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Introduction

This document outlines the Odour, Dust and Noise Management Plan for Elders' Killara Feedlot (the 'Management Plan'). The Management Plan articulates the Feedlot's strategies to:

- · ensure compliance with relevant environmental; and
- · develop and improve the Feedlot to better manage odour, dust and noise.

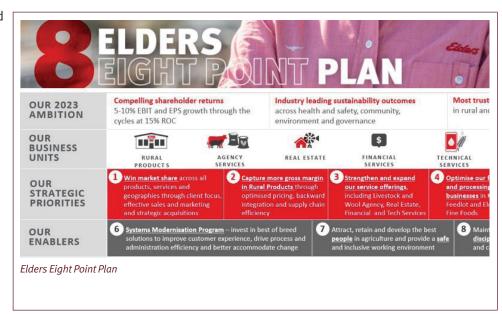
Scope

This Management Plan applies to the operations at the Killara Feedlot, located on Pine Ridge Road in Quirindi, New South Wales.

Elders Eight Point Plan

Our ambitions are to optimise our feed and processing business at the Killara Feedlot and develop and deliver an authentic and industry leading sustainability program, delivering industry leading sustainability outcomes across health and safety, community, environment and governance. These are highlighted in our current Eight Point Plan, which sets out Elders' key strategic priorities from 1 October 2020 through to 30 September 2023.

The practices outlined in this document for managing odour, dust and noise at the Feedlot demonstrate our commitment to our Eight Point Plan ambitions.



Compliance

The Feedlot is required to comply with the *Protection of the Environment Operations Act 1997* (NSW), the Regulations made under that Act, as well as the requirements of its EPA licence, The National Guidelines for Beef Cattle Feedlots in Australia and Environmental Guidelines: Use of Effluent by Irrigation (DEC 2004). Killara has recorded no community concerns regarding dust, odour or noise.

Risk Management

Risk management provides the foundation of the management plan. Risk assessments related to odour, dust and noise are conducted to identify specific hazards and the risk. Each identified hazard is risk-rated and linked to controls currently in place or an improvement action raised with practical measures to prevent, control, abate or mitigate. The process considers the community, improved safety and animal welfare outcomes as well as developing best practices with a focus on sustainability and continuous improvement.

Risk Mapping

An odour ring map with existing receptors has been developed and approved by the EPA – refer to Appendix A.

Environmental Monitoring

Risk areas have been identified and form part of the Feedlot's Environmental Protection Licence (EPL) and monitoring plan requirements.

An external consultant has been engaged to complete the annual environmental monitoring report, review trends, and make recommendations to ensure minimal impact to the environment and protect the impact to sensitive receptors.

Management Strategies to Minimise Odour

It is a requirement of the Feedlot's EPL (Section 3, part L4) to not cause or permit the emission of any offensive odour from the premises and to provide a defence if the emission is identified. 'Offensive' odour is judged by the public reaction.

In 2020, an external consultant was engaged to conduct Level 3 site-specific odour modelling using the approved beef feedlot emission methodology, hydrological modelling using MEDLI (Model for Effluent Disposal using Land Irrigation). This was conducted to determine whether increasing the cattle numbers by 3000 would impact sensitive receptors and potentially reduce through improved management practices. The modelling used the feedlot layout, feedlot operating practices and historical climate data to generate the required outputs which include manure accumulation, manure moisture content, catchment runoff and effluent holding pond volumes.

The Feedlot has 5 odour receptors within the approved odour ring, including two house receptors being 700 metres and 1.1 kilometres away. Refer to Appendix A for Approved Odour Map including receptors.

ODOUR SOURCE	ACTIONS TAKEN TO MINIMISE ODOUR	STATUS
Cattle pens	 Cleaning of pens at least every 60 days. Maintenance of maximum manure depth of 20mm (enabling manure to dry faster and reduce odour). Maintenance of pens as required to remove uneven surfaces which cause pooling of water. Seasonal cleaning before summer. Pen cleaning avoided during wet weather, so as to avoid spreading wet manure, which has much higher odour emissions than dry manure. Pen densities meet compliance requirements of 12 m2/SCU. Introduce pen covers to keep pens dry. 	In place Under investigation
Manure pads	> Maintenance of large manure pad (11.42 hectares in size) to maximise spreading capacity and	
	optimise drying times. > Bunded manure pad with a packed hard base to assist with draining. Accumulated water is pumped out to keep the manure pad dry. > Trained staff manage screening and composting. When pen cleaning in wet weather cannot be avoided, high moisture manure is separated and treated independently from manure pad. > Manure is collected and sold daily. > Manure added to Killara's crops are only moved to the cropping area and put into piles at a maximum of 14 days prior to spreading. Manure is spread uniformly onto cultivation or pasture at the correct rate. Manure is then incorporated in cultivation as soon as possible after application.	In place
Effluent ponds	 Open-air, gravity-fed drains are cleaned twice a year to prevent the build-up of waste. Open-air drains to move effluent to irrigation ponds replaced with underground pipes. Regular cleaning of effluent ponds occurs as required that exceed compliance requirements. Draining and cleaning of ponds occur in the summer months, every summer, to speed up drainage and drying of effluent sludge. Utilising spray irrigation application to reduce the capacity pressure on the effluent system allowing for more targeted and frequent irrigation. Increasing spray irrigation to 158 hectares using 3 centre pivots to further improve effluent level control. Centre pivot irrigation is set up to water via small bubbles (not spray droplets) that are distributed near the ground to remove the risk of dispersion and odour. Add another effluent pond to increase the holding capacity 	In place
Milling, mixing and loading feed for	> Liquid additives into effluent ponds. > Daily cleaning of spills.	
distribution – spilt, spoiled feed	- Sun, dealing of Spinor	In place
Deceased animals - decomposition	 Deceased cattle moved to designated composting area within 8 hours of death, and to manure pad once decomposed to an acceptable level for incorporation into fertiliser. Staff training on handling deceased animals. 	In place
General	> Tree breaks (a total of 1500 metres) have been planted between the feedlot and house receptors as a barrier for odour.	In place
	> Increase vegetation screens.	Under Investigation

Management Strategies to Minimise Dust

It is a requirement of the Feedlot's EPL (section 3, Part O3) that the premises be maintained in a condition that minimises or prevents the emission of dust from the premises.

DUST SOURCE	ACTIONS TAKEN TO MINIMISE DUST	STATUS
Cattle pens	> Routine pen cleaning and introduced a seasonal clean before summer. Reducing dry manure in pens helps to reduce dust when cattle move around. > When removing manure, only the top 15cm layer is removed and the compacted manure is left to reduce dust.	In place
Manure	> Manure is picked up and sold daily once compost standards are achieved.	In place
Roads	 In dry months, gravel roads around the feedlot are regularly watered down several times per day, as necessary. New gravel added to existing dirt roadways. Bitumen road laid around the feedlot in high traffic areas. Traffic movement of machines and vehicles are kept a significant distance away from dust receptors. 25 kmph speed limit imposed on-site. 	In place
	> Introduce additional bitumen in high use roadways.	Under Investigation
Movement of		
cattle	 Induction of cattle is conducted on concrete base floors indoors. Once cattle are inducted onto the site and moved to their designated pen, they are not moved until leaving the property to minimise movement. Compliant with low-stress handling of cattle. Training of staff in low-stress handling of cattle including using horses when moving around cattle. 	In place
	> Once cattle are inducted onto the site and moved to their designated pen, they are not moved until leaving the property to minimise movement. > Compliant with low-stress handling of cattle.	In place In place
cattle	 Once cattle are inducted onto the site and moved to their designated pen, they are not moved until leaving the property to minimise movement. Compliant with low-stress handling of cattle. Training of staff in low-stress handling of cattle including using horses when moving around cattle. Daily cleaning around mill and hayshed is scheduled to reduce the risk of wind blowing material over receptors. Testing of the incoming screens to ensure feed within specification to prevent dust when handling. Three scalpers utilised, designed to capture and remove dust. 	·

Management Strategies to Minimise Noise

Noise from cattle feedlots can result in adverse effects on surrounding residents (receptors) if the premises has not been designed to mitigate noise. Killara recognises the impacts of noise and has implemented strategies to protect the amenity and wellbeing of local communities living nearby.

NOISE SOURCE	ACTIONS TAKEN TO MINIMISE NOISE LEVELS	STATUS
Cleaning cattle pens	> Manure cleaning operation conducted only between the hours of 6 am and 9 pm.	In place
Cattle	 Induction of cattle, including vaccinations, is conducted in an enclosed shed as this is when cattle are most unsettled and vocal. Inductions of cattle conducted between 6 am and 3 pm. Once cattle are inducted onto the site and moved to their designated pen, they are not moved again until leaving the property to keep cattle content. Correct feed and scheduled feeding patterns are introduced to keep cattle content. 	In place
Feed mill	> Feed mill is only operational between 6 am and 3 pm.	In place
Staff	> Noise policy in place stipulating that no loud music is to be played on site.	In place
General	> Tree breaks (a total of 1500 metres) have been planted between the feedlot and house receptors as a barrier for noise.	In place
	> Increase vegetation screens.	Under investigation

Complaint Management

All environmental complaints including odour, dust and noise are recorded in the incident management system. In the system, all incidents are allocated to the manager and the 'Manager Review' completed. The system allows Managers to create and allocate actions to members of their staff in order to effectively address complaints.

Incidents recorded in the incident management system are retained for a minimum of 7 years.

Review and Reporting

The effectiveness of this Management Plan will be reviewed annually.

This will include:

- Review of the monitoring data and the monitoring plans; and
- assessment of the risks to the environment; and
- · impacts of changing legislation.

References

- National Guidelines for Beef Cattle Feedlots in Australia 3rd Edition, June 2012,
 Published by Meat & Livestock Australia in association with the Australian Lot
 Feeders' Association and the Feedlot Industry Accreditation Committee
- · Environmental Protection Licence 3966
- · The National Guidelines for Beef Cattle Feedlots in Australia
- Environmental Guidelines: Use of Effluent by Irrigation (DEC, 2004)
- Protection of the Environment Operations Act 1997, Part 5.5 Noise pollution, Section 139 & 140
- · Noise Policy for Industry, 2017 State of NSW and Environment Protection Authority

Appendix A

Approved Odour Ring
Map showing the approved odour ring in red and existing odour receptors.

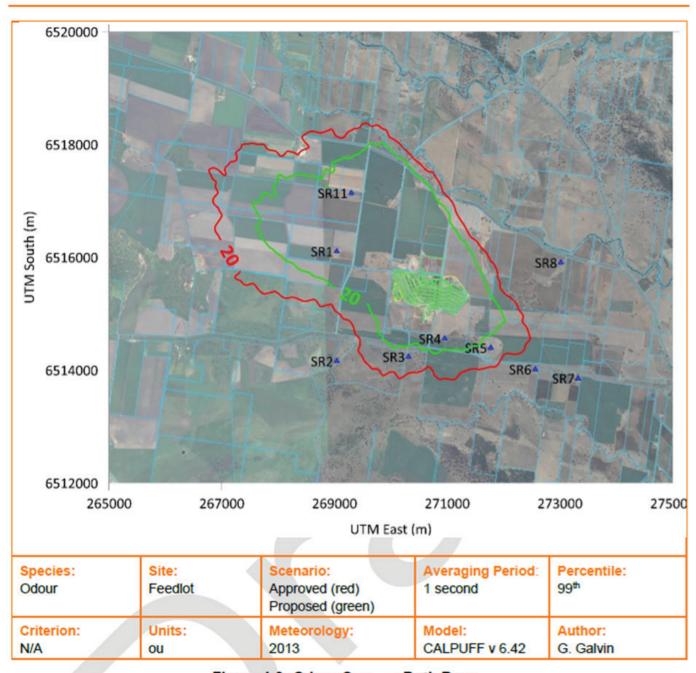


Figure 4-3: Odour C99 1sec - Both Runs







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