Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Licence

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

Licence number	L9294/2021/1
Applicant	The Power Feedlot Pty Ltd
ACN	097 192 731
DWER file number	DER2021/000080
Premises	Coolina Cattle Holding Yards Lot 12 Arthur Road NARNGULU WA 6532 Legal description – Lot 12 on Plan 47187
Date of report	23 January 2024
Status of report	Grant

1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges from operations at the premises. As a result of this assessment, licence L9294/2021/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

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.

2.2 Application summary and overview of premises

2.2.1 Application background

The Power Feedlot Pty Ltd (Power Feedlot) hold registration R1713/2005/1 for a Category 68 Cattle feedlot for the 'Coolina Cattle Holding Yards', a pre-export cattle holding facility at Narngulu, on the outskirts of Geraldton.

The registration was issued in 2005 for a category 68: cattle feedlot under Part 2, Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations). Following a review of the premises, Power Feedlot was advised in November 2020 the facility more accurately meets the description of category 55: livestock holding yard under Part 1, Schedule 1 of the EP Regulations and it must apply for a licence for ongoing operations in respect of discharges of waste and emissions under section 56 of the *Environmental Protection Act 1986* (EP Act).

2.2.2 Application summary

On 4 February 2021, Power Feedlot submitted an application for a licence under section 57 of the EP Act.

The premises relates to category 55: livestock saleyard or holding pen with an assessed annual throughput of not more than 25,000 head of cattle. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in licence L9294/2021/1.

2.2.3 Overview of operation and infrastructure (from application)

The holding yard operates from October to April, where cattle are transported from the Pilbara, Gascoyne, Murchison, Kimberley, and some areas within the south of the state to the holding yards. Cattle are held within pens for 24 hours up to 14 days for rehydration and introduction to pellet feed before live export export to overseas markets. The maximum number of cattle held at the premises at any time is 8,656 animals, with an annual throughput of 25,000 animals.

The facility has 43 holding pens, 1 handling yard (drafting yard) and two additional hospital pens for sick animals (total area of 35, 175 m^2), with 188 to 250 head per pen, depending on the size and weight of the cattle. The pens are located on a natural gravelly loam with little to no slope, with contaminated stormwater draining towards 5 in-situ drainage basins of unknown size. The applicant has stated that contaminated stormwater seeps into the ground or evaporates.

The pens are cleaned about every three months, manure is piled near a shed for an undefined period and trucked off site to local market gardens and farmers. While historical records indicate deceased animals were collected by a local pet meat abattoir, the application indicates a burial pit is used on the premises and carcasses covered once placed within the pit. The burial area where the burial pits are excavated measures 25 * 6.5 * 5 metres and is located on the southwestern portion of the premises.

2.2.4 Overview of complaints

The department maintains an Incident and Complaints Management System (ICMS). On 4 February 2022 a complaint was registered regarding odour and dust emissions from cattle standing in uncleaned manured lined pens.

3. Risk assessment

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

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

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Applicant controls (from application)

Emission	Sources	Potential pathways	Proposed controls
Operation			
Dust	Operation of cattle holding yards	Air / windborne pathway	Vehicles drive slowly to minimise dust.
Noise		Air / windborne pathway	Facility operates for 7 months of the year only (October – April).
Odour and nuisance insects		Air / windborne pathway	Buried carcasses are covered immediately once placed in pit. Manure is removed quarterly from pens, held for an undefined period and trucked off site. Facility operates for 7 months of the year only (October – April).
Contaminated surface water runoff and infiltration of manure contaminated stormwater and leachate from pens and burial pit contaminating soil, soil microbes and / or impacting on groundwater quality or adjacent agriculture land.		Seepage to soil and groundwater	Holding yard is operated between October to April in the driest part of the year. Stormwater directed drainage basins and evaporated naturally and allowed to infiltrate the soil. Cattle are held in the facility for a minimum of 24 hours to a maximum of 2 weeks at a time.

3.1.2 Receptors

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

Table 2 below provides a summary of potential human and environmental receptors that may be impacted because of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental Siting* (DWER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from prescribed activity**
Closest Single rural residential premises Closest rural residential subdivision	~140 metres southeast from the boundary of the premises. ~360 metres south from the boundary of the premises ~370 metres to the southwest of the boundary of the premises. ~ 1 kilometre west of the boundary of the premises. ~ 3 kilometres northwest of the boundary of the premises.
Closest residential area City of Geraldton	~ 6 kilometres west of the boundary of the premises
Closest Industrial area	~ 1 kilometre west of the boundary of the premises.
Geraldton Airport	~ 800 metres north of the boundary of the premises.
Environmental receptors	**Distance from prescribed activity**
Agriculture farming land	~ 14 metres to the west of the holding pens ~ 71 metres to the southeast of the holding pens.
Proclaimed Arrowsmith Groundwater Area under *Rights to Water and Irrigation Act 1914* (RIWI)	Perth Superficial Swan aquifer lies underneath the site. Groundwater movement is towards the coast, east to west. Groundwater depth ranges from 14.28 to 17.69 mbgl (from DWER bore 70118303 located 130m north of cattle pens). Premises has 7 bores located at depths of 26 to 34 metres in the Perth Superficial Swan aquifer for cattle watering. Two bores for mining use in the Perth Superficial located ~ 4 kilometres to the northeast from the premises boundary. One bore for commercial use in the Perth Superficial located ~ 2 kilometres southeast form the premises boundary.
Proclaimed Greenough River and Tributaries Catchment under RIWI	Located with the proclaimed catchment area. Third order Greenough River Tributary located ~ 2 kilometres east of the premises boundary. Area has <3% chance of moderate to high flood hazard (source: NRI-WA DPIRD).
Soil	Greenough 4 Bootenal well drained Phase (221Ga_4Bid). Level to very gently undulating alluvial depositional plain. Slopes 1-3%. Red sandy and loamy duplex soils with brown deep sands. DWER bore 70118303 located 130m north of cattle pens bore log indicates there is medium to coarse sand to 9 mbgl, hard limestone at 9 -11 mbgl and fine to coarse grain sand to 30 mbgl. 50 to 70 % of the soil type has a very low to low ability for microbial purification. (Source NRI-WA DPIRD) <3% of the soil type has a high to extreme hazard for phosphorus export. (source – NRI-WA DPIRD) <3% of the soil type has an extremely low to low capacity for soil water storage. (source – NRI-WA DPIRD).

	Leachate is likely to infiltration into the soil.

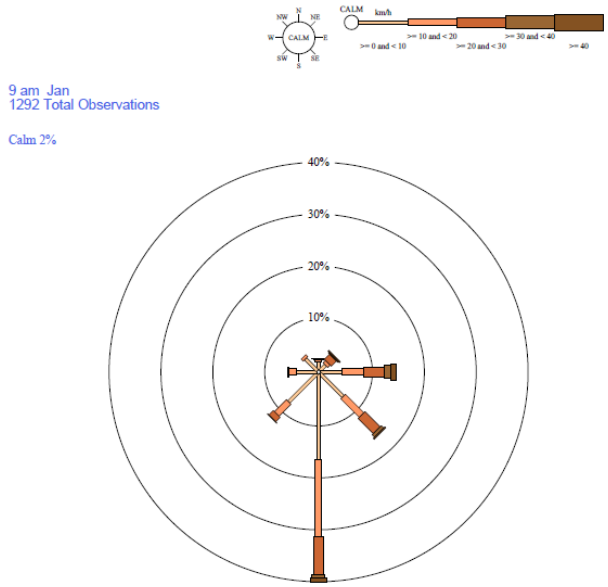
3.1.3 Climate

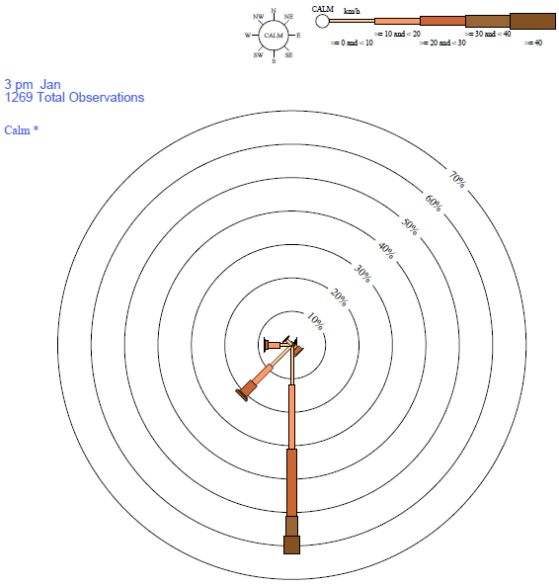
The Bureau of Meteorology (BoM) Geraldton Airport site (008315) located 800 metres north from the premises indicates that the mean annual rainfall is 349.2 mm (see Figure 1). Seventy percent of median rainfall occurs between May to September. It is noted that the applicant operates between October to May when the median rainfall is low, ranging from 8 to 2.2 mm each month with the highest monthly rainfall recorded during this period ranging from 16.8 to 93.6 mm.

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	9.7	12.2	16.8	22.1	39.5	58.4	68.6	59.8	30.9	15.9	13.8	5.3	349.2
Lowest	0.0	0.0	0.0	0.4	1.8	14.2	40.2	27.0	5.2	0.6	0.4	0.0	296.6
5th %ile	0.0	0.0	0.3	0.4	5.9	25.1	40.7	32.7	7.0	1.0	0.6	0.1	301.8
10th %ile	0.0	0.0	0.5	0.4	10.1	36.0	41.3	38.3	8.9	1.5	0.7	0.2	307.0
Median	4.0	3.2	2.2	8.0	34.5	54.0	54.0	62.1	25.4	7.5	5.6	2.6	335.4
90th %ile	22.8	33.0	58.9	53.6	73.7	96.4	116.7	80.4	54.5	22.0	28.6	15.2	400.5
95th %ile	27.9	42.9	73.1	62.5	79.6	108.4	122.8	84.1	64.4	57.8	36.2	16.0	430.8
Highest	33.0	52.8	87.2	71.4	85.4	120.4	128.8	87.8	74.2	93.6	43.8	16.8	461.2

Figure 1: Geraldton Airport (BoM site 008315) rainfall.

Figure 2 illustrates BoM Geraldton Town site (008050) wind data, located 10 km west of the premises. Strong southerly winds are consistent in January morning and afternoons. In July, westerly winds frequent mornings, swinging to the east and southeast in the afternoon.





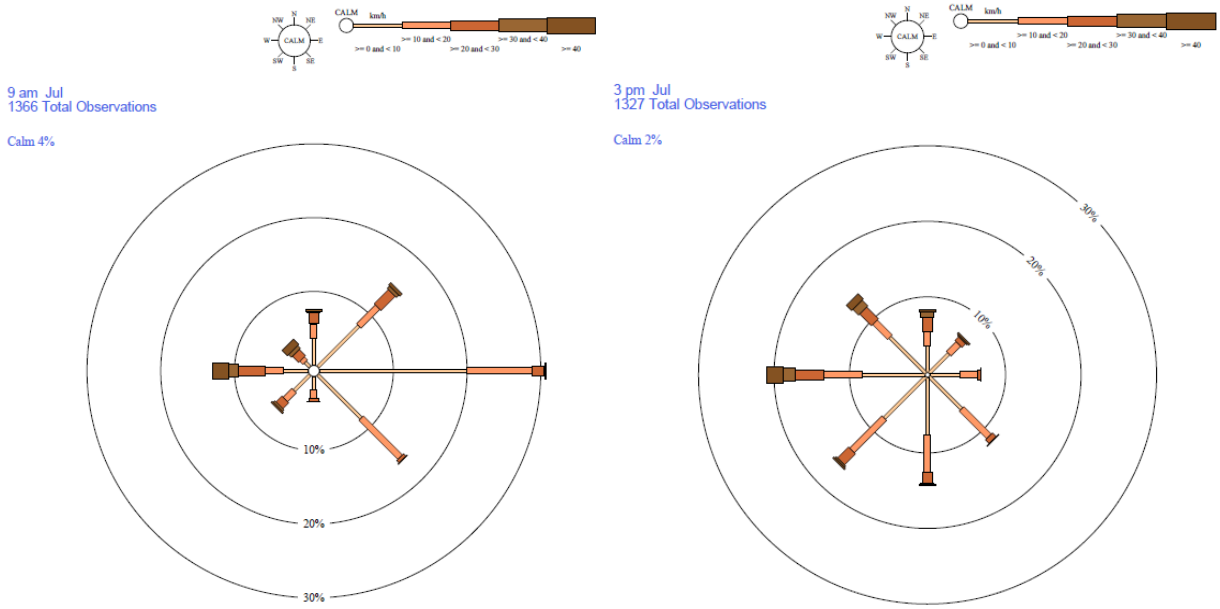


Figure 2: Geraldton town (BoM site 008050) wind roses for morning and afternoon for January and July.

3.1.4 Separation distances

The delegated officer has calculated the minimum separation distance to nearby sensitive receptors using a readily applied formula (the 'S-factor' formula) outlined in the National Guidelines (MLA 2012). See Appendix 2 for calculations and assumptions.

The S-factor method was originally devised in Queensland and allows for a rapid and simple assessment of potential air quality impacts (mainly odour) from beef cattle feedlots that does not require technically specialised and complex air quality modelling. It was calculated that the applicant's overall capacity of the existing pens (8,656 SCU) and the maximum stocking density (4.06 m^2/SCU) was considered not to meet within this assessment guidance framework (see Appendix 2) and required specialised modelling at those densities.

However, DWER calculated the separation distance meeting the minimum stocking density (9 m^2) and existing pens capacity (3,908 SCU), and measured the separation distance to the nearest receptors, being three rural residences between 140 to 370 metres south and southeast of the boundary of the premises. It is noted that the closest receptors are well within the actual calculated separation distance of 1.3 kilometres.

The delegated officer notes that this calculation is for a feedlot operation that operates all year round. In interpreting the separation distance, the delegated officer will consider that the holding facility operates for only 7 months within the year, the short time periods for holding cattle (24 hours to 2 weeks), that the facility is a holding yard and not a feedlot facility.

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and considers potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

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

Additional regulatory controls may be imposed where the applicant's controls are not deemed

sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Licence L9294/2021/1 that accompanies this decision report authorises emissions associated with the operation of the premises.

The conditions in the issued licence, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3: Risk assessment of potential emissions and discharges from the premises during and operation

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of licence	Justification for conditions.
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Operation								
Operation of cattle holding facility	Dust from pens and cattle movements	Air / windborne pathway causing impacts to amenity	Three rural residences between 140 to 370 metres south and southeast of the boundary of the premises. Geraldton airport within 800 metres north of the premises boundary.	Cattle held for 24 hours to 2 weeks. Facility operates for 7 months of the year (October to April) Refer to Section 3.1.1 Table 1	Low-level on-site impacts and minimal local off-site impacts to amenity C = Minor This risk event will likely occur in most circumstances. L = Likely **Medium Risk**	N	**Condition 1**	The proximity of the sensitive receptors to the holding facility underlines an inherent risk of operational activities from cattle and vehicle movements generating dust and being blown towards nearby residential receptors impacting on amenity. To address the risk of dust generation, the applicant will control dust by reducing vehicle speed within the premises (maximum speed limit was not provided). The delegated officer considered the applicant's controls to be insufficient to control and minimise dust from regular (daily / weekly) cattle movement on the bare earth in and out of the pens and unloading and loading trucks during the dry season. In determining this, the delegated officer considered the distance to sensitive receptors (residents and airport), the direction of wind in summer (prevailing strong southerly wind), seasonal operation of the holding facility (operates 7 months within the driest part of the year), the short time periods for holding cattle (24 hours to 2 weeks), the applicants' maximum cattle holding density (4.06 m^2/SCU) and the applicant's control. The delegated officer determined there was a medium risk of dust impacting on the amenity of close receptors, particularly the airport in summer. Based on this risk the delegated officer considered it necessary to regulate the following control. • Holding pens containing cattle must be wet down when dust is visible, to prevent dust emissions. The delegated officer is satisfied that this control will reduce dust lift on the premises and to ensure an acceptable level of risk is maintained during operations to minimise the impact of the holding facility on close sensitive receptors.
	Noise from cattle loading, unloading and holding.	Air / windborne pathway causing impacts to amenity	Three rural residences between 140 to 370 metres south and southeast of the boundary of the premises. Geraldton airport within 800 metres north of the premises boundary.	Facility operates for 7 months of the year (October to April), cattle held for short periods of time Refer to Section 3.1.1 Table 1	Mid-level local scale impacts to amenity. C = Moderate The risk event could occur at some time. L = Possible **Medium Risk**	N	**Condition 1**	The proximity of the sensitive receptors to the holding facility underlines an inherent risk of noise transmission from cattle movements and truck loading and unloading disturbing nearby residential receptors impacting on their amenity. To address this risk of noise transmission, the applicant will operate the facility for only 7-months of the year (October – April). The delegated officer considered the applicant's controls to be sufficient to prevent noise from disturbing receptors. In determining this the delegated officer considered the distance to sensitive receptors, seasonal operation of the holding facility (operates for only 7 months within the driest part of the year), the short time periods for holding cattle (24 hours to 2 weeks), the applicants' maximum cattle holding density (4.06 m^2/SCU), the meteorological wind direction, that no noise complaints have been lodged to DWER whilst the site has operated under a Registration and the S factor separation distance of 1.3 km. The delegated officer determined there was a medium risk of noise impacting on the amenity of close receptors. Based on this risk the delegated officer considered it necessary to regulate the following control. • The total number of cattle to be held on the premises not to exceed 3,908 • No cattle held between the months of May to September each year. The delegated officer is satisfied that these controls will reduce noise on the premises to ensure an acceptable level of risk is maintained to minimise impact of the holding facility on close sensitive receptors. Furthermore, the *Environmental Protection Noise Regulations* at the residences located 140 to 370 metres south and southeast of the boundary of the premises would apply.
	Odour and nuisance insects	Air / windborne pathway causing impacts to amenity and public health.	Three rural residences between 140 to 370 metres south and southeast of the boundary of the premises. Geraldton airport within 800 metres north of the premises boundary.	Burial carcasses are covered every month. Manure is removed quarterly from pens and trucked off site. Facility operates for 7 months of the year (October to April) Refer to Section 3.1.1 Table 1	Mid-level local scale impacts to amenity C = Moderate The risk event could occur at some time L = Possible **Medium Risk**	N	**Condition 1**	The proximity of the sensitive receptors to the holding facility underlines an inherent risk of odour and nuisance insect transmission from cattle operations disturbing nearby residential receptors impacting on their amenity. To address this risk of odour and nuisance insect transmission, the applicant will control odour and nuisance insects by operating the facility for only 7-months of the year (October – April), monthly carcass burial and quarterly manure removal from pens. The delegated officer considered the applicant's controls to be insufficient to prevent odour and nuisance insects from disturbing receptors. In determining this the delegated officer considered the distance to sensitive receptors, seasonal operation of the holding facility (operates for only 7 months within the driest part of the year during an active period for insect activity), the short time periods for holding cattle (24 hours to 2 weeks), the applicants control for carcass burial and manure removal, the applicants' maximum cattle holding density (4.06 m^2/SCU), the S factor separation calculation of 1.3 km the meteorological conditions and registered odour complaint. The delegated officer determined there was a medium risk of odour and nuisance insects impacting on the amenity and public health. Based on this risk the delegated officer considered it necessary to regulate the following conditions. • The total number of cattle held within the cattle holding facility must not exceed 3,908 animals.

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of licence	Justification for conditions.
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
								• All cattle held on the premises must only be held within the holding pens Pens to be cleaned every four weeks and records kept for cleaning. • Manure removed from the holding pens every four weeks must not be stored within the premises. • All carcasses are removed and taken to a carcass burial pit within 24 hours. • Carcasses are covered with a minimum of 300 mm of soil within a minimum of two hours following disposal in a carcass burial pit. • Full burial pits are sealed with 500 mm of clay and topsoil. • A minimum separation of 50 m is to be maintained between the burial pits and the premises boundary (closest rural residential is 140 m from premises boundary). The delegated officer is satisfied that these controls will reduce odour and nuisance insects on the premises to ensure an acceptable level of risk is maintained during operations to minimise impact of the holding facility on close sensitive receptors.
	Surface water runoff and leaching of contaminated stormwater from pens and mortalities in burial pits infiltrating soil, groundwater, or adjacent properties.	Contaminated surface water runoff and infiltration of manure contaminated stormwater and leachate from pens and burial pit contaminating soil, soil microbes and / or impacting on groundwater quality or adjacent agriculture land.	Proclaimed groundwater 14.28 mbgl. Three licenced bores under RIWI between 2-4 kilometres southeast and northeast of the premises. Neighbouring agriculture farming land 14 metres to the west and 71 metres to the southeast of the holding pens.	Stormwater runs off to drainage basins and is evaporated naturally and allowed to infiltrate into the soil. Cattle held for 24 hours to 2 weeks. Facility operates for 7 months of the year (October to April) in the direst part of year. Refer to Section 3.1.1 Table 1	Mid-level local scale impacts and low-level off-site impacts to environment C = Moderate The risk event could occur at some time L = Possible **Medium Risk**	N	**Condition 1**	The lack of impermeable holding pen floors, leachate and stormwater basins sizes, and unlined burial pits within the holding facility underlines an inherent risk of manure and carcass contaminated stormwater runoff, leaching into the soil and impacting on groundwater quality within the premises and on adjacent agricultural lands. To address this risk, the applicant will hold cattle for a maximum of 2 weeks, operate the facility for only 7-months of the year (October – April, driest part of the year), cover carcasses monthly within the burial pit and remove manure quarterly. The delegated officer considered the applicant's controls to be insufficient to prevent manure and carcass contamination of soil and groundwater within the premises and on adjacent properties. The delegated officer noted that the water management of the facility did not meet with National Guidelines for cattle feedlot facilities (MLA 2012). In determining this, the delegated officer considered the unquantified surface water runoff, the distance of the holding pens and burial pits to adjacent properties, the distance to groundwater (14 mbgl), the non-potable water quality of the groundwater, the users of the groundwater, the high infiltration capacity of the soil, the dry season operation of the facility (October to April), the rainfall of the region, the short time periods for holding cattle (24 hours to 2 weeks), the quarterly removal of manure and the monthly covering of burial carcasses. The delegated officer considered there was a medium risk of manure contaminated stormwater and leachate from the burial pit contaminating soil and infiltrating to groundwater. Furthermore, there was a medium risk of uncontrolled stormwater runoff exiting the premises, flowing to adjacent properties causing soil contamination. Based on this risk the delegated officer considered it necessary to regulate the following conditions. • Once a burial pit is full, it must be capped with a minimum of 500mm of clay and dressed in topsoil. • No cattle held on premises between May to September inclusive. • All manure is removed from the pens on a monthly basis and disposed off of-site • Manure is not stockpiled on the premises The delegated officer considered that the applicants' controls would be regulated to prevent infiltration of manure contaminated stormwater. The delegated officer is satisfied that these controls will contain and reduce soil and groundwater contamination on the premises to ensure an acceptable level of risk is maintained during operations to minimise impact of the holding facility on soil and groundwater water quality and impacting adjacent properties.

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

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4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 14 June 2021	None received	N/A
Local Government Authority, City of Greater Geraldton advised of proposal on 14 June 2021.	The City of Greater Geraldton provided a response on the 26 October 2021. The City has determined that there is sufficient information and evidence of approvals that have been issued in the past, where the City recognises and supports the existing cattle facility and associated developments on the subject property.	The delegated officer notes the City of Geraldton's response.
DPIRD advised of proposal on 20 July 2021	DPIRD replied on the 6 August 2021 and 28 January 2022. DPIRD provide information on the soil type, groundwater direction, groundwater mining receptor and, DWER monitoring bore (70118303). The bore has been intermittently monitored by DPIRD and indicated that the bore water quality was brackish and non-potable, indicating that further contamination by nutrients would not have a major impact on the current water quality. Furthermore, DPIRD advised that the facility lacked separation to human receptors, lacked controlled drainage where both did not meet with the National Guidelines for beef feedlots (MLA 2012). Dust suppression activities risked nutrient leaching and if necessary, should not exceed the evaporation rate for the day.	The delegated officer will consider this information in its assessment.
Applicant was provided with draft documents on 9/01/2024	Applicant responded on 15 January 2024. Refer to Appendix 1	Refer to Appendix 1

5. Discussion

The delegated officer determined that the cattle holding facility did not meet with National Guidelines (MLA 2012) for cattle feedlots. However, the delegated officer considered that the facility did not pose an unacceptable risk of impacts to amenity, public health, or the

environment. This determination is based on the following:

- the proposal is for a maximum throughput of 25,000 cattle per year or 3,908 animals at any time, and
- that the applicant proposed operational controls are included as regulatory controls.

The delegated officer assessed the risk of dust, noise, odour (including nuisance insects) to amenity and public health, manure contaminated stormwater and leachate from the pens and burial pits contaminating soil, groundwater, and adjacent properties to be medium, based on:

- distance to sensitive receptors (agricultural land, rural residences, rural subdivision, and airport located between 140 metres to 1 kilometre of the premises)
- seasonal operation of the holding facility (operates from October to April inclusive)
- the short time periods for holding cattle (24 hours to 2 weeks)
- DWER calculated maximum cattle holding density (4.06 m^2/SCU),
- that an odour complaint has been lodged with DWER;
- DWER calculated S factor separation distance of 1.3 kilometres,
- distance to groundwater, high infiltration capacity of the soil;
- meteorological conditions including rainfall and wind direction and strength, and
- the applicants holding yard design and controls.

The delegated officer determined to include the following additional regulatory controls on the licence to minimise the likelihood of dust, noise, and odour (including nuisance insects) to amenity and public health, and manure contaminated stormwater and leachate from pens and the burial pits contaminating soil, groundwater and agricultural lands as follows.

- Holding pens containing cattle must be wet down when dust is visible.
- The assessed holding capacity of the facility at one time is 3,908 SCU (in line with National Guidelines (MLA 2012 and AHA 2016)).
- All manure removed from the holding pens every month and immediately removed from site and must not be stockpiled within the premises.
- No cattle to be held on the premises from May to September inclusive.
- All stormwater runoff from the pens must be directed to existing drainage basins.
- All carcasses must: be moved to a burial pit within 24 hours; entirely covered by 300 millimetres of soil within 2 hours of disposal to the burial pit; full burial pits are to be capped with 500 millimetres of clay and located a minimum of 50 metres from the premises southeast boundary.

The delegated officer considers that the combination of the scale of the facility and operation only during the dry season poses an acceptable risk to the environment and public health.

6. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Animal Health Australia (AHA) 2016, Australian Animal Welfare Standards and Guidelines for Cattle, Edition 1, Deakin, ACT
2. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
3. Department of Primary Industries and Regional Development (DPIRD) 2020, Natural Resource Management Information Systems *https://maps.agric.wa.gov.au/nrm-info/*
4. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
5. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
6. DWER, 2019, Guideline, Decision making, Perth, Western Australia.
7. DWER 2019, Guideline, Industry Regulation Guide to Licensing, Perth, Western Australia
8. Meat and Livestock Australia Limited (MLA) 2012, National Guidelines for Beef Cattle Feedlots in Australia, 3rd Edition 2012, North Sydney, New South Wales
9. MLA 2012, National Beef Cattle Feedlot Environmental Code of Practice, 2nd Edition, North Sydney, New South Wales
10. Power Feedlot Pty Ltd (2021), Application and supporting documents, Narngulu, Western Australia

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

Condition	Summary of applicant's comment	Department's response
Condition 2 - Improvement condition for drainage	The applicant indicated that drainage existed on the premises. The applicant provided a map of drainage flow from pens to 5 in-situ earth drainage basins. The applicant also indicated that rainfall generated between October to May did not create any surface water runoff.	The department has removed the improvement works condition and included the existing drainage within condition 1, requiring all surface water from pens to drain to the basins and updated Figure 2.
Schedule 1 - Figure 2	The applicant provided a map labelling the premises infrastructure. The applicant indicated that the 'sale yards' did not have water for stock and was not used. The applicant indicated that they would move the burial area east of the existing pit to ensure that they comply with a 50 m set back from the boundary.	The department updated Figure 2 with this information. The delegated officer updated Condition1 to reflect that the sales yards are not used. The burial pit location has been moved east and made bigger to encompassed multiple pits within a burial area. The applicant must note that any future burial pits outside the burial area or any other changes to infrastructure on the premises must be assessed and approved through licence amendment application

Appendix 2: Calculation of S factor analysis

The S-factor separation distances for the dispersal of odours and noise from the source was calculated using the National Guidelines for Beef Feedlots in Australia (2012) (MLA 2012). The calculations consisting of the following.

S factor equation: $D = \sqrt{N} \times S$

Where:

- D= the required minimum separation distance (m)
- $\sqrt{}$ = square root
- N = feedlot capacity in standard cattle units (SCU) = 3,908 (see calculations below)
- S = composite site factor = 20.84 (see calculations below)

The applicant has provided an SCU of 8,656 at 500kg.

Where the composite site factor is given as $S = S_1 \times S_2 \times S_3 \times S_4 \times S_5$ (67 x 0.3 x 1 x 1 x 1)

S_1 = design and management factor = 67 (see calculations below)

S_2 = receptor type factor = 0.3 (single rural or farm dwelling)

S_3 = topography or terrain factor = 1.0 (flat terrain)

S_4 = vegetative cover factor = 1.0 (crops only (no effective tree cover)

S_5 = wind direction factor = 1.0 (normal wind frequency)

S1 was calculated using the stocking density. Stocking density is calculated by dividing the total area of the holding pens by the SCU. The applicant provided the SCU (8,656) and holding pen size (35,175 m2). DWER calculated the applicants stocking density (35,175 / 5,656) as 4.06 m^2/SCU. The beef industry stocking density minimum is 9 m^2/SCU (AHA 2016) and the MLA (2012) indicate that 11 m^2/SCU in rainfall area less than 750 mm is the minimum density size. DWER notes that the applicant may not meet industry standards for stocking densities at their current maximum holding numbers and requires specialised modelling advice.

DWER calculated the maximum stocking number at any one-time to meet the 9 m^2/SCU guidelines as 3,908 SCU. This figure was used in the S1 calculation, providing a value of 67 (from Table B.1 in the MLA 2012).

DWER calculated that the minimal separation distance required for a feedlot is 1,302.9 m (1.3 km). The closest residential receptor for the Coolina Holding Yards is 140m.