not conduct backgrounding of animals outside of the feedlot complex on the premises, unless it is done:

(a) outside of designated manure utilisation areas; and
(b) where the number of cattle per hectare is less than 50.

Manure management

11. During time limited operations, the works approval holder must ensure manure, including fresh or unprocessed manure and spent bedding, and wet or dried pond sludge, is managed as an unprocessed material, by:

(a) ageing in windrows for at least 12 months, prior to applying to land in accordance with the requirements of Table 3 (as aged manure); and/or
(b) taken off-site to a premises that is lawfully able to accept that type of waste, such as a licensed composting facility or solid waste facility.

Table 3: Authorised disposal of manure to land

Disposal point reference	Disposal (to land) requirements
"Manure utilisation area", as depicted in Schedule 1 map	Spreading of aged manure at a rate of not more than 5.6 t dm/ha, in accordance with conditions 12 & 13

12. The works approval holder must ensure that when applying manure to land in accordance with condition 11(a):

(a) aged manure generated from operations at the premises are the only solid wastes that are spread over manure utilisation area(s);
(b) it is evenly distributed over the manure utilisation area(s);
(c) it is only spread onto areas growing crops or pasture within manure utilisation area(s);
(d) it is not spread within 50 m of any defined watercourse or within 25 m of the premises boundary;
(e) it is not spread under the following conditions:
    (i) when rain or heavy cloud is expected within the following 24 hours; and
    (ii) when an inversion layer is present;
(f) the manure utilisation area(s) are harvested at least once every 12 months.

13. The works approval holder must keep accurate records of the date, time, area, and volumes of aged manure applied in accordance with conditions 11(a) and 12.

Monitoring

General monitoring

14. The works approval holder must ensure that:

(a) all soil samples are collected in accordance with DPIRD guidelines for soil sampling; and
(b) all soil samples are submitted to and tested by a laboratory with current ASPAC certification (or equivalent).

Soil monitoring

15. During time limited operations, the works approval holder must conduct soil testing at the locations listed in Table 4, at the corresponding depths down the soil profile, for the corresponding parameters, units and frequency specified in that table.

Table 4: Soil testing requirements

Soil sampling locations	Soil profile	Parameter	Units	Frequency
At least one sample made up of at least 5 individual cores	0 – 10 cm; 10 – 20 cm; 20 – 30 cm;	pH	$CaCl_2$	Prior to the first manure spreading event to establish baseline, and
		Electrical conductivity	mS/cm	
		Moisture content	%	
		Total nitrogen, ammonium-		

Soil sampling locations	Soil profile	Parameter	Units	Frequency
for each farm paddock across the manure utilisation area[1,2]		nitrogen, nitrate-nitrogen	mg/kg	annual thereafter
		Total phosphorus		
		Phosphorus retention index (PRI)	-	
		Phosphorus buffering index (PBI)	-	
		Aluminium	$CaCl_2$ extract	

Note 1: For soil sampling purposes, each farm paddock must represent a maximum area of 50 ha.
Note 2: GPS coordinates must be recorded for each sampling location, to ensure subsequent sampling events are in the same location.

Monitoring of inputs and outputs

16. During time limited operations, the works approval holder must keep accurate records for the items specified in Table 5.

Table 5: Monitoring of inputs and outputs

Input / Output	Parameter	Units	Frequency
Animals received and dispatched at the premises	Animals	Number	Each truck arriving/leaving at the premises
Deceased animals			Monthly
Manure removed from the premises	Manure, details of who accepted the manure and the receiving premises	Cubic metres	Each load removed from the premises
Yield harvested, dry matter yield	Harvested crops or fodder	t/ha	Each crop harvested from the effluent & manure utilisation areas
N & P removal rate		kg/ha	

Complaints management

17. The works approval holder must investigate any 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.

18. Following receipt of a complaint, directly from a complainant, about any alleged emissions from the premises, the works approval holder must:

(a) respond to the complainant within 72 hours of receipt of the complaint; and
(b) within 10 calendar days of receipt of the complaint, provide a summary of the outcomes of any investigation conducted in response to the complaint, including any corrective and preventative actions taken in response to the complaint, unless such communication is not requested by the complainant.

Records and reporting (general)

19. The works approval holder must record the following information in relation to complaints received by the works approval holder (whether 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;

(d) the complete details of any activities being undertaken, where, and the weather and wind conditions at the time of the complaint;
(e) the complete details and dates of any investigation conducted in response to the complaint;
(f) a summary of the findings of any investigation conducted in response to the complaint, including the details of the person(s) responsible for the investigation;
(g) a summary of any corrective and preventative actions taken in response to the complaint;
(h) a summary of the time taken to respond to the complaint; and
(i) a summary of all communications with the complainant.

20. The works approval holder must maintain accurate and auditable books including 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 8;
(c) results of soil monitoring required by condition 15;
(d) records of inputs and outputs in accordance with condition 16; and
(e) complaints received under condition 19.

21. The books specified under condition 20 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 6 have the meanings defined.

Table 6: Definitions

Term	Definition
aged manure	means manure that has been aged in windrows for a period of 12 months or longer
AS 1289	means the most recent version and relevant parts of the Australian Standard AS 1289 *Methods of testing soils for engineering purposes*
ASPAC	Australian Soil and Plant Analysis Council
ASPAC certification	means in relation to the analysis of a sample that the laboratory is certified by ASPAC for the specified analysis at the time of the analysis
backgrounding	means grouping, growing or acclimatising animals prior to entry into a feedlot
books	has the same meaning given to that term under the EP Act
CDA	Controlled Drainage Area
CEO	means Chief Executive Officer of the Department 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 works approval is subject under s.62 of the EP Act
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
DPIRD guidelines for soil sampling	means the document entitled "*A guide for fit for purpose soil sampling*" (Fertilizer Australia 2019), available at https://fertilizer.org.au
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure has been constructed in accordance with the works approval
EP Act	*Environmental Protection Act 1986* (WA)
freeboard	means the distance between the maximum surface water elevations and the top of retaining banks or structures at their lowest point
harvested	means the process of cutting and gathering a ripened crop by mechanical means, such as a combine harvester
licensed composting facility	means a premises that holds a current and valid licence granted by the CEO under section 57 of the EP Act for a compost manufacturing and soil blending facility (category 67A)
licensed solid waste facility	means a premises that holds a current and valid licence granted by the CEO under section 57 of the EP Act for a solid waste facility (category 61A)
manure	means faeces and urine. For the purpose of this works approval, manure also means spent bedding and sludge removed from catch drains and holding ponds
manure utilisation area	means an area of land in which manure generated from operations at the premises may be applied as a soil ameliorant, subject to conditions
original set of feedlot pens	means the original set of feedlot pens on the premises, that were subject to W4875/2011/1, and are required to be decommissioned

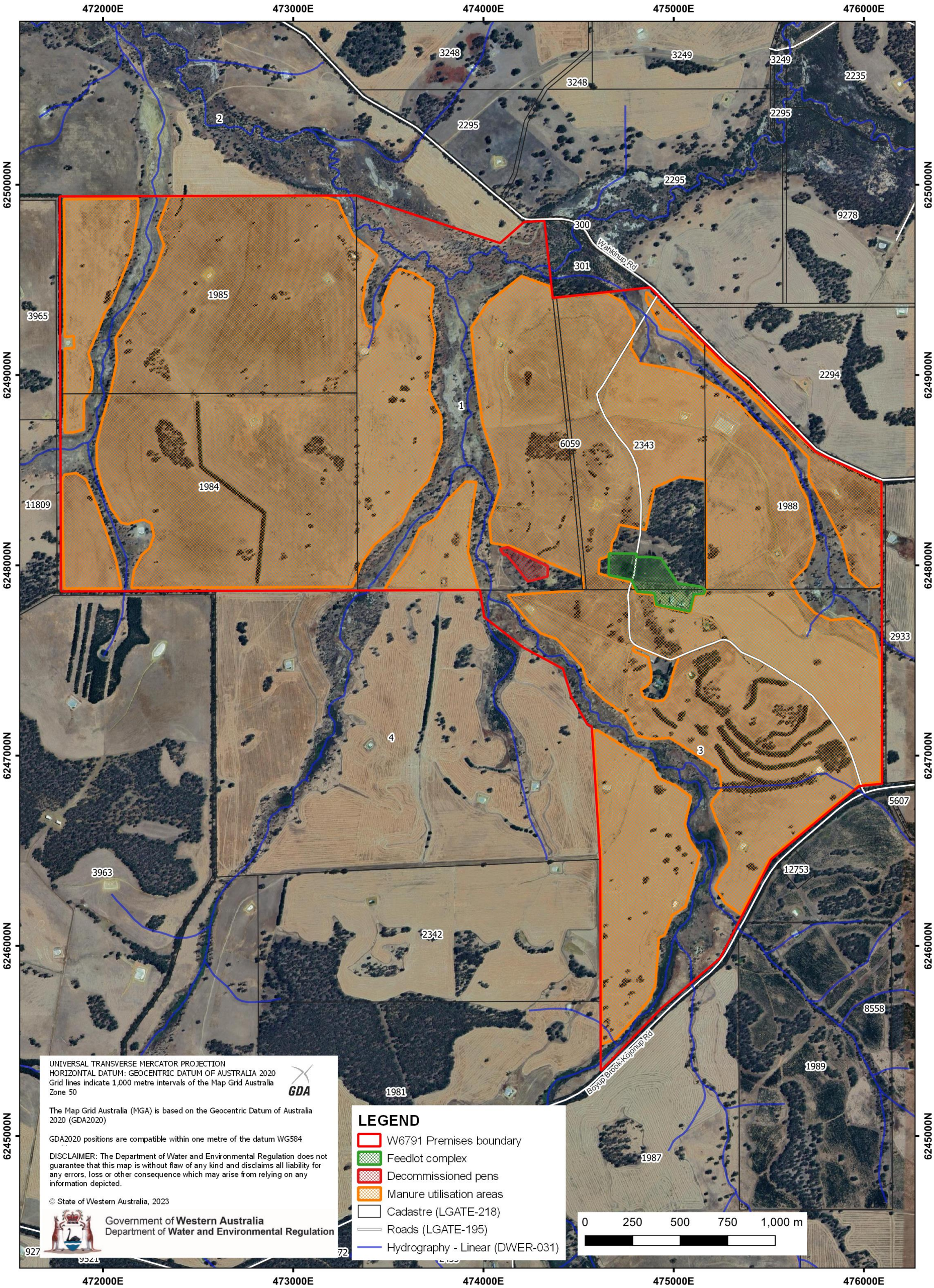
premises	the premises to which this works approval applies, as specified at the front of this works approval and as shown on the map in Schedule 1 to this works approval
prescribed premises	has the same meaning given to that term under the EP Act
Phosphorus retention index (PRI)	means the ratio of phosphorus adsorbed by soil (micrograms per gram) compared to that remaining in a solution (of initial concentration of 10 mg phosphorus per litre) after 16 hours
qualified professional engineer	means a person who: (a) holds a tertiary academic qualification specialising in geotechnical or civil engineering; and (b) has a minimum of 3 years of experience working in the area of geotechnical or civil engineering; or is otherwise approved by the CEO to act in this capacity
time limited operations	means operation of the infrastructure identified under this works approval that is authorised for that purpose, subject to the relevant conditions
Standard cattle unit (SCU)	means a Standard Cattle Unit, which is equivalent to an animal with a liveweight of 600 kg and calculated using the method outlined in the *National Beef Cattle Feedlot Environmental Code of Practice*, Meat & Livestock Australia Limited, June 2012
works approval	refers to this document, which evidences the grant of the works approval by the CEO under s.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 and map of manure utilisation areas

The boundary of the prescribed premises is shown in the map below (red line), in addition to the location of the feedlot complex (green cross-hatch), decommissioned pens (red cross-hatch) and manure utilisation areas (orange cross-hatch).



Schedule 1: Maps

Map of infrastructure

The location of key feedlot infrastructure is shown in the map below.