MAJOR PROJECT ASSESSMENT: Moira Station Cattle Feedlot

Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

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1. EXECUTIVE SUMMARY

Agricultural Equity Investments (AEI) Pty Limited is proposing to construct and operate a cattle feedlot at Moira Station in the Riverina Region of southern New South Wales. The Moira Station property is approximately 1,200ha in size and is located in the Murray local government area, near the border of NSW and Victoria, some 42km south of Deniliquin and 13km south of the township of Mathoura. The site has previously been used for agriculture and contains an extensive network of irrigation channels. The proposed feedlot would accommodate approximately 80,000 cattle, which would arrive at the feedlot weighing approximately 300kg and be fed and watered until an average weight of approximately 529kg is reached. Based on a capacity of 80,000 head of cattle, the proposal would be the largest feedlot in Australia.

The capital cost of the proposed cattle feedlot is estimated at $60 million. Approximately 80 people would be employed during construction and 86 people during its operation. If approved, it is estimated that construction would take approximately 6 months.

On 2 December 2005, the Proponent lodged an Environmental Assessment for the proposal with the Department. During the exhibition period, the Department received 19 submissions on the EA, with 5 submissions received from public authorities, 13 from the general public and 1 from a private company. Twelve submissions either objected to or raised concerns with the proposal. Key issues raised in submissions received by the Department included:

- Odour impacts;
- Scale of the development;
- Impact from Flies;
- Potential impact of diseases and methods to minimise these;
- Treatment of effluent;
- Amenity impact, including tourism, noise and quality of country living;
- Traffic impact, including noise associated with increased truck movements; and
- Insufficient information in EA, including incomplete year of weather (including wind) data.

The Department has assessed all of the issues raised in submissions and has concluded that residual impacts of the project, including odour, waste management, pests, noise and traffic impacts, can be mitigated and/or managed to ensure an acceptable level of environmental performance. Consequently, the Department considers the project is in the public interest, subject to strict conditions of approval.

2. BACKGROUND

The purpose of the proposed feedlot is to produce grain fed beef graded and cut to compete with the US product in the global market, particularly Asia, where there is considered to be high demand for consistent quality beef products.

Industry research has shown that demand for beef from Asia has grown considerably over recent years and demand is considered to be in excess of supply. Additional cattle feedlots are therefore necessary to meet the market demand for the beef products currently being supplied to the Asian market. In recent years, the various Asian beef markets have indicated that high quality beef products are increasing in demand due to previous quality related problems involving Bovine Spongiform Encephalopathy (BSE or Mad Cow disease).

AEI used several selection criteria to identify a suitable and affordable site to accommodate an 80,000 head cattle feedlot, including:

- A minimum area of 120ha
- A surrounding area with minimal close neighbouring properties in order to minimise potential impacts from the proposed project
- Access to transport to enable smooth delivery and distribution of cattle and grain
- Available water supply, preferably river and bore water
- Existing power supply
- Comprising of a suitable soil type for a feedlot
- Access to suitable feeder cattle numbers in south eastern Australia
- Access to suitable grain and feed components
- Access to a local workforce for the operation of the feedlot.

The preferred location of the proposed cattle feedlot on Moira Station within Murray Shire is a 1,200ha site with minimal close neighbouring properties. The site has direct access to the Cobb Highway for road transport and the Deniliquin-Bendigo railway should rail access be required. The site also has access and licensing for both river and bore water and there is an existing power supply. The site consists of clay based soils. The rural properties in the Riverina Region produce suitable grain and feed components and also feeder cattle numbers. A suitable and available workforce is located in Moama and the surrounding area.

The major industries in this region comprise agriculture, food processing, manufacturing, forestry and wood processing, transport and logistics, education and research and public sector institutions. The nearest towns in the vicinity of the project site are Mathoura, Echuca-Moama and Barmah, all are located within a 10 to 20km radius of the site.

AEI also evaluated alternative locations to site the proposed feedlot, including:

- Jerilderie Shire – upon more detailed consideration sites in this area were deemed unsuitable as they had been extensively farmed and the soils were not of a sufficient quality to accommodate the proposed feedlot, particularly sedimentation and holding ponds.
- Deniliquin Shire – two suitable sites were located in this area, however on further investigation both sites contained groundwater close to the surface, which would have been significantly impacted due to the required excavation depth for the holding pond and irrigation requirements.
- Conargo Shire – a property was identified in this area, however on further investigation it was located below the 1 in 100 year flood zone. Under the Conargo Local Environmental Plan 1987, the proposed project is prohibited.

The site comprises Lots 60 DP 751153, Lot 1 DP 111271, Lot 2 DP 111271, Lot 76 DP 751153, Lot 125 DP 751153, Lot 126 DP 751153, Lot 127 DP 751153, Lot 128 DP 751153, Lot 129 DP 751153, Lot 140 DP 751153, Lot 164 DP 751153, Part Lot 8 DP 751153, Part Lot 9 DP 751153, Part Lot 118 DP 751153, Part Lot 162 DP 751153, Part Lot 163 DP 751153 and Lot 1 DP 550495.

Figure 1*: Regional Context*

3. PROPOSED DEVELOPMENT

The Proponent is proposing to construct and operate an 80,000 head cattle feedlot at Moira Station, approximately 13km south of Mathoura in south western NSW. The proposed feedlot would occupy a footprint of 600ha, which would comprise the following components:

- 96 feed pens;
- internal roadways between each pen;
- Access road from the Cobb Highway around 2.2km in length;
- Effluent storage area with a 500 mega litre capacity;
- Feed mill and hay processor;
- Freshwater storage area with a 1,000 mega litre capacity;
- Manure stockpiling area;
- Cattle receival area;
- Associated sedimentation and holding ponds;
- Irrigation area;
- Ancillary buildings for administrative activities; and
- Diversion of some existing channels of the Moira Irrigation Channel.

Preparation of the site to site to allow for construction of the proposed project would consist of clearing trees in the pen area and along the proposed access road along with the construction of a new access road adjacent to the proposed operational access road. It is proposed that these activities be undertaken and completed prior to commencement of the main construction program.

The construction of the proposed project would be undertaken over a period of approximately 6 months. The construction access is proposed to be adjacent to the main entry road from the Cobb Highway. It is proposed that earthworks would commence with topsoil stripping of work areas for the simultaneous construction of feed pens, roads, building pads and water storage as well as upgrading the irrigation areas.

It is proposed that drainage pipelines, pits and structures be integrated with earthworks to enable the completion of sections for the erection of pens, cattle alleys, feed bunks and roads. Materials required would include concrete, pipes, pits, gravel, sand, cement, road base, steel pipe and cable for pens, road sealing material, power and communication cables and building materials.

Once the construction activities have been completed, all cattle will be delivered to the feedlot by road transport and will initially be placed in a receival area via a weighbridge for supervision prior to be being placed in the feedlot pens. High quality hay, freshwater, shade and shelter will be provided within the receival area.

Cattle would enter the feedlot at around 9-12 months of age and an average of around 300kg in weight. The cattle would be fed for approximately 182 days to achieve an average of 529kg in weight. Once the designated weight is reached, the cattle will be transported from the site to an abattoir.

The majority of feed will be transported to the site from within south eastern Australia together with locally grown produce. All feed will be processed on site through a feed mill and stored in silos while hay would be processed on site through a grinder system. The feed will be loaded into feed trucks from overhead storage bins and mixed within the truck, which will then place the mixed feed into feed bunks within the pens.

Manure from the pens will be collected and stored within a controlled drainage area adjacent to the feed pen area (refer to Figure 2). Stockpiled manure will be placed in windrows for aerobic composting. The manure will then be screened prior to spreading over an area of land to the east of the Cobb Highway. All runoff from the feedlot will drain through the sedimentation ponds to the holding pond to be pumped to the effluent storage area. While wastewater generated will be irrigated on a 380ha area of the property.

The feedlot will be designed as a Class 1 feedlot, which has the highest standard of design, operation, maintenance, pad management and cleaning frequency and odour performance. While based on a capacity of 80,000 head of cattle, the proposal would be the largest feedlot in Australia.

It is expected that construction of the proposed project would occur within the hours specified by the Department of Environment and Conservation and Murray shire council. These hours would be 7am to 6pm Monday to Friday and 7am to 12pm Saturdays with no construction activities undertaken on Sundays and Public Holidays. The proposed feedlot would operate 24 hours a day, 7 days a week. The layout and components of the proposed project are illustrated by Figure 2 and summarised by Table 1 below.

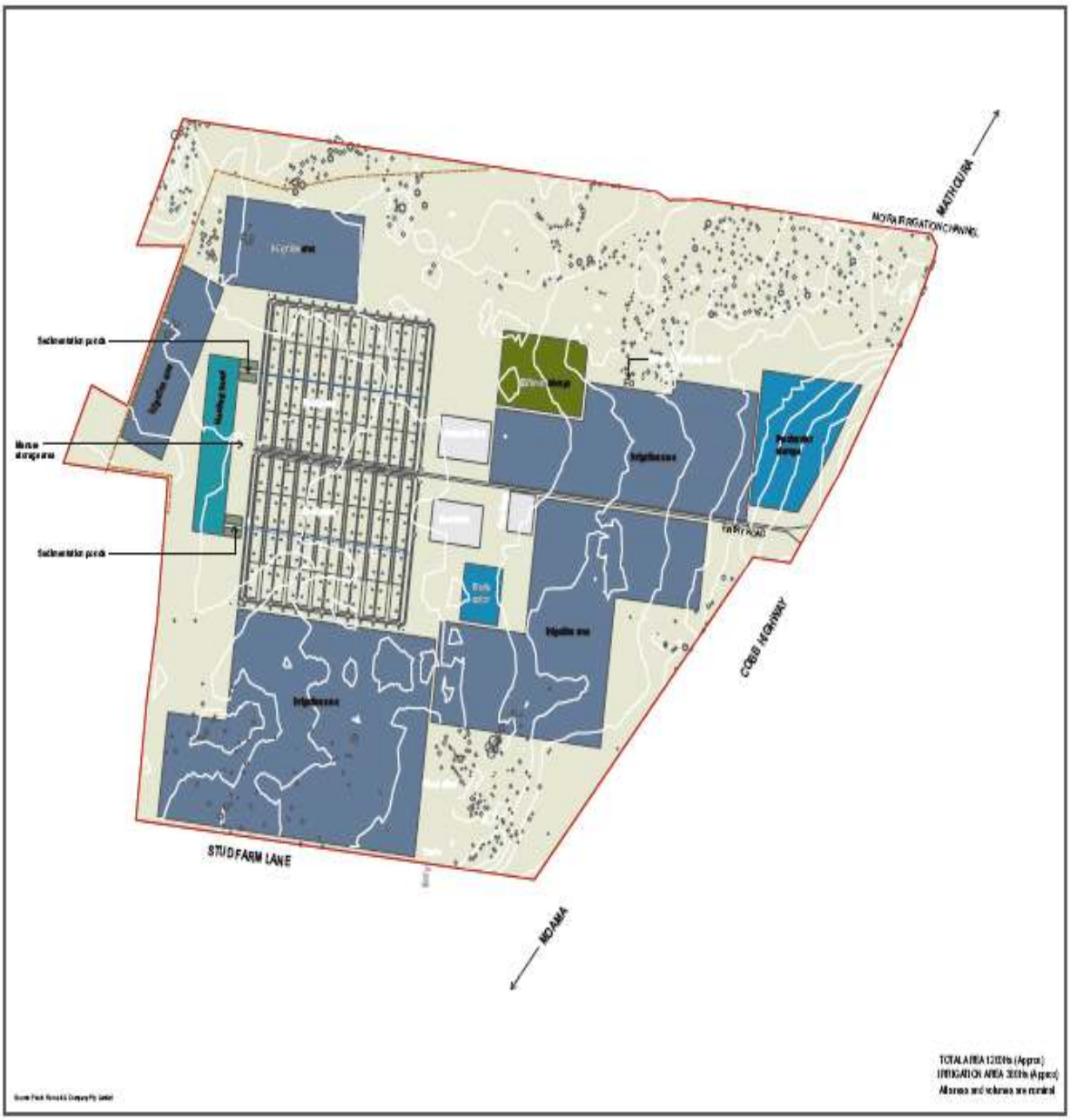

Figure 2: *Project Layout*

Table 1: Major Components of the Proposed Feedlot

Aspect	Description
Feed pens	96 pens (measuring 61m by 168m) to contain the cattle on one site. The proposed pens would slope east to west and a clay material of approximately 300mm thick would be used under the pens. Four lateral move irrigators are proposed to be installed and used during the summer months, extracting water from a concrete channel east and west of the pens and used for cooling, dust control and pad moisture.
Internal roadways	Feed and cattle lanes between each of the pens. The proposed roads would be approximately 8m wide. Additionally another road of the same width is proposed for between the site receivals area and the Cobb Highway, which would be sealed to cater for vehicles, including B-Doubles.
Ancillary buildings	A workshop measuring 36m by 22m, two offices measuring around 36m by 18m, amenities block measuring about 19m by 11m and also diesel storage.
Effluent storage	Water from the holding pond is proposed to be pumped into the irrigation storage, and freshwater supplied to the storage via the freshwater storage. Water from the effluent storage consisting of a mixture of freshwater, runoff and wastewater would be directed into irrigation channels to flood irrigate the fields adjacent to the feed pens. The storage would be capable of holding all wastewater and runoff during the wet winter months when irrigation would not be taking place. The storage area would have a capacity of some 500ML.
Commodities and feed preparation area	Feed and supplements are proposed to be delivered to the commodities area where they would be stored. A feed mill and a hay processor are also proposed to be located here.
Receivals area	Cattle are proposed to be delivered to the receivals area, via a weighbridge and an internal access road which would be connected to the Cobb Highway. The pens within the receivals area would each measure 27m by 17m
Freshwater storage	A freshwater storage of around 1,000L capacity is proposed for the north eastern corner of the site.
Sedimentation and holding ponds	Runoff from the feedlot is proposed to be directed into two sets of twin sedimentation ponds. Each sedimentation pond would measure approximately 95m by 46m at the floor and have depth of around 0.37m to 1m. A channel would connect the sedimentation basins to a holding basin which would measure approximately 870m by 181m, with the floor approximately 6.2m below ground level. It is proposed that water depths in the sedimentation and holding ponds not exceed 1.5m and 3m respectively. Material excavated from the holding pond is proposed to be used as fill under the pens.
Irrigation area	This is proposed to cover approximately 380ha, comprising approximately 300ha of liquid waste irrigated crop and the remainder made up of drains, roads and channels.
Diversion of Moira Irrigation Channel	It is proposed to re-direct some existing channels around the footprint of the project.

4. STATUTORY CONTEXT

4.1 Major Project

The proposed development would constitute a Major Project because as described in Schedule 1 of *State Environmental Planning Policy (Major Projects) 2005* the proposal is development for the purpose of intensive livestock industries that employs 20 or more people for the purpose of feedlots, piggeries, poultry egg or meat production or dairies. Consequently the Minister for Planning is the approval authority for the project.

4.2 Permissibility

The proposed project includes a number of land parcels which are zoned 1(a) General Rural under *Murray Local Environmental Plan 1989*. The proposal is being a cattle feedlot which is described as an intensive livestock keeping establishment. The project is permissible with development consent in land zoned 1(a) General Rural zone under *Murray Local Environmental Plan 1989*.

4.3 Minister's power to approve

Department has exhibited the Environmental Assessment (EA) in accordance with section 75H (3) of the *Environmental Planning and Assessment Act 1979*, as described in Section 5 below. Additionally, the project is permissible with development consent and meets the requirements of the Major Project SEPP. Therefore, the Department has met its legal obligations and the Minister has the power to determine this project.

4.4 Environmental Planning Instruments

The assessment of the proposed development is subject to the following environmental planning instruments and strategies:

- *State Environmental Planning Policy No 44 – Koala Habitat Protection*
- *State Environmental Planning Policy No 55 – Remediation of Land*
- *Murray Local Environmental Plan 1989*

The Department has considered the proposed project against the objectives and aims of these instruments, and is satisfied that the proposed project, subject to the implementation of the recommended conditions of consent, is generally consistent with the provisions of these instruments (refer to Appendix E).

5. CONSULTATION AND ISSUES RAISED

On 2 December 2005, the Proponent lodged an EA for the proposal with the Department.

The Department subsequently:
- notified all property owners in the vicinity of the site who could be affected by the proposal;
- notified Murray Shire Council and all the relevant State government agencies;
- advertised the exhibition of EA in the *Deniliquin Pastoral Times and Echuca Riverina Herald*; and
- exhibited the EA from 9 December 2005 until 30 January 2006.

This satisfies the requirements for public participation in the EP&A Regulation.

5.1 Submissions Received

During the exhibition period, the Department received 19 submissions on the EA: 5 submissions from public authorities, 13 from the general public and 1 from a business group. Twelve submissions, including 11 submissions from the general public, either objected to or raised concerns with the proposal.

Public Authority Submissions

The ***Department of Environment and Conservation*** (DEC) advised that following its review they were able to support the project subject to a number of conditions. The DEC indicated that odour is the key issue associated with the proposal and despite using 'state-of-the-art' odour impact assessment, there would still be some receptors where it would not be possible to conclusively determine whether they will or will not experience offensive odour impacts. The DEC also indicate that the proposed size of the feedlot and absence of a full year of site-specific on-site meteorological data add to the uncertainty. The DEC add that this uncertainty will need to be carefully considered by the Department in its assessment of the proposal. To address this uncertainty, the DEC has provided some advice and recommended conditions. They suggest the development to occur in stages with progression to the next level dependent on demonstrating compliance at the previous level and ensuring the Proponent implement stringent odour mitigation measures and monitoring.

Department of Natural Resources (DNR) raised a number of issues including the possible restricting of groundwater supply given the groundwater sharing plan for the area may restrict the groundwater licence entitlements for the property (however the DNR indicate future water availability should still meet the feedlots water requirements), stormwater management to protect the Moira Lake and Wetland System, solid and liquid waste management should be closely monitored and groundwater monitoring should be undertaken by the Proponent.

The ***Roads and Traffic Authority*** (RTA) reviewed the proposal and has recommended a number of conditions for the Department to consider. This included requirements for the upgrade of the access road and its intersection with the Cobb Highway and to ensure the site access road intersection with the Highway has adequate site distance in each direction for the permitted speed limit.

Murray Shire Council supports the proposal, however want to ensure the wider community and potential impacts on the environment are considered in the assessment of the application. Council recommended a number of conditions, including requirements for the Proponent to report on stocking levels, suitable 294 contributions be made, ensuring the access road off the Cobb Highway is to the RTA's requirements, a number of environmental management plans be implemented and that odour be regulated in accordance with the DEC's requirements.

The ***Cadell Land and Water Management Plan*** (CLWMP) support the proposal, however recommended a number of conditions be considered.

Public Submissions

The key issues raised in submissions from the general public related to:

- Odour impacts;
- Scale of the development;
- Impact from flies, pests and exotic weeds;
- Potential impact from diseases to the area;
- Treatment of effluent;
- Impacts on water supply;
- Property values;
- Amenity impact, including tourism, noise and quality of country living;
- Noise impacts, including from traffic noise from increased truck movements;
- Traffic impact; and
- Insufficient information in EA, including incomplete year of weather (including wind) data.

Business Group

The key issues raised in this submission included:

- odour impacts, particularly on nearby Manager's residence;
- impacts on existing irrigation supply channel through the subject land and associated diversions;
- noise issues;
- flies and other pests;
- impacts of the proposal on the operational function on the Moira Private Irrigation District

The Department has assessed all of the issues raised in the various submissions in Section 6 of this report.

6. ASSESSMENT

6.1 Environmental Impacts

Key issues raised in the submissions to the proposal and/or identified during the Department's assessment included:

- odour impacts on nearby receptors;
- solid and liquid waste management;
- surface and groundwater hydrology, including diversions of irrigation channels;
- traffic and transport on the local road network;
- Ecological impacts;
- Heritage;
- Noise impacts and in particular operational and traffic noise;
- pest and weed control; and
- cattle welfare.

6.1.1 Odour Impacts

Issue

The Moira Cattle Feedlot proposes to operate at 80,000 head of cattle, which would be the largest cattle feedlot in Australia. Subsequently, due to the proposed size of the feedlot and the nature in which feedlots operate, the project has the potential to generate odour impacts during its operation. The major odour sources likely to contribute to odour emissions include feedlot pen surfaces, effluent holding ponds, sediments ponds, manure stockpile areas and burial pits. Within a 5km radius of the proposed feedlot, there are approximately 14 private properties. The odour assessment has predicted that some of these properties are likely to experience odour levels greater than the relevant DEC odour criteria by between 1 and 26 Odour Units (ou). The potential odour impacts from the proposal were a key issue raised in submissions from the general public and DEC.

Consideration

An odour assessment considered the potential odour emissions that may be generated by the proposed feedlot. The Proponent's assessment was undertaken in accordance with the DEC's '*Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW* and was also based on recent feedlot assessments undertaken in NSW.

The odour impact assessment used the computer based dispersion model CALPUFF to determine the possible off-site odour emissions. The predicted odour impacts were ascertained using estimated odour emission rates from the key odour generating sources from the proposal, including feedlot pen surfaces, effluent ponds and storage areas and from the burial pit and its dispersion based on meteorological data generated from both the computer-based model 'The Air Pollution Model' (TAPM) and from data collected from a meteorological station installed on the site. The odour predictions from this assessment were compared against the DEC's odour performance criteria for a number of private properties around the proposed site and the nearby townships of Barmah, Moama and Mathoura.

The odour assessment has predicted that around 5 private properties around the proposed feedlot are expected to experience odour emissions greater than the relevant odour criteria by between 1-26ou's. The greatest exceedance is expected to occur at the closest property, located some 500m to the west of the project. While a further 3 private properties are expected to experience odour emissions equal to the odour criteria. The predicted odour levels from the project compared to the relevant DEC odour criteria is outlined in Table 2 below.

Table 2: Predicted Odour Levels from the Feedlot Compared to the Relevant Odour Criteria

Location	Predicted Odour Emission (ou)	Odour Criteria (ou)
R1	5	6
R2	33	7
R3	5	7
R4	17	6
R5	17	6
R6	8	7
R7	6	6
R8	6	6
R9	5	6
R10	5	6
R11	7	7
R12	15	7
R16	5	6
R17	4	6
R18	4	7
R19	2	7
R20	2	7
Barmah	1	5
Moama	1	2
Mathoura	2	3

Note: 1. 'R' reference above refers to a residential property as described in the Environmental Assessment Report
2. Shaded refers to properties predicted to experience odour above the odour criteria

The odour impact assessment indicates that all other private residential locations and the three nearby townships of Barmah, Moama and Mathoura are expected to meet the relevant odour performance criteria. The proximity of the private residential properties and nearby townships to the proposed feedlot are illustrated by Figure 3 below.

Due to the likely odour impacts from the proposal, the Proponent had commenced discussions with a number of nearby private residences who were predicted to experience adverse odour impacts. The Proponent has advised the Department that they had reached an agreement with all of the landowners who were predicted to experience odour levels above the criteria. This has included the following:

- R2 – has entered into a call option to purchase the property;
- R4 - has a call option to purchase the property;
- R5 & R6 – has reached an agreement with the owner; and
- R11 and R12 – has agreed to purchase these properties.

During the assessment of the proposal, both the Department and DEC requested that the Proponent ensure that those private properties that clearly would experience significant odour impacts be either voluntarily purchased or have an agreement with the Proponent to off-set the likely impacts they would experience. Based on this request, the Proponent has ensured that agreements have been reached with these property owners.

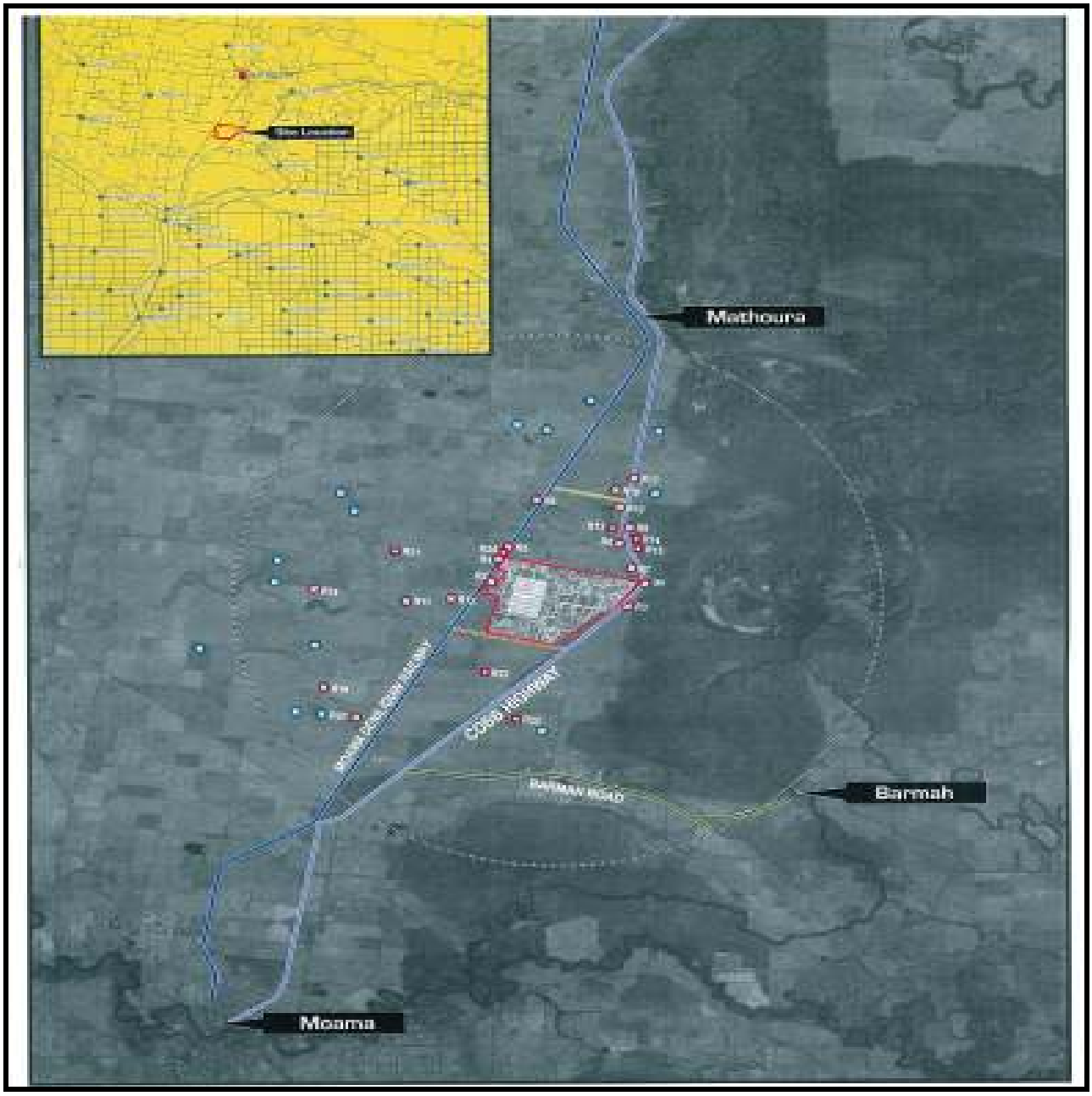

Figure 3: Residential Properties Around the Project Site

Conclusion

The Department acknowledges the level of concern that has been raised by the general public concerning the possible odour impacts from this proposal. While both the Department and DEC acknowledge that there is a level of uncertainty concerning the conclusive understanding of the exact level of odour emissions that may be generated. This is due to the nature of odour assessments themselves and not a result of this particular proposal.

As part of the assessment of the proposal, both the Department and DEC required the Proponent to undertake further assessment work to improve the odour assessment undertaken. This included ensuring all potential odour sources were considered in the assessment and ensuring the assessment was also aligned with the DEC's modelling and assessment requirements for odour.

While the Proponent has agreements with all of the property owners predicted to experience odour level above the criteria, the Department still understands that there is likely to be concerns from other private residences concerning the potential odour impact from the proposal. In order to address this concern, the Department has recommended and number of stringent conditions of approval to ensure the feedlot is satisfactorily meeting relevant odour criterion as the feedlot develops and during the life of the project. The DEC concur with the recommended requirements and believe that these measures will ensure any level of uncertainty with the level of odour impact is effectively managed. These measures also incorporate the recommendations of the DEC and include:

- an **independent audit** of the performance of the operation at 40,000 and 60,000 head of cattle and during the life of the Project to ensure an appropriate level of odour performance and compliance with the consent to the satisfaction of the Director-General and DEC. Part of the independent review will be undertaken by an odour expert. The Proponent will have to implement any recommendations from the review, including any issues before proceeding beyond 40,000 and then 60,000 head of cattle.
- **regular auditing** be undertaken to ensure odour is being managed and that the feedlot is operating in accordance with best management practices;
- a detailed **odour management plan** with appropriate monitoring to be prepared to the satisfaction of the DEC and Director-General;
- an **odour validation methodology** be prepared to validate the odour predictions made and identify **further odour management** measures should odour impacts occur to the DEC's satisfaction; and
- a comprehensive **complaints handling** and response system.

Additionally, the Department believes that the Proponent should implement all odour control measures as outlined in the Proponent's final Statement of Commitments, attached to Appendix B.

The Department is satisfied that these recommended measures will provide a comprehensive mechanism to ensure the proposal is initially constructed and developed in accordance with best management practice, demonstrates satisfactory performance at progressive stages during the stocking of the facility and provides for regular monitoring and auditing to ensure odour is adequately managed. Importantly, the Department is satisfied that the recommended measures will provide greater certainty with the potential level of odour impact from the proposal and measures to address any odour concerns. This position is supported by the DEC who concurs with the recommended conditions of approval.

6.1.2 Solid and Liquid Waste Management

Issue

At full capacity, the Project is expected to generate approximately 64,000 tonnes of manure and 1,043ML of effluent per annum. The Proponent indicates that the feedlot has been designed to incorporate on site disposal of liquid waste from the effluent storage area via irrigation and some proportion of the manure stored on site with the remainder transported off site for treatment and disposal. Waste was raised in some submissions received, including the submission from the DNR.

Consideration

The Proponent completed a number of surveys to determine the suitability of the Moira Station property for the cattle pens, storage of solid waste, irrigation of liquid effluent, drainage control and for holding effluent storage ponds. Soil profile testing determined that several thick clay bands were found to a depth of 4-6m below the surface, suggesting the property has a low permeability and would be suitable for the feedlot. While surveys on the property has indicated groundwater depth to be some 20-22m below the surface and of low salinity content. The land capability assessment indicated that the Moira Station was suitable to be used for effluent storage and irrigation. Soil characteristics on the property are considered to be capable of absorbing the levels of salt and nutrients that would be present within the effluent.

There is around 380ha available for the irrigation of liquid effluent on the proposed property which is suitable for the sustainable irrigation of wastewater. While the size of the sedimentation basins (5ML each) 130ML holding pond and 500ML effluent storage area is will sufficient to control the amount of liquid waste to be generated.

Manure from the feedlot pens is proposed to be regularly cleaned out and stockpiled on site in wind rows some 1-1.5m in height with base widths of around 3-5m. Around 10% of the manure will be used on site for soil conditioning and for some cropping activities. The Proponent indicates application of manure would be based on the results of annual soil tests and would not exceed the nutrient requirements of proposed crops. The remainder of the manure will be transported off site for treatment and disposal. The Proponent concludes that the proposed property has sufficient capacity to handle the anticipated manure volumes. The Department is satisfied with the proposed waste management system and agrees that the proposed property has sufficient capacity and is suitable to handle anticipated waste volumes.

The DNR raised a number of issues concerning the management of waste, indicating that since the management of solid waste relies on external markets, the Proponent should demonstrate contingency measures should be included as conditions should excess solid waste require storage on-site and measures in place to manage potential contamination of surface and groundwater should it be stored off-site. The DNR also indicated that all floor and walls of the waste storage areas, pens, lanes and tailwater ponds should be clay lined and suitably compacted to ensure these areas impermeable. The Department agrees with the issues raised by the DNR and has recommended that the Proponent address these issues as part of the recommended conditions of approval.

Conclusion

The Department considers that the on-going management of solid and liquid effluent from the feedlot will be a key issue, particularly given the proposed capacity of the project and expected volume of waste that will be generated. However, the Department considers that the proposed waste management system and disposal system should sufficiently manage the anticipated volumes that will be generated.

Notwithstanding, the Proponent will be required to satisfy a number of stringent measures as part of the recommended conditions of approval to ensure that the waste related infrastructure is adequately constructed and maintained, the storage and irrigation of waste does not exceed the capacity of this area to handle the waste and is only utilised in the designated areas identified in the proposal. The recommended conditions of the DEC and DNR have also been incorporated into the conditions of approval and include:

- Demonstration that the waste management system is working adequately prior to progressing to certain stocking density stages (prior to the expanding beyond 40,000, 60,000 head and at 80,000);
- an Effluent Irrigation and Wastewater Management Plan be prepared in consultation with the DNR and DEC to manage liquid and solid waste issues, including monitoring of soil, water, nutrient and salt levels;
- all storages, pens, sediment basins/ponds, holding pond and effluent storage are designed, constructed and operated to prevent leakage and failure to the satisfaction of the DEC and DNR
- The Proponent must ensure that the quantity of solid and liquid waste applied to the utilisation areas does not exceed the capacity of that area to effectively utilise the wastewater.
- That the Proponent demonstrate that no more than 10% of the annual quantity of manure is used on site and that the remaining annual quantity of manure is transported off site for treatment and disposal.

The Department is satisfied that these proposed measures will ensure that waste from the proposed project is adequately managed.

6.1.3 Surface and Groundwater Hydrology

Issue

The proposed site is located near the border of NSW and Victoria and as such, is located near the Murray River floodplain area. The Moira Lake wetland system and Barmah-Millewa Forest are located in the area, which are considered to be significant ecological and world heritage value. Some irrigation supply channels are located on the proposed site for the Moira Private Irrigation District (MPID). A number of submissions received from private individuals, a business group and public authorities raised issues concerning the potential impact of the proposal on water related issues. This included concerns with potential impacts on surface and groundwater quality, impacts on the local irrigation channels, impacts on the Moira wetland system and concerns with the actual water entitlements of the property.

Consideration

Surface Watercourses and Wetland System

The Proponent suggests that due to the lack of permanent drainage lines occurring on the site and relatively low level of rainfall, most runoff occurring on the site infiltrates into the soil or is lost by evaporation. While the subject site is also not subject to flooding due to the distance of the Murray River some 9km to the east of the site. As the proposed site is also naturally slopes to the west away from the sensitive Moira Lake wetland system (5km to the east), any stormwater runoff or liquid wastewater will be contained on the site through drainage control and will not impact on this wetland system or nearby watercourses.

The significant construction and site preparation works that will be required to develop the proposal also has the potential impact on nearby watercourses. Four sedimentation ponds will be constructed which will capture initial contaminated runoff water and then transfer this water into a holding pond during construction works. While a number of diversion bunds will be established around local irrigation channels and fresh water storages to separate contaminated and clean water. In addition, a 50m buffer area around the irrigation channels and freshwater storages will be maintained to prevent any contamination.

The DNR raised the issue about the proximity of the Moira Lake wetland system to the site and the need to ensure that stormwater runoff be retained and managed on site. The Department acknowledges this issue and has specifically requested that the Proponent ensure all contaminated drainage water leaves the site. The Department is satisfied that this requirement and other recommended measures to will ensure potential surface water quality impacts are managed during both the construction and operation of the proposal.

Water Supply

The Proponent indicates that the proposed feedlot will require approximately 1,790ML per year of water to operate, including an estimated 1,460ML for cattle drinking water. The Proponent outlines that the Moira Station property has a 1,125ML surface water license entitlement and a 5,114ML groundwater bore license entitlement.

Some concerns were expressed in submissions about the stated entitlement to access surface and groundwater in the area given that water supply allocations vary from year to year and since Government's Groundwater Sharing Plan will shortly manage groundwater extraction. The DNR has advised that the proposed site is located within 'Groundwater Management Area 016', which in the future is likely to be subject to a 'Groundwater Sharing Plan' which has the potential to reduce the volume of water available to the feedlot. The Proponent outlined that through its discussions with the DNR, current groundwater allocations may reduce by 60-70%, resulting in the property having access to around 2,000ML of groundwater. The Proponent concludes that this would still satisfy the annual water requirements of the feedlot.

The Department is satisfied that the proposed feedlot will have access to sufficient water supplies to meet its annual water requirements. The DNR concurs with this position. However, the Department has recommended a specific condition that will ensure all cattle on the site have access to sufficient water supplies.

Groundwater

Groundwater depth at Moira Station is approximately 20-22m below the surface and of low salinity content and thick clay bands occur to a depth of 4-6m below the surface. As such, the proposal is not expected to impact on groundwater. The potential impacts of solid and liquid waste from the proposal on groundwater is assessed in the '*Solid and Liquid Waste Management'* section of this Report.

The Department is satisfied that the groundwater depth in the area should be sufficient to mitigate against any potential impacts. However to ensure groundwater is protected, the Department has recommended a number of stringent conditions to manage and impacts. This includes a requirement for the Proponent to prepare a detailed groundwater monitoring program in consultation with the DNR and DEC which will monitor any potential groundwater impacts during the operation of the project and implement further management measures should any impacts occur. The Proponent is also required to prepare and implement a groundwater management plan to detail measures to manage and minimise the impact of the proposal on groundwater.

Diversion of Irrigation Channels

Irrigation supply channels for the Moira Private Irrigation District (MPID) are located on parts of the proposed site that are used to supply water to various properties in the region. The Proponent indicates that discussions and agreement were reached with the MPID concerning the diversion of the Moira Channel around the project. The Proponent indicates they would construct a new channel to connect to the existing Moira Channel with works occurring at the time of year when no water is in the Channel to minimise impacts on water supply and quality. The diversion works would also be undertaken to agreed specifications.

A submission from the MIPD outlined that the issues concerning the relocation of the existing channel has not been adequately addressed with the MPID. In response to this issue, the Proponent advised that they have and will continue to consult with the MPID concerning the proposed diversion.

The DNR indicated that any proposed diversion of the irrigation channel should be validated through appropriate compaction testing to ensure any 'prior stream beds' that are intersected are appropriately lined to minimise leakage and accessions to groundwater.

To address the concerns raised by the MPID the Department has required that the Proponent provide evidence that the Moira Board of Management agrees with the arrangements for the proposed diversion of the Board's irrigation channels prior to the commencement of construction. While also requiring that the Proponent validate the proposed location of the diverted channel via appropriate compaction testing to ensure that any "prior stream beds" that are intersected during the realignment are appropriately lined to minimise leakage and accessions to groundwater. This validation must also be to the satisfaction of the DNR. The Department is satisfied that these recommended conditions suitable addressed the issues raised by the MPID and DNR.

Conclusion

The Department considers that due to the natural topography of the site and distance to surface and groundwater resources, the proposed development is unlikely to significantly impact on surface or groundwater, including nearby wetland systems. The Department acknowledges the concerns raised by the Moira Board of Management concerning the need to protect the quality of water within the irrigation supply channel, to protect the integrity of the channel and concerns about the need to satisfy the Board's concerns with the proposed relocation of the channel.

In order to ensure the proposal does not impact on surface and groundwater and to address the concerns raised by the MIPD, the Department has recommended a number of conditions. The conditions also incorporate the recommended management measures raised by the DNR and DEC and include:

- the Proponent to provide evidence, to the satisfaction of the Director-General, that the Moira Board of Management agrees with the arrangements for the proposed diversion of the Board's irrigation channels prior to the commencement of construction;
- the validation of the proposed channel diversion route to ensure that any "prior stream beds" that are intersected during the realignment are appropriately lined to minimise leakage and accessions to groundwater;
- that an Erosion and Sediment Control Plan be prepared to address construction related activities;
- no potentially contaminated drainage water migrates from the site into the adjacent Moira Lake and wetland system;
- a detailed Groundwater Monitoring Program and Groundwater Management Plan be prepared to monitor potential groundwater impacts during the operation of the project and to provide detailed measures to manage and minimise the impact of the proposal on groundwater.

6.1.4 Traffic and Transport

Issue

Construction and operation of the proposed feedlot would result in increased traffic along the Cobb Highway. The feedlot would generate up to 164 vehicle movements during the construction phase of the project, and a maximum of 182 vehicle movements during the operation of the project.

Consideration

The Cobb Highway is generally aligned north-south and is the primary route between the towns of Moama-Echuca on the Victorian border and Hay in NSW. It is a State Highway (SH21) and comprises one traffic lane in each direction. The current volumes on the highway in the vicinity of the site are approximately 2,258 vehicles (an average of the traffic volumes from the two count stations located north and south of the site). These volumes result in a level of service of B on the highway.

Construction Impacts

The Proponent has estimated that there would be a maximum of 164 traffic movements per day during the construction of the project, including 60 heavy vehicle movements and 104 light vehicle movements. Light vehicle movements include maintenance vehicles and staff vehicles. Traffic movements would be evenly distributed along Cobb Highway (82 movements north and 82 movements south). The Department considers that addition traffic generated by the construction of the feedlot would have minimal impact on Cobb Highway and regional roads.

The proposed project involves the construction of a new access road within the site with direct connection to the Cobb Highway to the east of the site. The internal access road is proposed to be a sealed 10 m wide road, comprising two 4 m wide lanes and two 1 m wide hard shoulders able to support B-Double vehicles. It is proposed to construct a deceleration lane on the southbound lane of the Cobb Highway for traffic wishing to access the site from the north. Traffic accessing the site from the south would do so via a left turn from the Cobb Highway directly into the site. Traffic leaving the site and wanting to travel north would so via a left turn movement directly onto the Cobb Highway.

Sight distance along this stretch of the Cobb Highway is generally very good (in excess of 600 m in each direction) due to the relatively flat topography and very few curves in the alignment of the highway. This is consistent with RTA's Road Design Guide in which site distance from the ingress and egress is required to be 225m in both directions for a 100km/hr zone. The Department notes that the Proponent has not provided any details regarding the new configuration of the Cobb Highway in the vicinity of the proposed site entrance. The Department concurs with the RTA that the Proponent should be required to construct a channelised right turn treatment and a deceleration and acceleration lane for left turning vehicles into and out of the subject site at the junction of the Cobb Highway proposed access driveway, in accordance with the RTA's Road Design Guide. Additionally the Department recommends that the Proponent enter into a Work Authorisation Deed (WAD) with RTA prior to undertaking any design or construction work.

Operational Impacts

The Proponent describes the main sources of traffic generation as:

- deliver and transportation of 160,000 head of cattle to and from the site per annum;
- deliver of approximately 220,000 tonnes per annum of grain;
- transportation of manure from the site (no tonnage figures were provided by the Proponent);
- staff vehicle movements; and
- miscellaneous vehicle movements (suppliers, representative and service contractors).

The Traffic Impact Assessment indicated that the proposed development would generate a maximum of 182 traffic movements per day (during the operational phase), with traffic movements relatively evenly distributed along the Cobb Highway (91 movements north and 91 movements south). When these additional movements are added to the existing traffic volumes along the Cobb Highway, the increased traffic generated from the feedlot would represent an approximate increase of 4% over above existing 2003 traffic volumes. This increased traffic is not expected to result in any adverse impacts to the operation or safety of the Cobb Highway. The Cobb Highway has sufficient capacity to accommodate these increased levels without impacting on the level of service provided by the road. However, the Department recommends that the Proponent prepare and implement a transport code of conduct for the management of traffic during the operation (and construction) of the development. The transport code of conduct should include details of access routes to be used by heavy vehicles, measures to minimise traffic generated by the project and noise emissions, vehicle maintenance requirements, speed limits and details of the behavioural requirements for vehicle drivers.

Internally, a car park with 70 parking spaces is proposed to be provided. The feedlot is proposed to employ up to 80 people in its operational phase however, the traffic impact assessment assumed that the occupancy rate of vehicles entering and leaving the site would be 1.4 resulting in 61 inbound and outbound trips and therefore the car park of 70 spaces would adequately cater for the operational staff numbers. The Department recommends that all on-site car parking for staff and visitors associated with the project, including aisle widths and parking bay dimensions be designed in accordance with *Australian Standard AS 2890.1-2004: Parking facilities - Off-street car parking.*

Conclusion

The Department considers that the project would have minimal impact on Cobb Highway. Nevertheless, the Department recommends that the Proponent implement a number of measures to ensure impacts are appropriately managed and monitored. The Department believes that the Proponent should:

- design access routes and on-site car parking in accordance with relevant Australian Standards and/or RTA's Road Design Guide, and in consultation with the RTA;
- prepare and implement a traffic code of conduct; and
- enter into a Work Authorisation Deed (WAD) with RTA prior to undertaking any design or construction work.

6.1.5 Other Issues

Flora and Fauna

The flora and fauna assessment undertaken by the Proponent included database searches, literature reviews and field survey work to assess the potential ecological impacts of the project. The site has been extensively cleared for agricultural purposes, and is presently used for cropping. A database search for the surrounding area indicated that there was potential for 7 threatened flora species and 22 threatened fauna species to occur in the area, as listed under the *Threatened Species Conservation Act 1995* and/or *Environment Protection and Biodiveristy Conservation Act 1999.*

Vegetation communities identified within the proposed site include River Red Gum and Black Box communities in the uncropped northern pastures, scattered remnants of Box community in the cropped areas, and cropped land. No threatened plants species were identified during the survey. The Proponent states that the project would require the removal of a small remnant stand of trees for the cattle feedlot and isolated trees are likely to be removed during the construction of buildings, water storages and access roads. While the Proponent has not stated the total area of vegetation that will be required to be removed, the Department is satisfied that the project would have minimal impact on the native vegetation within the site.

Three threatened fauna species, as listed under the *Threatened Species Conservation Act 1995,* were recorded during the fauna survey, namely, the Grey-crowned Babbler (*Pomatostomus temporalis temporalis)*, the Brown Tree Creeper (*Climacteris picumnus*) and the Blue-billed duck (*Oxyura australia*). Additionally, the remains of a Major Mitchell's Cockatoo (*Cacatua leadbeateri*), which is listed as a Vulnerable species under the *Threatened Species Conservation Act 1995* was found on the site. In addition to the threatened species recorded on the site, there is habitat present on site for another 15 threatened species. Eight Part Tests were undertaken in accordance with section 5A of the *Planning and Assessment Act 1979* for the four species recorded during the survey and the additional 15 species which have the potential to occur on the site. The assessments concluded that threatened species would not be significantly impacted by the proposed construction and operation of the feedlot.

Habitat for 5 threatened woodland birds, as listed under the *Environment Protection and Biodiveristy Conservation Act 1999*, is present on site. However, the Proponent states that the woodland present on site is unlikely to be of sufficient size to support populations of these species. As such, an assessment was not undertaken in accordance with *Environment Protection and Biodiversity Conservation Act 1999*. While the Department considers that the feedlot would not have a significant impact on threatened species, the Department recommends that the Proponent should protect the northern belt or native woodland and grassland area.

Noise

A noise impact assessment was undertaken by the Proponent in accordance with the *Industrial Noise Policy* and included potential noise impacts from construction and operation of the feedlot as well as road traffic noise. No monitoring was undertaken at the site to determine the existing background levels and a value of 30dB(A) was adopted for the assessment based on minimum background levels provided in the DEC's *Industrial Noise Policy* for rural areas. The Department considers this approach to be suitable.

The Proponent has estimated that the feedlot would take 6 months to construct. The construction noise impact assessment compared predicted noise levels against the "4 to 26 week" criterion (that is, background plus 10dB(A)) as specified in the DEC's *Environmental Noise Control Manual* for residential areas. The noise impact assessment indicated that construction noise would exceed the 40dB(A) criterion at residential receptors R2, R3 and R4. Receptor R2 and R4 are located approximately 500m and 1100m to the north-west of the holding pond, respectively. Receptor R3 is located approximately 500m to the east of the freshwater storage area. The Proponent has estimated that the freshwater storage and holding pond would be constructed within a four week period. The Department considers that impact on these residents would be short-term. Notwithstanding, the Proponent will be purchasing R2 and R4 due to the predicted odour impacts at these properties. To minimise impacts that Department recommends that construction hours be restricted to 7:00 am to 6:00 pm Mondays to Fridays and 8:00 am to 1:00 pm on Saturdays.

The Proponent states that noise generated from the operation of the feedlot would be from the infrequent operation of machinery and equipment and from animal noise. The nearest residential receptors are within 500m of the project site (R2 and R3), with the majority of receptors over 1km from the site. Therefore, the Department considers that noise levels generated during the operation of the feedlot would have minimal impact on nearby receptors. Additionally, due to the minor increase in vehicle movements, the Department considers that traffic noise is unlikely to impact on residents.

Heritage

The EA provided an Aboriginal Heritage Assessment of the proposed site prepared by HLA Envirosciences. The Riverine region provided optimum conditions for the settlement of Aboriginal people. The Proponent identified twenty six sites in proximity to the feedlot site from a database search of the DEC's Aboriginal Heritage Information Management System (AHIMS), including scarred trees, burials, middens and mounds (ovens). A survey of the site was undertaken between 4 and 8 April 2005 by archaeologists from HLA and representatives of the Moama and Cummeragunja Local Aboriginal Land Councils (LALCs). The survey divided the site into areas of low, moderate and high sensitivity. All existing areas used for ploughing, irrigation, laser levelling, infrastructure such as roads, sheds and buildings were all classified as low to nil archaeological sensitivity. The entire area for the proposed cattle feedlot would be located on land classified as of low archaeological sensitivity.

The results of the survey identified three Aboriginal sites (all of high sensitivity in the north eastern portion of the site) – all sites were located within Transect 15 in an area that is not proposed to be directly impacted by the proposed feedlot. The sites comprise a scarred tree (approximately 1 km north of the proposed impact area), a hearth mound (oven) and an isolated artefact, both located adjacent to the northern boundary of the site and outside the proposed impact area. The Department considers that the project would not impact on Aboriginal heritage, however, notes that Proponent has not provided any written statements from the Moama and Cummeragunja LALCs in regards to participation in the survey and comments on the proposed project.

Under Part 3A of the *Environmental Planning and Assessment Act, 1979* a Proponent is no longer required to obtain a permit under section 87 or a consent under section 90 of the *National Parks and Wildlife Act, 1974* to destroy Aboriginal artefacts, relics or places. However, the Department recommends that the Proponent prepare a detailed contingency plan in the event that buried Aboriginal objects are encountered. The contingency plan should include planning regarding the salvage of objects and the management of burials, strategies to consult with the Aboriginal community and planning for reburial and/or relocation of burials.

The Proponent describes that the project site currently consists of farm infrastructure in the form of ruins and a shearing shed in the north-eastern portion of the site and shed silos and yards in the southern portion of the site, with the shearing sheds and ruins dated to the 19th century. The Department notes that no assessment has been

undertaken for European heritage, and it unclear whether these structures are of cultural significance. The Proponent states that they are in a debilitated state and that these structures are outside the footprint of the proposed project. The Department is satisfied that the project would have minimal impact on these structures.

Animal Welfare

The proposed cattle feedlot has the potential to impact upon the health of the animals through heat stress created from the climatic conditions. The Proponent proposes that an Animal Care Statement (ACS) be prepared prior to stocking the feedlot. The ACS would outline management measures aimed at preserving the welfare of the animals in the feedlot. It would also outline procedures and policies required for disease control and veterinary care and the means of mass disposal of carcasses should a large death count occur at the facility.

The Proponent states that the operation and practices of the proposed cattle feedlot at Moira Station will comply with the nationally recognised *Australian Model Code of Practice for the Welfare of Animals: Cattle* (SCARM, 2004) and *Australian Model Code of Practice for the Welfare of Animals: Land Transport of Cattle* (SCARM, 2000). The Department considers this to be consistent with best practice, however recommends the proposed cattle feedlot also complies with *Australian Code of Practice for the Welfare of Cattle in Beef Feedlots* (SCARM, 1997).

The Proponent highlights that the proposed cattle feedlot is not expected to create any significant hazards or risks to animals provided the mitigation measures (contained in Table 3) are implemented. In addition, the Proponent states that the welfare of cattle is an important consideration to maximise cattle growth and productivity therefore the proposed feedlot has been designed and would be operated to ensure that the health and well being of cattle is maintained. The feedlot would also be operated in accordance with the requirements of NSW Department of Primary Industries.

Table 3: Mitigation Measures

Issue	Safeguard	Phase
Animal Health	Preparation of ACS for the operation of the feedlot	Operation
	Provision of sprinkler (cooling) system for feed pens	Operation
	Provision of hospital pens to isolate sick animals	Operation
Biophysical Environment	Development of an integrated feedlot management strategy which would include a pest control strategy. This would include: • Treating cattle with commercial fly control chemical • Continual maintenance of the pen surface and drains • Regular removal of manure from the feed pens • Weekly cleaning of the water troughs • Weekly cleaning of residual and split feed along the feed troughs • Regular removal of solids from the sedimentation basin • Maintaining a minimum inventory of manure at the feedlot	Operation

Four public submissions raised the issue of how dead stock be disposed of, noting inconsistency in representatives responses. Three public submissions raised the issue about the spread of disease from cattle at the feedlot to other livestock. Moira Private Irrigation identified that burial pits were noted in the text of the EA but not included in project outline. Murray Shire Council identified that prior to the Council issuing the Certificate of Occupancy the developer will be required to supply a Major Disease Management Plan and an Animal Care Management Plan.

To minimise impacts the Department recommends that the Proponent prepare and implement an Animal Care Statement to address all issues associated with the welfare of the cattle, particularly health, housing, watering, feeding and handling. The Statement should be prepared in accordance with the relevant codes of practice relating to cattle feedlots, including the *Australian Code of Practice for the Welfare of Cattle in Beef Feedlots,* the *Australian Model Code of Practice for the Welfare of Animals – Cattle* and the *Australian Model Code of Practice for the Welfare of Animals – Land transport of cattle*. The Statement should also be prepared in consultation with

Murray Shire Council, the RSPCA and DPI. The RSPCA has advised the Department that they are satisfied with this recommended condition and that it will ensure the requirements of the RSPCA are met.

Flies

The Proponent notes that the number of pests and insects, particularly flies, may increase as a result of the operation of the feedlot. Seven public submissions raised issues associated with increases in fly populations. It was noted that the effects from flies is not well addressed in the EA and that no means have been identified for measuring potential increases in fly numbers or means for mitigating any potential increases.

The Proponent has identified in the 'Statement of Commitments' that a Fly Control Management Plan will be prepared and will outline measures to ensure appropriate management and maintenance of flies on the site, including:

- Maintaining the feedlot to allow proper surface drainage and easy effluent removal;
- Maintaining a level pen surface, avoiding potholes where fly breeding can occur;
- Ensuring water troughs don't overflow;
- Frequently removing manure and spilled feed from potential fly breeding areas; and
- If sprinklers are used, make sure sprinkler heads don't leak.

The Department is satisfied that this Management Plan will provide sufficient procedures to adequately control the outbreak of flies.

7. CONCLUSION

The Department has assessed the EA, Statement of Commitments, Preferred Project Report and submissions on the proposal. The key issues raised in submissions related to odour, waste management, surface and groundwater management, traffic, pest control and ecological impacts. The Department has considered these issues and a number of stringent conditions recommended to ensure impacts from the proposal are adequately managed.

The Department acknowledges the concerns that were raised in submissions about the Project, particularly in relation to odour impacts from the development. While the Proponent has negotiated an agreement with all of the private properties that were predicted to experience odour impacts above the relevant odour criteria, the Department has recommended the Proponent demonstrate an appropriate level of performance at key stages during the development of the feedlot. As part of this recommendation, the Department, in consultation with other key government authorities, will ensure that the Feedlot is complying with the relevant odour criteria, that other key issues are being met and that the development is compliant with the conditions of approval prior to be being able to proceed to the next stage of development. The Department is satisfied that this approach will ensure that any uncertainty concerning the likely odour impacts of the development are known and managed. This requirement, plus other measures including regular auditing and the need to implement a stringent odour monitoring program and odour management plan will also ensure that odour impacts from the development are managed.

In summary the Department is satisfied that residual impacts of the project can be mitigated and/or managed to ensure an acceptable level of environmental performance. Consequently, the Department considers the project is in the public interest, subject to strict conditions of approval.

8. RECOMMENDATION

It is recommended that the Minister:

- consider the findings and recommendations of this report;
- approve the project application, subject to conditions, under Section 75J of the *Environmental Planning and Assessment Act 1979*; and
- sign the attached project approval (Appendix A).

APPENDIX A – CONDITIONS OF APPROVAL

APPENDIX B – STATEMENT OF COMMITMENTS

APPENDIX C – RESPONSE TO SUBMISSIONS

APPENDIX D – ENVIRONMENTAL ASSESSMENT

APPENDIX E - ENVIRONMENTAL PLANNING INSTRUMENTS CONSIDERATION

The assessment of the proposed development is subject to the following environmental planning instruments and strategies:

- *State Environmental Planning Policy (Major Projects) 2005*
- *State Environmental Planning Policy No. 11 – Traffic Generating Developments*
- *State Environmental Planning Policy No 44 – Koala Habitat Protection*
- *Murray Local Environmental Plan 1989*

Consideration of the proposed development in the context of the objectives and provisions of these environmental planning instruments is provided below.

State Environmental Planning Policy (Major Projects) 2005
The Major Project SEPP identifies developments to which Part 3A of the Act applies. Clause 1 of Schedule 1 of the Major Projects SEPP includes development for the purpose intensive livestock industries that employs 20 or more people for the purpose of feedlots, piggeries, poultry egg or meat production or dairies.

The proposed Moira Feedlot will employ 86 people. The Department is satisfied that the proposed development meets the requirements of Schedule 1 of the Major Projects SEPP.

State Environmental Planning Policy No. 11
State Environmental Planning Policy No. 11 – Traffic Generating Developments (SEPP 11) applies to the proposed development because it meets criteria listed in and Schedule 1 and Schedule 2 of the SEPP 11.

Consequently, in accordance with Clause 4 of SEPP 11, the Department has forwarded the EA to the Roads Traffic Authority for comment (RTA). The RTA raised no objections and recommended a number of conditions of approval for the Department to consider. Consequently, the provisions of SEPP 11 have been met.

State Environmental Planning Policy No 44 – Koala Habitat Protection
State Environmental Planning Policy No. 44 - Koala Habitat Protection aims to:
- encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas;
- ensure permanent free-living populations of koalas over their present range; and
- reverse the current trend of koala population decline.

To this end, a number of local government areas in which populations of koalas are known to reside is provided in Schedule 1 of SEPP 44 and the provisions of the SEPP may apply to that land. The Murray local government area is included in the Schedule, however, the proposed feedlot does not contain potential or core koala habitat and as such the provisions do not apply..

Murray Shire Local Environmental Plan 1989
The *Murray Shire Local Environmental Plan 1989* (LEP) sets out the aims and objectives for development within the Murray local government area (LGA). The aims of the LEP 1989 that are relevant to the proposed development are;
- To encourage the proper management, development and conservation of natural and man-made resources within the Shire of Murray by protecting, enhancing or conserving:
    - Prime crop or pasture land; and
    - The waterways and associated wetlands for their fish and fish habitat values.

The Department is satisfied that the aims of LEP 1989 have been satisfied on the basis that the proposed development provides important economic and social benefits to the Shire through the provision of employment,

capital expenditure and associated flow on effects. The proposed development will also operate without resulting in significant impacts on watercourses, ecological areas, wetlands and local soils.

The LEP also sets out specific objectives of the for the 1(a) General Rural zone under the LEP. Under the LEP, the objectives of the 1(a) General Rural zone are:

(a) protecting, enhancing and conserving:
  (i) agricultural land in a manner which sustains its efficient and effective agricultural production potential,
  (ii) soil stability by controlling and locating development in accordance with soil capability,
  (iii) forests of existing and potential commercial value for timber production,
  (iv) valuable deposits of minerals, coal, petroleum and extractive materials by controlling the location of development for other purposes in order to ensure the efficient extraction of those deposits,
  (v) trees and other vegetation in environmentally sensitive areas where the conservation of the vegetation is significant to scenic amenity, recreation or natural wildlife habitat or is likely to control land degradation,
  (vi) water resources for use in the public interest,
  (vii) areas of significance for nature conservation, including areas with rare plants, wetlands and significant habitat, and
  (viii) places and buildings of archaeological or heritage significance, including the protection of aboriginal relics and places,
(b) preventing the unjustified development of prime crop and pasture land for purposes other than agriculture,
(c) facilitating farm adjustments,
(d) minimising the cost to the community of:
  (i) fragmented and isolated development of rural land, and
  (ii) providing, extending and maintaining public amenities and services, and
(e) providing land for future urban development for rural-residential development and for development for other non-agricultural purposes, in accordance with the need for that development.

The proposed project relates to the establishment of a large cattle feedlot on a sizeable rural property which has been previously used for agricultural activities. Minimal vegetation and natural watercourses occur on the site and as such will not be impacted on by the proposal. Adequate provisions are recommended as part of the conditions that will ensure impacts on the Moira Channel and any heritage items are managed while ensuring that the operation of the development, namely the waste disposal activities, odour emissions, noise impacts and transport movements are suitable managed. Therefore, the proposed development is considered to be consistent with the objectives of this zone.

The Department has considered the proposed development against the objectives of the above zoning, and is satisfied that the proposed development, subject to the implementation of the recommended conditions of consent, is generally consistent with the LEP.