Our Reference: 23876.85251
Your Reference: Community letters for Nullamanna Feedlot Expansion (DA 15/2016)

26th May 2016

PO Box 411
Unit 1/3 Foundry St
TOOWOOMBA QLD 4350
Telephone: (07) 4638 2228
Facsimile: (02) 6771 5999
Free Call: 1800 445 389
info@enviroag.net.au
www.enviroag.net.au

ABN 56 135 005 999

Mr Anthony Alliston
Manager Development Services - Civil and Environmental Services
PO Box 138
Inverell NSW 2360

Dear Anthony

Re: Community letters for Nullamanna Station Feedlot Expansion (DA 15/2016)

Through the public review of the Nullamanna Station Feedlot Expansion Development Application and Statement of Environmental Effects, the community was able to provide feedback on the development. Letters were submitted to Inverell Shire Council which raised concerns about odour, water access, animal welfare and traffic. Responses to these concerns have been detailed below.

Odour

Letters from the community addressing odour stated concerns over the movement of odour into the valley where the Nullamanna Township is located, as well as flow of odour into individual houses during high wind and wet weather.

The odour assessment has found that odour will not affect surrounding residents in average wind conditions. In above average wind speeds, with wind blowing directly from the feedlot to a resident's house, odour will likely be detected.

Nullamanna Station will plant a vegetative buffer. Vegetative buffers reduce wind speeds, increase mixing of air, and reduce the spread of dust and aerosols, which are carriers of odorous compounds (Trabue *et al.* 2010; *Hernandez et al.* 2012).

Trees will be planted to the west and south-west of the manure stockpiles as stated in the Statement of Environmental Effects. The tree buffer will consist of native trees and shrubs.

Quantity of water

With regards to the quantity of water available to the feedlot, Nullamanna Station has a bore licenced for 20ML per year and a 65ML gully dam to the north of the feedlot. The National Guidelines for Beef Cattle Feedlots in Australia (MLA 2012) states that approximately 72ML of water is required per year for a feedlot of 3,000 SCU. This yearly requirement includes water for dust suppression, feed processing, cattle wash down, general cleaning and staff and office amenities. Thus there is enough water for cattle.

However the 72ML does not include water to dilute feedlot effluent before it is applied to waste utilisation areas. Nullamanna Station has a Maximum Harvestable Right (MHR) of 131 ML, which is based on the size of the property (1872.71 ha) (NSW Office of Water, 2015). Additional smaller dams onsite covered under the MHR are used for irrigation.

Animal Welfare

The animal welfare concerns raised in the letters were related to the provision of shade for cattle to reduce heat stress. One letter suggested that trees be planted in the feedlot. This will not work, as the cattle will destroy smaller trees and no existing trees are growing in the feedlot expansion area.

Shadecloth was also suggested in another letter as this may reduce heat stress to cattle. Providing shade in the feedlot area is associated with an increase in productivity of feedlot cattle (better feed efficiency)

(Sullivan *et al.* 2011; MLA, 2006). However, Nullamanna does not have weather extreme enough to grant this as obligatory.

The Model Code of Practice for the Welfare of Animals: Cattle (Primary Industries Standing Committee, 2004) states:

> *"The provision of shade or alternative means of cooling, such as misters and sprays, may be required and should be considered particularly where:*
>
> *a) the duration of prolonged high temperature and high humidity with decreased air movement is likely; or*
>
> *b) the temperature exceeds 30°C for an annual period of 750 hours - see the Bureau of Meteorology Temperature Map in Appendix 2.2A1 of the National Feedlot Guidelines.*
>
> *Movement of cattle should not be attempted during extreme heat conditions.*
>
> *Where cold stress predominates, shelter (e.g. windbreaks, mounding) and allowance for additional nutrient requirements should be considered."*

Cattle destined for Nullamanna Station are predominantly transported from west of the feedlot, where hotter, colder and drier temperatures prevail. Based on the temperature map mentioned in point "b" in the above reference, Nullamanna Station experiences approximately 500 hours above 30°C. Due to the location of the feedlot on top of a hill, prolonged periods of decreased air movement do not happen frequently.

Thus whilst shade cloth may potentially increase the productivity of animals and lift welfare, shade is not necessary to ensure the welfare of the animals under the welfare code.

Traffic

The letters raise concern over the school bus and B-double trucks sharing the road, as well as the behaviour of truck drivers on the road (speeding, cutting corners).

The school bus time restrictions on Nullamanna Road still apply to the north of Nullamanna Station on the unsealed road. The Township of Nullamanna is not subject to these time restrictions and all trucks should travel this route.

Nullamanna Station will, where possible, make changes to transport and contractor supply agreements and contracts with grain and stock carrying companies to ensure semitrailers and B-doubles are operated in a safe manner in the township of Nullamanna and on Nullamanna Road. Clauses may include:

- Minimise truck operation during school hours if possible;
- Be mindful of school busses;
- Slow to 80km/hr for designated bus stops; and,
- A flyer is to be provided to all truck drivers outlining speed limits, school times and bus stops.

If you have any further questions with regards to these topics, please give our office a call.

Yours sincerely,

Ryan Francis
Senior Environmental Scientist
EnviroAg Australia Pty Limited

References

Hernandez, Guillermo, et al. "Odor mitigation with tree buffers: Swine production case study." *Agriculture, Ecosystems & Environment* 149 (2012): 154-163.

MLA (2006). *Heat load in feedlot cattle.* Meat and Livestock Australia: Sydney.

Primary Industries Standing Committee (2004). *Model code of practice for the welfare of animals: cattl*e (No. 85). CSIRO Publishing: Sydney.

Sullivan, M. L., Cawdell-Smith, A. J., Mader, T. L., & Gaughan, J. B. (2011). Effect of shade area on performance and welfare of short-fed feedlot cattle. *Journal of animal science*, *89*(9), 2911-2925.

Trabue, S., Sauer, T., Pfeiffer, R., Hernandez, G., & Tyndall, J. (2010). Odor mitigation with tree buffers. In *Biotechniques for Air Pollution Control: Proceedings of the 3rd International Congress on Biotechniques for Air Pollution Control. Delft, The Netherlands, September 28-30, 2009*. CRC Press, 2010.