



Application for licence amendment

Division 3, Part V *Environmental Protection Act 1986*

Licence holder number	L9384/2023/1
Licence holder	Ucarty Holdings Pty Ltd
ACN	009 033 612
DWER file number	DER2023/000217
Premises	Ucarty Feedlot Ucarty Road UCARTY WA 6462
Date of report	3 July 2024
Status of report	Final

Amendment description

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the existing licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is hereby given under section 59B(9) of the EP Act.

This amendment is limited to constructing a roof over uncovered pens at the existing feedlot.

In completing the assessment documented in this 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>.

Purpose and scope of assessment

Ucarty Holdings Pty Ltd (licence holder) is seeking approval to construct a roof over the 6 remaining uncovered pens at the premises, which will allow for an increased stocking density from 2,360 to 2,695 standard cattle units (SCU).

An application to amend the existing licence (L9384/2023/1) was submitted to the department on 14 March 2024.

Background

The licence holder has been operating a feedlot on the premises since 2006, which is accredited under the National Feedlot Accreditation Scheme (NFAS). The premises is situated on farming land in Ucarty, about 125 km north-east of Perth.

Works approval W4170 was granted in 2005 for the construction of the original feedlot for 1,500 head of cattle. The feedlot was partially constructed before a registration (R1869) was issued for the commencement of operations. Construction compliance documentation was not submitted prior to W4170 expiring in 2008; construction also had deviated from the original plans, where only 6 of 12 proposed pens were constructed with a compacted base. A further 8 larger backgrounding pens were later established (without a compacted base) that have since been decommissioned.

Works approval W6554 was granted in 2022 for the construction of a roof over half of the pens, to replace the 8 backgrounding pens.

L9384 was granted in May 2023, following construction and verification of the works under W6554, for ongoing operation of the existing outdoor pens and new covered pens at an assessed design capacity of 2,360 SCU.

The licence holder manages manure and decomposed carcasses in accordance with a nutrient balance, by immediately spreading over paddocks on the premises at the point of removal from the feedlot (i.e., no stockpiling). Carcasses are decomposed prior to land application and this process occurs at the carcass disposal pad, located about 2.5 km south-west from the feedlot.

Proposed amendment

This licence holder proposes to construct a roof over the remaining 6 uncovered pens (labelled 'new shed' in Schedule 1: Maps of L9384); due to the higher stocking density, this will increase the assessed design capacity of the feedlot to 2,695 SCU.

Throughout construction of the shed, all uncovered pen infrastructure will be removed, including e.g. fences, feed bunks etc, with the new pen infrastructure installed once the shed is constructed.

The shed structure will measure 180 x 30 m and comprise a total pen area of 5,400 m² over an existing hardstand floor. The new shed will be stocked at the same density as the existing covered pens (4.7 m²/SCU). The existing floor has been constructed using clay soils that were tested as part of W6554.

The increased assessed design capacity is accounted for in the licence holder's updated nutrient balance provided in their application documents. All solid waste (manure/spent bedding and decomposed cattle carcasses) from the feedlot operations generated by 2,695 SCU will be spread over 990 ha of land.

Solid waste generation

This proposal will result in a minor increase in cattle numbers and the licence holder provided updated solid waste calculations in the application document. The amount of dry solids (manure and bedding) generated is expected to be about 1.68 tonnes TS/yr and the total amount of carcass solids produced is expected to be 3,786 kg/yr.

The calculations submitted with the application estimate an increase in total carcass disposal from 46 to 52 per year (average live weight: 400 kg). The licence holder has deemed the current carcass disposal pad as being sufficient for the slight increase in assessed capacity and that no changes to the carcass disposal pad is proposed as part of this application.

Solid waste utilisation

The licence holder currently works on an annual spreading rate of 4.5 t/ha for the spent bedding/manure product, 2.5 t/ha for dry manure and 1.0 t/ha for decomposed carcass material for a grain wheat crop yielding 2.5 t/ha and a winter cereal hay crop yielding 4 t/ha.

The increase in capacity will be managed in accordance with the updated nutrient balance, in which spreading rates will change slightly to 2.4 t/ha and 3.0 t/ha for the spent bedding/manure product and decomposed carcasses, respectively, for a winter cereal hay crop yielding 4 t/ha; and 2.0 t/ha and 2.5 t/ha for the spent bedding/manure product and decomposed carcasses respectively, for a grain wheat crop yielding 2.5 t/ha.

Separation distances

When considering the proposed amendment feedlot capacity of 2,695 SCU, the calculated separation distance to the nearest receptor, being a single rural or farm dwelling, is 1.23 km which is well within the actual distance of 3.5 km. The calculated separation distance to the nearest town, being the medium-sized town of Goomalling (~600 persons), is 4.92 km, which also is well within the actual distance of about 15 km.

Consultation

The Department of Primary Industries and Regional Development (DPIRD) considers the proposal is consistent with their advice and expectations; advice was also provided on an updated nutrient balance that considers the feedlot operating for 365 days instead of 270 days, and no longer considers potassium as a limiting nutrient, due to it having a lower impact on the environment when compared to nitrogen and phosphorus.

No comments were received from the Shire of Dowerin within the requested timeframe.

Risk assessment

The table below describes the risk events associated with the amendments consistent with the *Guidance Statement: Risk Assessments* (DER 2017). The table identifies whether the risk events are acceptable and tolerated, or unacceptable and not tolerated, and the appropriate treatment and degree of regulatory control, where required.

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls
Source/ Activities	Potential emissions	Potential receptors, pathway and impact	Licence holder controls					
Construction								
Construction of an additional covered feedlot to replace the existing uncovered pens	Noise and fugitive dust	Unreasonable interference with the health, welfare, convenience, comfort or amenity of nearby sensitive receptors (>3.5 km)	Sufficient separation distance in place to nearby human receptors	Low level impacts to amenity on local scale Minor	Likely to occur only in exceptional circumstances Rare	Low Acceptable, not subject to controls	The delegated officer considers there is sufficient separation distance in place (>3.5 km to nearest rural dwelling, >16 km to nearest town). The delegated officer does not reasonably foresee that noise and dust from construction will impact on the amenity and health of off-site human receptors.	None specified.
Operation								
Holding, feeding and watering of animals within indoor (roofed) feedlot shed	Nutrient-laden leachate (from manure, urine) accumulated in soiled bedding in pens	Seepage/infiltration causing groundwater contamination	Pens constructed within a covered shed Pens constructed on an existing impermeable hardstand base Straw-based bedding system to absorb leachates	Low-level on-site impacts Minimal off-site impacts on local scale Minor	Likely to occur only in exceptional circumstances Rare	Low Acceptable, based on applicant controls being implemented	The covered nature of the pens significantly minimises the volume of leachate generated from manure (urine, faeces, spilled feed, etc.), given it is not exposed to rainfall runoff. To further protect the underlying groundwater resource, the base of the covered pens will be constructed with a compacted hardstand that complies with a permeability of at least 1 x 10 ⁻⁹ m/s. The delegated officer considers these controls will ensure the risk of groundwater contamination from ongoing feedlot activities is acceptable, providing an appropriate surcharge layer is maintained.	- Pen floors and bunding must be maintained to ensure integrity is sustained.
	Odour, from animals within sheds and accumulated manure	Unreasonable interference with the health, welfare, convenience, comfort or amenity of nearby sensitive receptors (>3.5 km)	Stocking density 4.7 m ² /SCU Straw-based bedding system to absorb leachates	Low level impacts to amenity on local scale Minor	Likely to occur only in exceptional circumstances Rare	Low Acceptable, based on applicant controls being implemented	The delegated officer considers there is sufficient separation in place (>3.5 km to nearest rural dwelling, >16 km to nearest town). Providing the stocking density in pens does not exceed the assessed density (4.7 m ² /SCU) and spent bedding is removed from pens at the end of each rotation (~12 weeks), the delegated officer considers it unlikely that odour from feedlot operations will significantly impact on the amenity or health of off-site human receptors.	- Must operate covered pens with maximum stocking density of 4.7 m ² /SCU; - Pens must be cleaned out after every rotation
	Surface water runoff, contaminated with nutrients	Uncontrolled discharge, causing contamination of shallow groundwater	Pens constructed within a covered shed Pens constructed on an existing impermeable hardstand base Straw-based bedding system to absorb leachates Pens cleaned out after every rotation	Low-level on-site impacts Minimal off-site impacts on local scale Minor	Likely to occur only in exceptional circumstances Rare	Low Acceptable, based on applicant controls being implemented	The covered nature of the pens significantly minimises the volume of leachate generated from manure (urine, faeces, spilled feed, etc.), given it is not exposed to rainfall runoff. To further protect the underlying groundwater resource, the base of the covered pens will be constructed with a compacted hardstand that complies with a permeability of at least 1 x 10 ⁻⁹ m/s. The delegated officer considers these controls will ensure the risk of groundwater contamination from ongoing feedlot activities is acceptable, providing an appropriate surcharge layer is maintained.	- Pen floors and bunding must be maintained to ensure integrity is sustained.
Spreading of manure/spent bedding and decomposed carcasses to land	Nutrient-laden leachate from spoilt bedding material and decomposed carcasses	Contamination of soil, causing contamination of shallow groundwater Runoff from spread areas causing contamination of Cunjardine River Soil acidification Excessive build-up of soil P	Straw/manure from covered pens) to be spread immediately after removal (about every 12 weeks) Application of solid waste to land to occur at application rates to ensure nutrient removal to prevent excess nutrient build up, in accordance with the nutrient balance	Mid-level on-site impacts Moderate	Could occur at some time Possible	Medium Acceptable, subject to regulatory controls	The delegated officer has considered the advice provided by DPIRD on the applicant's proposal to spread decomposed solid waste on the premises and has determined appropriate application rates in accordance with the nutrient balance calculations provided as part of this application. As the proposed controls are critical for maintaining an acceptable level of risk, they will be imposed on the licence as ongoing operational controls. The delegated officer also considers that soil testing before and after the application of solid waste has occurred, will allow the ability to track movement of P and other nutrients down the soil profile and indicate if there is leaching at greater depth.	- Application rates for each waste type specified; - Wastes must only be spread across specified waste utilisation areas, with even distribution and only onto areas growing crops or pasture; - Must conduct soil testing of nutrients, before and after first application
		Overland runoff, uncontrolled runoff/discharge, causing contamination to nearby surface water courses		Mid-level on-site impacts Moderate	Could occur at some time Possible			
	Odour from spreading	Unreasonable interference with the health, welfare, convenience, comfort or amenity of nearby sensitive receptors (>3.5 km)	No stockpiling of manure, direct spread onto land	Minimal impacts to amenity on local scale Slight	Not likely to occur in most circumstances Unlikely	Low Acceptable, based on applicant controls being implemented	The delegated officer considers there is sufficient separation in place (>3.5 km to nearest rural dwelling, >16 km to nearest town). It is preferable, but not essential, if manure and decomposed solid waste can be incorporated into cultivation as soon as possible after application, to further reduce the risk of odour. This requirement has not been imposed on the licence at this stage, however this is an option should manure spreading activities cause off-site impacts during operations.	None specified

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Decision

The delegated officer has determined the proposal to construct a roof over the remaining uncovered pens will further lower the risk of emissions and discharges from feedlot operations at the premises, and the minor increase in stocking density (which the covered pens will allow) is not considered to significantly alter the previously assessed risk of activities on the premises.

The proposal will result in the feedlot changing to a fully covered operation, in which rainfall will be excluded from coming into contact with pen surfaces and negating the generation of effluent and surface runoff.

The proposed increase in stocking density will result in a slight increase in the amount of manure and spent bedding being generated from feedlot operations; however, the increase is considered to be minor and can be managed by the licence holder using existing infrastructure and management practices. The licence holder has also updated the existing nutrient management plan for the feedlot operation (to account for the increase in manure) and has sufficient land available for spreading.

Works conditions have been added to the existing licence regarding design and construction specifications of the roof, and post-construction certification reporting requirements.

Licence holder comments on draft decision

The licence holder was provided with drafts of the amended licence and this report on 7 June 2024 and requested the amendment be issued with no further comments.

Conclusion

Based on this assessment, it has been determined to amend the existing licence, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Summary of amendments

The below table provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the revised works approval as part of the amendment process.

Condition no.	Proposed amendments
History	Updated
2, Table 2	Works condition added
3, 4	Compliance and Environmental Compliance Report conditions added
Schedule 1- Map of infrastructure	Updated to include proposed new shed

References

1. Department of Environment Regulation (DER) 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2019, *Guideline: Decision Making*, Perth, Western Australia