Item 10 Development of a 1,000 head cattle feedlot on "Clevecourt" Bingara

FILE REFERENCE

DELIVERY PROGRAM

GOAL: 2. Building the business base

OUTCOME: 2.1 OUR ECONOMY IS GROWING AND SUPPORTED

STRATEGY: 3.1.1 Encourage respectful planning, balanced growth and good design - ED - external

AUTHOR Planning Officer

DATE 8 December 2017

STAFF DISCLOSURE OF INTEREST Nil

IN BRIEF/ SUMMARY RECOMMENDATION

Council received an application for a 1,000 head cattle feedlot. Based on assessment of the proposal under S.79C of the *Environmental Planning and Assessment Act, 1979,* it is considered that the merits of the proposal warrant development approval subject to the recommended conditions of consent.

COMMENT

The Development Application was received by Council on 13 September 2017.

This report is divided into four sections, being:

1. Background

2. The Development Proposal

3. Statutory Planning Considerations

4. Consultation

5. Conclusion

1. BACKGROUND

Gwydir Shire Council received a development application (DA 38/2017) on 13 September 2017 for a proposed 1,000 head cattle feedlot. The feedlot will include the use of a shed, silos, a feed mill and cattle yards already existing on the property and the construction of 10 production pens, feed lanes, a gravity fed water supply system, a sediment pond and an effluent storage pond.

Feed for the operation will be sourced internally from on-farm cropping and externally in the local area. Likewise, cattle for the feedlot will be sourced on-farm from the property's existing Wagyu cattle breeding operations and

externally from other local producers. Water for the development will be sourced from existing harvestable right storage dams on the property and a 250ML bore licence accessing Upper Gwydir alluvial groundwater. The liquid and solid waste generated from the feedlot is intended to be used as fertiliser on cropped areas of the property.

Site location

The proposed feedlot is to be situated on the properties 'Clevecourt' and on part of 'Clevecourt South', 756 Gineroi Road, Bingara, approximately 15 kilometres north-northwest, as the crow flies, from the village of Bingara. The property 'Clevecourt', owned by Jason and Ann Lewis, encompasses an area of 83.31 ha and is made up of Lots 98, 99 and 121 DP 754864. The development also affects Lot 9 DP 754864, 72.75 ha in area, of the property 'Clevecourt South' owned by John and Lynne Lewis. The proposed feedlot complex is to be situated on Lots 98 and 99 DP 754864, with the proposed effluent disposal area on Lots 9, 98, 99 and 121 DP 754864.

The holding is currently occupied by a homestead, a small feedlot operation (under 50 head), several sheds, silos, yards and other associated structures. The property is cleared of most large vegetation along ridge tops and on the lower slopes where cropping takes place. However, stands of timber are located all over the property, mainly along fence lines, creeks and in gullies. The major activities carried out on the property are broad acre cultivation of the land for grain and feed crops and the grazing of cattle.

Figure 1 - Locality Plan

Site Description and Uses

The proposed feedlot complex will cover an area of approximately 7 hectares and the proposed effluent disposal, an approximate area of 50 hectares. The

subject land consists of undulating slopes ranging from 2-5%, the intermittent Antimony Gully runs through the west section of the property (between the proposed feedlot and the effluent disposal area) and feeds into Spring Creek which runs along the southern boundary of the property. The land has mature groupings of trees being primarily black pine and gum, mainly located on the slopes, in gullies and along fence lines, with scattered isolated trees and grass species, including some native species, over the remaining land which is not subject to cropping. Approximately half the property is cropped and would be defined as average crop and pasture land by the Department of Primary Industries.

Surrounding land uses

The property 'Clevecourt' is bounded by the properties 'Glen Ayre' to the north and north west, 'Cooyong' to the north, 'Wilga Park' to the north east, 'Summerdale' in the east, 'Peranjou' on the south east, 'Clevecourt South' to the south and south west and 'Greenmount' in the west. All these properties primarily engage in grazing and cropping operations, with the exception of the property 'Peranjou' which also operates a 'farm stay' business. Figure 2 depicts the location of the proposed feedlot within the predominantly rural setting. The property is also bordered by Gineroi Road to the south, a partial sealed and unsealed public road and bisected by Cooyong Road, an unsealed public road.

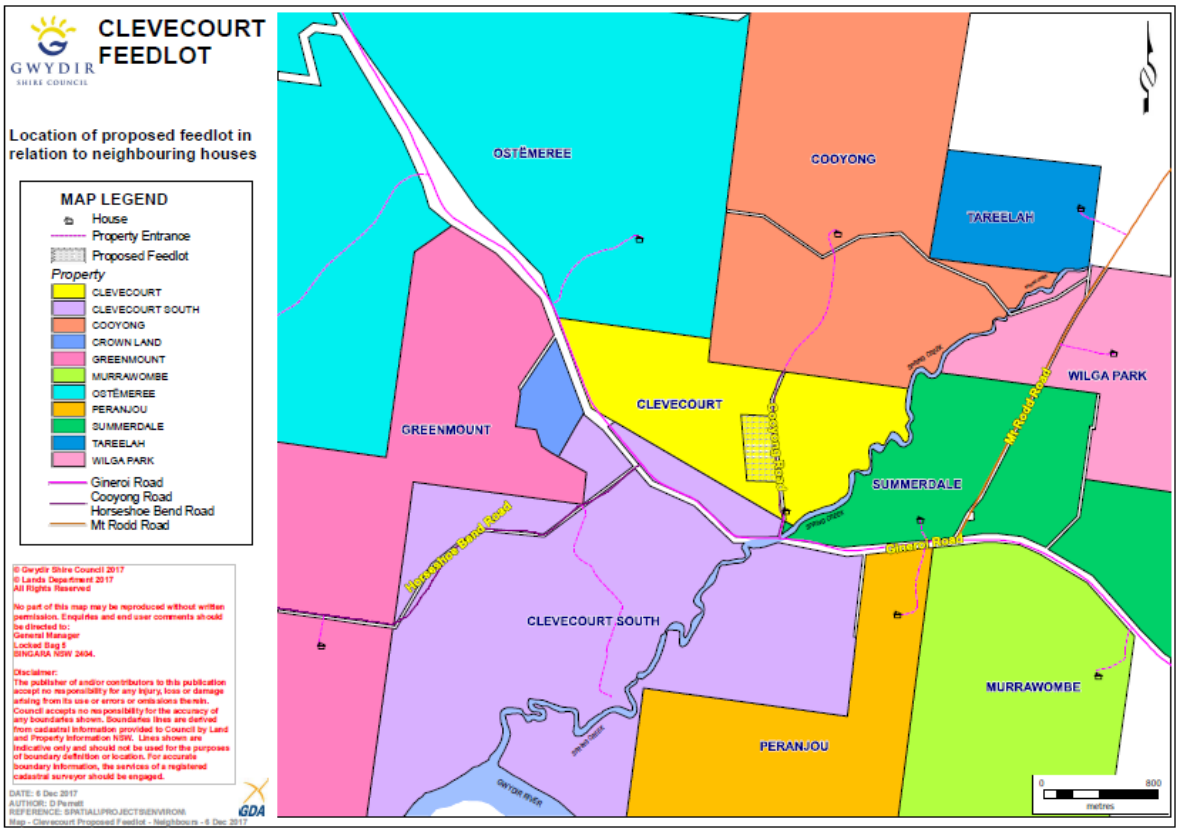

Figure 2 – Location of Neighbouring Properties and Dwellings

In addition to the surrounding property's cropping and grazing operations they also have a homestead and associated structures located on them. Their

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location in relation to the proposed feedlot is shown in Figure 2 and given in Table 1.

The closest dwelling-houses on adjoining properties not associated with the proposed development are located approximately 1,000 metres east and southeast of the development site on the properties 'Summerdale' and 'Peranjou'.

Receptor	Property Name	Direction from feedlot	Distance Clevecourt Feedlot (m)
1	Summerdale	East-southeast	1,020
2	Peranjou	Southeast	1,130
3	Cooyong	North-northeast	1,520
4	Ostemeree	North-northwest	1,570
5	Wilga Park	Northeast	2,420
6	Murrawombe	Southeast	2,580
7	Tareelah	Northeast	2,620
8	Emoh Ruo	South-southwest	3,170
9	Greenmount	West-southwest	3,220
10	Glen Ayre	West-northwest	3,670
11	Kieran	North-northwest	3,840
12	Orban	Northeast	4,000
13	Kelvin Grove	West-northwest	4,500
14	Mt Rodd	North-northeast	4,500
Bingara	Township - Bingara	South-southeast	15,030

Table 1 - Location of adjoining and nearby properties

Consultation

Public consultation and Referrals

The application was notified, in accordance with Council's Community Consultation Policy - Number: A.01.01 as detailed in Table 2.

The public consultation included:

- Notification of nearby and potentially affected landholders and residents, and placement of signs at the site during the exhibition period
- Consultation with internal departments and the EPA through correspondence.

Notification Type: Level D – Surrounding Properties	• Development, where impacts affect the adjoining properties or any other property likely to be affected, as determined by the Council;
Notifications:	
Landowners/Occupiers	Adjacent landowners were notified and landowners along Gineroi Road from 'Clevecourt South' to the Alan Cunningham Road.
Exhibition period	21 days
Concurrence	NSW Environment and Protection Authority
Internal consultations	Council's Engineering Department General Manager
Other	Nil
Submissions received:	
Public Submissions received	1 submission was received. Issues are considered in Section 4 of this report.
Other Submissions received	A summary of submissions is at Attachment 1.

Table 2 – Notification A.01.01

2. THE DEVELOPMENT PROPOSAL

The main component of the applicant's proposal includes the following:

- ⇨ Construction of 10 individual pens each with an area of 1,440m^2
- ⇨ Use of existing grain storage/milling area
- ⇨ Use of existing storage shed and silos
- ⇨ Use of existing cattle yards for loading/unloading of cattle
- ⇨ Construction of water supply system
- ⇨ Construction of internal roadworks linking pens, feed storage area and existing cattle yards
- ⇨ Construction of new sediment pond (1ML) and effluent storage pond (10ML)
- ⇨ Waste disposal area (existing cropped land on property) of approximately 50 hectares

The proposed feedlot complex and effluent disposal area is to be designed and operated in accordance with the Meat and Livestock Australia's National

Guidelines for Beef Cattle Feedlots in Australia 3rd Edition. The National Guidelines for Beef Cattle Feedlots in Australia sets standards for drainage systems, separation distances, effluent and manure utilisation and pen pad construction.

The proposed feedlot will have a maximum capacity of 1,000 head, consisting of ten 40m x 36m pens with a proposed density of 100 head per pen, which allows an average stock density of 14m2/head. Cattle will be fed for up to 350 days on a mixture of hay (sourced on property), grain and other feed supplements (imported). Feed will be prepared onsite using a grinding mill and mobile feed mixer. Draft feedlot layout is shown in Figure 3.

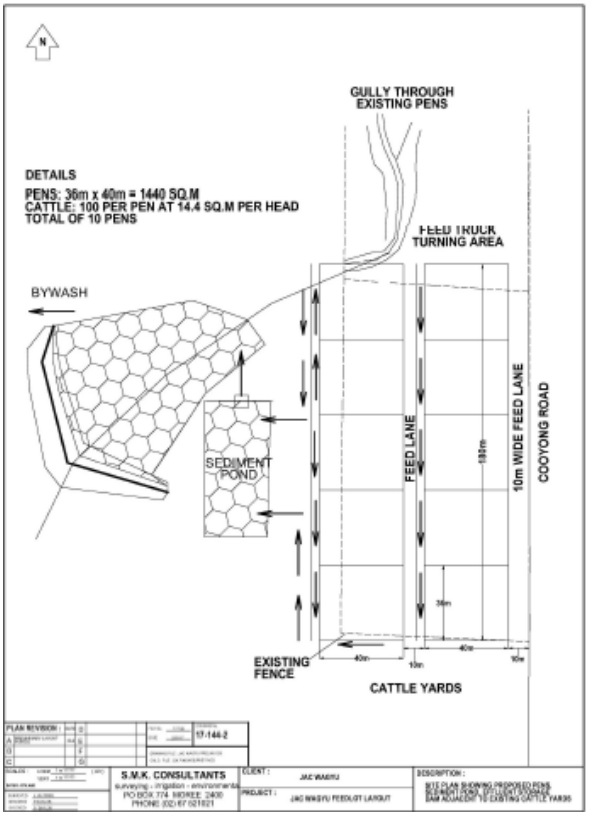

Figure 3 - Draft feedlot layout

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Figure 3 Arial view of proposed feedlot

The proposed development also intends to use manure and effluent from the feedlot to replace non-organic fertiliser. Effluent from the storage pond will be irrigated on the disposal area indicated in red on Figure 3. Any surplus effluent remaining in the pond will be lost to evaporation. Solid waste from the effluent pond and from pen cleaning is to be trucked directly for use on cropped and pasture areas of 'Clevecourt' and other properties managed by the proponent, including 'Clevecourt South', 'Murrawombe' and 'Tareelah North' in place of non-organic fertiliser. The proponent also intends to sell or trade excess manure from the feedlot to properties in the area for use as fertiliser. Further information on the collection, storage and use of the effluent and manure from the proposed feedlot is discussed in greater detail in Attachments 1, 3 and 4.

An adequate water supply for the proposed feedlot will be sourced partly from the property's existing harvestable rights and from an existing groundwater licence shared with an adjoining property and managed by the proponent. It is intended that water will be pumped from onsite dams, or trucked from the bore to storage tanks to be located on the top of the hill above the feedlot complex. From the storage tanks, water will be gravity feed throughout the feedlot. Further information on the water supply from the proposed feedlot is discussed in greater detail in Attachments 1, 3 and 4.

The proposed development will source hay for the onsite and grain, other feed supplements, from properties in the local area. Cattle will be feed according to the NSW Department of Primary Industries recommendations and Animal Welfare guidelines. Cattle in the proposed feedlot will be fed and moved via internally constructed feed lane and roads. Cooyong Road will not be used as a part of the feedlot operation.

The proposed development has suitable access to Cooyong Road, an unsealed public road maintained by Council. Cooyong Road joins Gineroi

Road which is a partial sealed and unsealed public road which connects to Alan Cunningham Road in the south, close to Myall Creek, and again in the north, at Warialda Rail. Alan Cunningham Road is considered a regional connector road that conveys freight, livestock and crops, both north and south of the region.

It is considered that traffic on the Gineroi and Cooyong Road will increase by approximately 1 B-Double every two days carrying fodder to, and livestock to and from, the proposed feedlot. Additionally there will be a minor increase in light traffic from employees and other maintenance services providers.

The proposed feedlot intends to employ one permanent staff member and will generally operate between the hours of 7:00am and 5:00pm, 7 days a week. The proponent has requested flexibility outside of these hours in the summer, in order to load and unload cattle in the cooler early morning or late night, which is preferable for animal welfare.

3. STATUTORY PLANNIING CONSIDERATIONS

Gwydir Local Environment Plan 2013 (GLEP)

The proposed development site is located in the RU1 Primary Production zone under the GLEP. The proposed development is defined as a feedlot and is categorised as intensive livestock agriculture under the GLEP. As such, it is permissible development in the RU1 Primary Production zone with Council consent.

The proposed development is also compliant with all other relevant sections of the GLEP. For more detailed information regarding the above see Attachment 1.

Section 94 Development Contribution Plan No. 1 – Traffic Generating Development (DCP)

The proposed feedlot is development to which the DCP applies. As such, the feedlot operation shall be required to pay a contribution to Gwydir Shire Council for the movement of trucks on Council's roads in accordance with the DCP. For more detailed information regarding the above see Attachment 1.

State Legislation

Environmental Planning and Assessment Act 1979 and Environmental Planning and Assessment Regulations 2000

Notwithstanding Council's Local Environmental Plan, the proposed cattle feedlot development may be classified as *designated development* under the provisions of Schedule 3 of the *Environmental Planning and Assessment Regulation, 2000.* As the proposal before Council will accommodate no more than 1,000 head of cattle, the feedlot proposal is not designated development.

Further, the proposal does not require approvals listed under Section 91 of the *Environmental Planning and Assessment Act, 1979* and is therefore not classified as an integrated development.

Thus it is determined that the proposed feedlot is local development.

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Other State Legislation relevant to the proposed development

The proposed development is considered to be compliant with the following Acts:

- National Parks and Wildlife Act 1974
- The Heritage Act 1977
- Threatened Species Conservation Act 1995
- Rural Fires Act 1997
- Protection of the Environment Operations Act 1997
- Water Management Act 2000
- Native Vegetation Act 2003

For further detail see Attachment 1.

State Environmental Plan Polices and Development Codes (SEPP's)

The proposed development is considered to be compliant with the following relevant SEPP's.

- State Environmental Planning Policy 30 – Intensive Agriculture
- State Environmental Planning Policy 33 – Hazardous and Offensive Developments
- State Environmental Planning Policy 55 – Remediation of Land
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (Rural Lands) 2008

For further detail see Attachment 1.

Federal Legislation

The proposed development is considered to be compliant with the following relevant Federal Legislation.

- Environment Protection and Biodiversity Conservation Act 1999

For further detail see Attachment 1.

Site Suitability and Potential Impacts

The proposed site of the feedlot is located approximately 15 kilometres north west of the township of Bingara in a predominantly agricultural area used for cropping and grazing. As such, the proposed development will not be out of character with the surrounding area.

The proposed feedlot complex site is located along the western side of a cleared ridgeline with a slope of between 2% and 5%. In this way the feedlot is advantageously situated to capture waste runoff from the pens, divert clean water runoff around the complex and to construct waste storage ponds with minimal disturbance to the surrounding vegetation or environment. It is

considered that the site is appropriate for the effective construction of a feedlot.

However, the proposed site is also in close proximity to Spring Creek (located approximately 370m south) a semi-permanent spring fed creek which runs into the Gwydir River approximately 3km downstream. Should the effluent storage ponds capacity be breached or fail, contaminated runoff may reach the creek. Similarly, runoff of irrigated waste from the feedlot on the effluent disposal area could contaminate Spring Creek in a storm/rain event. It would be prudent to construct contours along the bottom edge of the effluent disposal area in order to mitigate this risk. Additionally, it would be recommended that regular water quality monitoring of Spring Creek and groundwater be undertaken.

Other potential impacts include noise, odour, dust, vermin and flies which are generally associated with feedlot operations and affect the amenity of surrounding properties and residences. The proposed feedlot site is located outside of the necessary separation distances set by the NSW EPA guidelines, with the closest residences being 1,020m from the feedlot. The proponent intends to plant a vegetation screen along the eastern side of the feedlot; this will assist with the transfer of noise and dust, and screen the feedlot from any properties which are affected visually. The control of vermin and flies will be managed in accordance with the National Guidelines for Beef Cattle Feedlots in Australia and will include baiting and effective management practices.

The proposed site is not affected by flooding, bush fire, sensitive lands, nor is it a location for threatened species, communities or ecologies. The proposed site is also unaffected by local or state listed Aboriginal or non-indigenous heritage or cultural significance.

Full details for this section are discussed in Attachment 1.

4. CONSULTATION

The proposed development was notified under Gwydir Shire Council's Community Consultation Policy for a period of 21 days. Council received one (1) submission objecting to the proposed development, Attachment 5. The main concerns raised in that submission are:

- Adverse impact on surrounding land values
- Adverse impact on 'farm stay' accommodation due to view impacts and odour
- Cooyong Road – access, inadequate runoff mitigation, odour and dust caused by vehicle movements
- Use of New Mt Rodd Road as a haulage route
- Biosecurity Hazards along Cooyong Road
- Feral pigs and pest management
- Feedlot water supply
- Existing feeding practices

These concerns have been relayed back to the applicant to address. A summary of the proponent's response is as follows:

- The applicant believes that there is adequate separation distances between the feedlot and neighbouring residences so as to not have an adverse impact on the surround land values. The area is predominantly rural cropping and grazing land which is further supported by the inclusion of a feedlot in the area to buy their produce or process livestock. Evidence gleaned from the sale of properties surrounding other feedlots in the Gwydir Shire has not shown a significant impact on land values.
- A vegetation screen shall be planted between Cooyong Road and the eastern side of the feedlot so as to screen the feedlot from the road and any residences which may have a view of the proposed site. Additionally, the odour assessment attached to the Statement of Environmental Effects indicates that there is sufficient distance between the 'farm stay' and the feedlot to ensure little impact from odour.
- Cooyong Road is a Council maintained unsealed public road. Any vehicle traversing the road will cause dust, not just those vehicles associated with the proposed feedlot development. The proposed development cannot restrict access, nor is it liable for mitigating road runoff. The feedlot will use internal roads for feeding and the movement of equipment and livestock. Stormwater runoff from the proposed feedlot will be drained towards the western slope of the ridge away from Cooyong Road.
- The proposed feedlot has an interest in maintaining hygiene levels for the livestock, thus dust will be kept to a minimum as it can spread disease and reduce production potential. Additionally, odours attract vermin and flies, so pens will be cleaned regularly to keep odours to a minimum.
- New Mt Rodd Road will not be used as part of the haulage routes, however may be used by local trucks that are delivering feed or stock from along that road.
- Cooyong Road is a public road and is subject to the same biosecurity risks as any other road with the Gwydir Shire where livestock is transported or driven, or where crops are harvested and transported. Cooyong Road, being a public road, is governed by the same rules as all public roads.
- The proposed feedlot will adopt standard management practices to control pest and vermin which may include control programs, bait stations, eradication programs.
- It is intended to operate the proposed feedlot within the existing water supply allocations for the property which should not affect rock aquifers in the area.

- The existing paddock feeding operations on the property are considered to be consistent with extensive agriculture, and the two pens of intensively feed cattle are under the 50 head required to be a feedlot. As such, current operations are compliant.

The proposed development was referred internally to Council's Technical Services' engineers for comment and potential impacts on Cooyong and Gineroi Roads. There are concerns regarding the physical alignment of Cooyong Road, which is not within the road reserve. It is recommended that as a part of this development, the road be surveyed to move the road reserve to the site of the physical road.

As the proposed feedlot is not considered to be integrated or designated, the development was not formally referred to the EPA. However, the EPA after a cursory assessment provided the following points:

- Water balance information supplied – not checked
- Further information on the proposed irrigation/manure application area needed i.e. are they proposing to have tail water dams in this area to capture the first flush or run off event with rain? Given the small size of the activity, the effluent dam could be sized to minimise any requirement for irrigation – maximise evaporation in the first instance.
- Appears to be adequate buffer distances to receptors for noise and odour, have noted the consultants have undertaken a Level 1 odour assessment which indicates a clear pass or adequate buffer to the nearest receptor, which is considered acceptable.
- Application of Meat and Livestock Australia National Guidelines/Code of Practice for feedlots in proposed operations, stocking, pen construction and effluent holding ponds/drainage with appropriate impermeable clays employed where required.
- Stock mortality needs to be further addressed.
- Ground water monitoring up and down gradient of feedlot (noted however this facility is on top of the hill) and also surface water monitoring up and down stream of facility – may only be possible at limited times with mostly dry creeks.
- Provide construction documentation and specification of effluent pond/pens.
- Confirmation of the re-alignment of the existing drainage gully or diversion of clean water around or away from pens and proposed effluent dam works. (Plans at present show the gully to the north of the feedlot going through the northwest pen)
- Suggest some adequate screening/plantings to be incorporated with development along Cooyong Road.

Where appropriate, conditions have been included with Council's Schedule of Conditions, alleviating or mitigating the matters raised in the above submissions.

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5. CONCLUSION

It is considered that the development application submitted to Council by Jason Lewis for the operation of a 1,000 head feedlot including the construction and dry land disposal, waste materials and holding pond satisfactorily addresses:

- S.79(C) matters for consideration of the *Environmental Planning and Assessment Act, 1979*, and
- That potential impacts of the proposed feedlot can either be mitigated or managed
- The proposal is generally in the public interest.

Based on this assessment, it is considered that the merits of the proposal warrant development approval subject to the recommended draft Conditions of Consent, Attachment 2.

The Conditions take into consideration issues raised by internal and external government departments and landowners. Conditions of Consent establish compliance controls and performance and environmental audits to mitigate the environmental impacts of the proposal to an acceptable level.

OFFICER RECOMMENDATION

THAT this report be received and noted and that the proposal for 1,000 head feedlot and associated facilities including sediment pond, effluent storage pond, water supply system, internal roads and laneways and onsite effluent disposal, located on the property “Clevecourt”, Lots 98, 99 and 121 in DP 754864 and “Clevecourt South”, Lot 9 DP 754864 be approved subject to the attached draft schedule of conditions.

FURTHER It is recommended that the following matters are particularly addressed in the conditions:

- That prior to construction of the proposed feedlot a construction certificate is obtained. The application should include full details of the construction of the pens, sediment pond, effluent pond, water supply system, internal roads and any other associated structure.
- Details of manure disposal off site are provided.
- Prior to the occupation of the feedlot, the applicant is to supply Council with a feedlot management plan.
- That a vegetation screening/landscaping plan be supplied to Council prior to the issuing of a Construction Certificate for the proposed development.
- That the Cooyong and Gineroi intersection be upgraded to B-Double standard.
- The surveyed alignment of Cooyong Road is to be corrected to

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be in line with the constructed road.

- That Cooyong Road is fenced on both sides for its entire length.
- That s94 contributions be levied on the development in accordance with the Gwydir s94 Development Contributions Control Plan – Traffic Generating Development.

Crs. Young and Dick absented themselves from the Chamber during the debating and voting relating to this Feedlot Development Application.

ATTACHMENTS

AT- Statutory Requirements s79C
AT- Draft Conditions of Consent
AT- Statement of Environmental Effects
AT- Appendices to Statement of Environmental Effects
AT- Submission
AT- Response from Consultant

COUNCIL RESOLUTION:
MINUTE 415/17

THAT this report be received and noted and that the proposal for 1,000 head cattle feedlot and associated facilities including sediment pond, effluent storage pond, water supply system, internal roads and laneways and onsite effluent disposal, located on the property "Clevecourt", Lots 98, 99 and 121 in DP 754864 and "Clevecourt South", Lot 9 DP 754864 be approved subject to the attached draft schedule of conditions.

FURTHER It is recommended that the following matters are particularly addressed in the conditions:

- **That prior to construction of the proposed feedlot a Construction Certificate is obtained. The application should include full details of the construction of the pens, sediment pond, effluent pond, water supply system, internal roads and any other associated structure.**
- **Details of manure disposal off site are provided.**
- **Prior to the occupation of the feedlot, the applicant is to supply Council with a feedlot management plan.**
- **That a vegetation screening/landscaping plan be supplied to Council prior to the issuing of a Construction Certificate for the proposed development.**
- **That the Cooyong and Gineroi roads intersection be**

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upgraded to B-Double standard.

- **The surveyed alignment of Cooyong Road is to be corrected to be in line with the constructed road <u>within 5 years of this approval being actioned.</u>**
- **That Cooyong Road is fenced on both sides for its entire length.**
- **That s94 contributions be levied on the development in accordance with the Gwydir s94 Development Contributions Control Plan – Traffic Generating Development.**

FURTHER that manure may be stockpiled in the short term, no more than 3 months.

Upon being put to the meeting, the motion was declared carried.

For the Motion were Crs Dixon OAM, Egan, J Coulton, Moore, Smith, Galvin and D Coulton Total (7).

Against the Motion was Nil Total (0).

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Attachment 1

STATUTORY PLANNING CONSIDERATIONS

In determining the Development Application, Council is required to consider those matters listed under Section 79C of the *Environmental Planning and Assessment (Amendment) Act, 1979.* Matters of consideration are as follows:

1 S.79C (1) (a)(i) Provision of any Environmental Planning Instrument

1.1 Gwydir Local Environmental Plan 2013

The subject development is located with the Gwydir Shire Council area and as such is governed by the Gwydir Local Environment Plan 2013 (GLEP).

The relevant aims of this GLEP plan are:

(a) *to encourage the proper management, development and conservation of environmental, economic and social resources in Gwydir,*
(b) *to facilitate economic growth and development consistent with the aim specified in paragraph (a) and that:*

  (i) minimise the cost to the community of fragmented and isolated development, and
  (ii) facilitates the efficient and effective delivery of amenities and services, and
  (iii) facilitates stimulation of demand for a range of residential, enterprise and employment opportunities and promotes agricultural diversity, and
  (iv) utilises, where feasible, existing infrastructure and roads when considering new development and future potential development,

(c) *to facilitate development in accordance with flood management planning,*
(d) *to facilitate development that is compatible with adjoining and nearby uses,*
(e) *to facilitate development that is appropriate in scale and type to the characteristics of the zone,*
(f) *identify, protect and conserve places of European heritage significance and Aboriginal heritage and cultural significance,*
(g) *to identify, protect, conserve and enhance natural assets.*

Proponents Submission

No submission was provided

Staff Comment

The proposed feedlot will utilise approximately 150 hectares of dry land cropping and grazing land as part of the operation. The proposed feedlot will not impact on timber, mineral, soil, water nor areas of archaeological or heritage significance or high scenic or recreational value.

There are no known places of archaeological or heritage significance.

It is considered that the operation of the proposed feedlot satisfactorily meets the aims of the GLEP.

1.1.1 Land Use Definition

The proposed development is categorised as "intensive livestock agriculture" under the Gwydir Local Environment Plan 2013. Intensive livestock agriculture is defined as:

> *"the keeping or breeding, for commercial purposes, of cattle, poultry, pigs, goats, horses or other livestock that are fed wholly or substantially on externally-sourced feed, and includes any of the following:*
> *(a) Dairies (restricted),*
> *(b) Feedlots,*
> *(c) Piggeries,*
> *(d) Poultry farms,*
> *But does not include extensive agriculture, aquaculture or the operation of facilities for drought or similar emergency relief"* (Gwydir Local Environment Plan 2013, 30 August 2013, p75).

A feedlot is defined under the Gwydir Local Environment Plan 2013 as:

> *"a confined or restricted area that is operated on a commercial basis to rear and fatten cattle, sheep or other animal, fed (wholly or substantially) on prepared and manufacture feed, for the purpose of meat production or fibre products, but does not include a poultry farm, dairy or piggery"* (Gwydir Local Environment Plan 2013, 30 August 2013, p65).

Proponents Submission

The intended land use, as defined in the LEP as intensive livestock agriculture, is a permissible land use, with development consent, within the RU1- Primary Production zone.

Staff Comment

The proposed development complies with both the above definitions.

1.1.2 Zoning

The proposed development site is located within the RU1 Primary Production zone under the Gwydir Local Environmental Plan 2013. Intensive livestock agriculture is a permissible land use in this zone with consent.

The objective of the RU1 Primary Production zone are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands*
- *To minimise conflict between land uses with this zone and land uses with adjoining zones.*

Proponents Submission

The proposal is for an agricultural land use that will sustain efficient and effective agricultural production potential enhances the agricultural potential. The development will encourage diversity in primary industry operations at the property without restricting the use of surrounding land for other agricultural purposes. The protection of natural resources and places has been fully taken into consideration in the planning of this development. The utilisation of the land for agricultural purposes will minimise fragmentation and alienation. The proposal is not considered to conflict with the adjoining land uses. The proposal is likely to enhance the potential of surrounding grazing enterprises.

The proposed development is therefore considered to be both compatible and consistent with the surrounding land uses and would be considered to satisfactorily meet the objectives of the RU1 Primary Production zone.

Staff Comment

The establishment of a feedlot is categorised as local development in the RU1 Primary Production zone under the GLEP, and is therefore permitted with Council's Development Consent.

Existing cropping activity will be enhanced by the utilisation of manure and effluent from the operation of the feedlot. The property has already been contoured to manage water runoff. There are no forests of existing and potential community value for timber production or areas of significance for nature conservation on the property. Access to mineral and other extractive materials will not be compromised. The proposed feedlot is located on cleared cultivated land and will have minimal impact on trees and other vegetation. The proposed feedlot is not located in an environmentally sensitive area. The proposal will utilise existing surface waters collected under the property's existing harvestable right and from an existing bore licence. There are no places, items and buildings of heritage significance either Aboriginal or European.

The proposed feedlot is an agricultural activity sited in an area primarily characterised by agricultural operations. The proposal does not relate to urban development or impact on the community for amenities or services but has the potential to add to the value of the property's existing agricultural operations and further utilise agricultural production in the area. It is considered that the operation of the proposed feedlot facility satisfactorily meets the above objectives of the RU1 Primary Production zone.

1.1.3 Relevant miscellaneous provisions under Part 5 of the GLEP

1.1.3.1Clause 5.9 Preservation of Trees and Vegetation

> *The objective of this clause is to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation.*

Proponents Submission

The proposed development will not involve the clearing of any trees. The feedlot is to be built over an existing cattle pen which has no native vegetation.

Staff Comment

The proposed development site has been cleared of trees, extensively disturbed and striped of grass cover as a result of the applicant's current long term feeding practices. It is considered that the removal of trees and vegetation on the proposed site is minimal and therefore this clause is not relevant to the proposed development

1.1.3.2 Clause 5.10 Heritage Conservation

The objectives of this clause are as follows:
(a) To conserve the environmental heritage of Gwydir,
(b) To conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
(c) To conserve archaeological sites,
(d) To conserve Aboriginal objects and Aboriginal places of heritage significance.

Proponents Submission

The proposed development is not in the vicinity of any heritage items in accordance with Council's Local Environmental Plan or under State or Federal legislation.

Staff Comment

The proposed site of the development is not listed in Schedule 5 of the GLEP or the NSW Heritage Register as a place of or item of Aboriginal or European or environmental heritage significance. As such this clause does not apply to the proposed development

1.1.3.3 Clause 5.11 Bush fire hazard reduction

This clause relates to the carrying out of Bush Fire hazard reduction in accordance with the *Rural Fires Act 1997*.

Proponents Submission

The development does not involve the erection of any building or dwelling. The proposed development will be primarily located on an existing cleared area of land. The majority of the area will be bare of vegetation and other readily flammable materials. Some reduction work will be undertaken to minimise the bushfire hazard to the development. A firebreak will be maintained around the development footprint. All weather roads will provide access for fire-fighting and the fire break will provide access around the feedlot. Water from on-site storages will provide adequate supply for fire-fighting purposes.

Staff Comment

The proposed development site is not located within the currently identified Bush Fire Prone areas. However, even land locate outside critical bush fire areas can be effected by grass fires and the like, so it is prudent to implement fire mitigation measure in all areas of the Gwydir to protect life, livestock and assets.

1.1.4 Relevant additional local provisions under Part 6 of the GLEP
Clause 6.1 Earthworks

The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

Proponents Submission

Ancillary earthworks will be required for construction of the proposed feedlot to achieve appropriate design standards. As the feedlot will be located on an existing cleared area of land, of which the majority of the area will be bare of vegetation, any earthworks will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

Staff Comment

The earthworks are ancillary to the proposed development, as such will be assessed under this development and will not require an additional development consent. The site of the proposed feedlot pens has an existing sloped of between 2 and 5 percent and therefore will require minimum earthworks to meet the recommended fall for effective on the site drainage. The sediment and effluent storage ponds require excavation to meet the required holding capacity. The excavated material will be compacted into a bank to surround the effluent storage pond. The proposed earthworks are considered to minimise disruption to the environmental functions and processes from the proposed development. The proposed earthworks are deemed to have little or no effect on neighbouring uses. No cultural or heritage items or features are identified in the surrounding area which would be impacted by the proposed development.

1.2 Section 94 Development Contributions Plan No 1 - Traffic Generating Development (GDCP)

This plan was adopted in April 2011 and was developed to ensure the operation of Traffic Generating Development does not adversely impact on local roads and allow Council to assess the demand for road maintenance, repair and reconstruction arising from Traffic Generating Development.

The purpose of the plan is to:

a. Provide an administrative framework under which specific public facilities strategies may be implemented and coordinated;
b. To ensure the operation of Traffic Generating Development does not adversely impact on local roads. Assess the demand for road maintenance, repair and reconstruction arising from traffic generating development;
c. To authorize the Council to impose conditions under section 94 of the Environmental Planning and Assessment Act 1979 when granting consent to development on land to which this plan applies;
d. Provide a comprehensive strategy for the assessment, collection, expenditure accounting and review of development contributions on an equitable basis;
e. To minimize any adverse environmental and social impacts in terms of noise and dust to residences, road users and other development in the vicinity;

f. Enable Council to be both publicly and financially accountable in it's assessment and administration of this plan;
g. To ensure that the existing community is not burdened by the costs of road works resulting from damage caused by heavy vehicles associated with the Traffic Generating Development;
h. Demonstrate that the contributions have been set after due assessment for the likely needs and demands of the Traffic Generating Development in terms of access roads and their on-going maintenance;
i. Justify the application of a levy for road works for each tonne of extracted/processed/produced material.

This plan applies to all Traffic Generating development and related operations that:-

- Require the use of road haulage vehicles to support the operation of the enterprise;
- Generate additional traffic movements above levels of traditional agricultural activities;
- Development which includes the following enterprises:-

  - Wool Scouring Plants
  - Abattoirs
  - Rendering Plants
  - Saleyards
  - Wood or timber milling or processing works including wood preservation works
  - Wineries or associated works
  - Warehouses
  - Light industry
  - Intensive Agricultural Enterprises
  - **feedlots**
  - poultry farms
  - piggeries
  - dairies
  - Composting Works
  - Transport Terminals
  - Grain Storage Complex
  - Feed mills
  - Extractive Industries
  - Mine
  - Rural Industry

Proponents Submission

The proposed development is for construction of a Feedlot. This is considered a traffic generating development under the Gwydir Development Contributions Plan. The traffic generation potential of the proposed development has been calculated and is presented in Section 3.2.4 (of the Statement of Environmental Effects). Theses estimations should be utilised when calculating the appropriate development contribution fee.

Under the provisions of the Environmental Planning and Assessment Act, 1979 Council may include a condition of consent that details the following:

- Require land to be dedicated free of cost;
- Require money to be contributed for works and facilities to be provided in the future;
- Require money to be contributed towards the cost of works in kind, in satisfaction of Section 94 requirements; or
- Require or accept a combination of any of the above.

In applying Section 94 contributions the Council must be fair and reasonable, and as such the contributions levied on development with the Gwydir Shire are limited to essential or base-line works.

Staff Comment

A condition will be included in the draft schedule of conditions applying the GDCP to the proposed development.

Further detail about the movement of vehicles is discussed later in the report.

1.3 State Legislative Requirements

1.3.1 Environmental Planning and Assessment Act 1979 & Environmental Planning and Assessment Regulations 2000

Proponents Submission

This Statement of Environmental Effects has been prepared in accordance with the requirements of the Act. It provides an environmental impact assessment and details of how the feedlot will be development and operated to protect the environment, community and provide for ecological sustainable development.

Staff Comment

Notwithstanding Council's Local Environmental Plan, the proposed cattle feedlot development may be classified as *designated development* under the provisions of Schedule 3 of the *Environmental Planning and Assessment Regulation, 2000.* As the proposal before Council will accommodate no more than 1,000 head of cattle, the feedlot proposal is not designated development.

Further, the proposal does not require approvals listed under Section 91 of the *Environmental Planning and Assessment Act, 1979* and is therefore not classified as an integrated development.

Thus it is determined that the proposed feedlot is local development and is to be assessed and determined by Council.

1.3.2 National Parks and Wildlife Act 1974

Proponents Submission

The proposal includes minor clearing of pasture, including native grass species, improved pasture species and invasive species, within an area previously cleared of trees and utilised for agricultural purposes. The clearing will be kept to the minimum extent necessary to allow for the construction of the feedlot.

An Aboriginal Heritage search was undertaken on relevant databases and supported by a walk-over of the subject site in accordance with appropriate Due diligence assessment guidelines. The result of the search and survey concluded that there are no visible or recorded sites of archeological significance with the development proposed. The development work will include excavations and therefore appropriate actions will be enforced if objects of Indigenous or European heritage are encountered during this work.

Staff Comment

The proposed feedlot is located on a site already cleared and extensively disturbed by the current agricultural operations. The construction of the feedlot, sediment and effluent storage ponds will require the removal of very little vegetation. As such it is considered that the proposed development is compliant with this Act.

1.3.3 The Heritage Act 1977

Proponents Submission

An Aboriginal Heritage search was undertaken on relevant databases and supported by a walk-over of the subject site. The result of the search and survey concluded that there are no visible or recorded sites of archeological significance with the development proposed. The development work will include excavations and therefore appropriate actions will be enforced if objects of Indigenous or European heritage are encountered during this work.

Staff Comment

No items or sites of heritage significance were identified for the proposed site of the feedlot under the GLEP or State heritage register. As such it is considered that the proposed development is compliant with this Act.

1.3.4 Threatened Species Conservation Act 1995

Proponents Submission

The EIS has been prepared as per the requirements of this Act. A threatened species assessment and assessment of matters of national significance has been included as Appendix 3 (of the Statement of Environmental Effects). The Assessment of Significance concluded the proposed development will not have significant impact on NSW and/or Commonwealth listed threatened species, populations or ecological communities if the Feedlot complex and associated systems are constructed and managed as detail this report (being the Statement of Environmental Effect and appendix).

Staff Comment

This has been addressed as part of the Flora and Fauna assessment later in the report.

1.3.5 Rural Fires Act 1997

Proponents Submission

Chairman ……

The subject site has been assessed by the Rural Fire Service's Bushfire Prone Land mapping tool and was not found to be bush fire prone. The site is located within a region characterised by scattered cropland, pastures and stands of native vegetation. The proponent will take practicable steps to reduce the risk of fire on site.

The proposed design incorporates a 35m buffer zone around the development footprint. This firebreak will be free of vegetation and other readily flammable materials. All weather roads will provide access for fire-fighting and the firebreak will provide access around the feedlot. Water from onsite storages will provide an adequate supply for fire-fighting purposes.

The development does not involve the erection of any buildings or dwellings as classified under the Building Code of Australia. The feedlot will be located on a cleared area of land within construction work including fencing, excavation of a dam and the provision of feeders and water tanks.

Staff Comment

The proposed development does not fall within the current Bush Fire Prone Area for the Gwydir Shire Council and as such is considered to be a low risk site. The applicant is to provide a low fuel buffer zone around the proposed site. The proposed site is deemed to comply with this act.

1.3.6 Protection of the Environment Operations Act 1997

Proponents Submission

Under the Protection of the Environment Operations Act, it is an offence to cause water, air, noise or land pollution. The proposal is below the applicable threshold "capacity to accommodate more than 1,000 head of cattle at any time" included in Clause 22 Schedule 1. Therefore, the proposed development does not require a licence under the POEA Act. However, specific recommendations for environmental protection are included in this report (being the Statement of Environmental Effects and Appendix).

Staff Comment

The proposed development falls short of the applicable threshold under cl 22, Schedule 1 of the Protection of the Environment Operations Act 1997 and therefore is not required to be licenced under this act. However, proposed feedlot may still have impacts on water, air, noise and land. As such the proposed feedlot will be conditioned to submit a feedlot management plan detailing the effective management of the effluent sediment and storage ponds, stormwater runoff and cleaning of pens to prevent and/or mitigate these impacts.

1.3.7 Water Management Act 2000

Proponents Submission

Feedlots require a secure and reliable water supply to operate. The Proponent intends to utilise harvestable rights entitlements and existing bore water entitlements to obtain the water supply required for the proposed development. The water storages to be built as part of the Feedlot are considered permissible under the Act as they will be capturing effluent runoff.

Staff Comment

The proposed development is to make use of the properties existing harvestable water right and bore licences as a secure and reliable water supply to operate the feedlot. If so, no further water licences will be required. This is discussed later in the report.

1.3.8 Native Vegetation Act 2003

Proponents Submission

The proposed development will involve an area of land that is predominantly cleared and currently use for agricultural purposes. The construction of the effluent ponds may require some clearing of native groundcover and grasses, which will be kept to the minimal extent possible.

Staff Comment

The proposed site is almost entirely cleared and significantly disturbed from farming and grazing. However, in order to construct the sediment and effluent storage ponds the ground cover of grasses will need to be excised. This disturbance is consider minimal.

1.4 State Environmental Planning Policies

The proposal before Council is subject to the following relevant State Environmental Planning Policies (SEPP):

SEPP 30 – Intensive Agriculture;
SEPP 33 – Hazardous and Offensive Development;
SEPP 55 - Remediation of Land; and
SEPP Infrastructure 2007
SEPP Rural Lands 2008

The proposed development has been assessed in relation to the objectives and provisions of these SEPPs.

1.4.1 SEPP 30 Intensive Agriculture

Proponents Submission

The proposed development meets the definition of intensive agriculture, as a cattle Feedlot with capacity to accommodate greater than 50 head of cattle. This report has addressed the policy aims of SEPP 30. In particular, the report assesses the potential for odour, water pollution and soil degradation; and measures to mitigate any potential adverse impacts. The site is considered suitable for the proposed development and is adequately separated and shielded from neighbouring residents. The Proponent intends to seek accreditation under the National Feedlot Accreditation Scheme which requires the implementation of appropriate mitigation measures and best management practices.

Staff Comment

The applicant's consultant in the SEE has addressed SEPP 30.

In determining a development application for a feedlot of this size, Council as the consent authority must take into consideration:

(i) the adequacy of the information provided in the statement of environmental effects or environmental impact statement accompanying the development application; and

(ii) the potential for odours to adversely impact on the amenity of residences or other land uses within the vicinity of the site; and

(iii) the potential for the pollution of surface water and ground water; and

(iv) the potential for the degradation of soils; and

(v) the measures proposed to mitigate any potential adverse impacts; and

(vi) the suitability of the site in the circumstances; and

(vii) whether the applicant has indicated an intention to comply with relevant industry codes of practice for the health and welfare of animals; and

(viii) the consistency of the proposal with, and any reasons for departing from, the environmental planning and assessment aspects of any guidelines for the establishment and operation of cattle feedlots or piggeries published, and made available to the consent authority, by the Department of Agriculture and approved by the Director of Planning.

The information provided in the SEE addresses all issues. Additional information was requested and provided by the Consultant.

The impact of odour has been addressed in detail and will be further discussed.

The impact of pollution of surface water and ground water has been addressed in detail and will be further discussed.

The impact of potential degradation of soils has been addressed in detail and will be further discussed.

The measures proposed to mitigate any potential adverse impacts has been addressed in detail and will be further discussed.

The suitability of the site in the circumstances has been addressed in detail and will be further discussed.

The SEE outlines the proponent's intent to comply with relevant industry codes of practice for the health and welfare of animals.

The SEE is generally consistent with Department of Planning and Environments guidelines for the establishment and operation of the cattle feedlot.

The SEE does not address the above issues directly, they have been covered through the report. Adjoining property owners were also notified at this time.

It is considered that assessment under the SEPP has been complied with.

1.4.2 SEPP 33 – Hazardous and Offensive Development

Proponents Submission

SEPP No 33 applies to proposals falling under the definition of 'potentially hazardous industry' or 'potentially offensive industry'. Under SEPP No 33 the permissibility of industrial proposals is linked to safety and pollution control performance. The SEPP aims to ensure the merit of proposals are properly assessed before being determined. It aims to ensure that developments can only proceed if they are suitably sited and can demonstrate that they will be built and operated with an adequate level of safety.

The SoEE demonstrates that the Feedlot is suitably sited. The main waste products from the Feedlot are manure, effluent and compost. However, these can be sustainably reused as an alternative to inorganic fertilizers. The Feedlot will not produce hazardous waste products. While all Feedlots produce some odour, this will be minimised through good design and management. Additional protection is provided through separation distances between the site, the closet residences and other areas with sensitive land uses. Hence, nuisance odours are not expected at nearby residences or other surrounding areas with sensitive land uses.

Staff Comment

This State Policy has the aim of ensuring that Council has sufficient information to assess whether a proposal represents hazardous or offensive development. Under the SEPP a *potentially offensive industry* means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.

The proposal has potential to have an adverse impact on the amenity of nearby residents in terms of noise, odour and dust emissions. The SoEE provides sufficient information to address relevant matters for consideration under Clause 13 of the SEPP.

The Guidelines state that "the key consideration in the assessment of a potentially offensive industry is that the consent authority is satisfied there are adequate safeguards to ensure emissions from a facility can be controlled to a level at which they are not significant."

The SoEE has demonstrated that the activities associated with the proposed development do not constitute "potentially hazardous development".

It is considered that assessment under the SEPP has been complied with.

1.4.3 SEPP 55 - Remediation of Land

Proponents Submission

The proposed development site is currently utilised grazing with a history of agricultural use. It is unlikely historical grazing of the site would have resulted in contamination. During an inspection of the property no evidence of visible contamination from current or post practices was identified. Further, the subject land is not identified as being potentially contaminated and is therefore considered to be suitable for the intended use. It was accordingly determined that no further investigation under SEPP 55 was required.

Staff Comment

This State Policy is required to be considered in the processing and determination of development applications.

The purpose of this policy is to provide a state-wide planning approach to the remediation of land. In particular, this policy aims to promote the remediation of contaminated land for the purposes of reducing the risk of harm to human health or other aspects of the environment.

In accordance with clause 7 of SEPP 55, following a search of Council records, the subject land is not identified as being potentially contaminated and is considered to be suitable for the intended use. The requirements of the SEPP are therefore satisfied.

It is considered that assessment under the SEPP has been complied with.

1.4.4 SEPP Infrastructure 2007

Proponents Submission

The proposed feedlot will use existing state roads and power infrastructure. The homestead is connected to mains power, whilst the feedmill is to run using an onsite generator. In the event of a power failure, there are portable generators onsite.

A water storage tank is to be located adjacent to the proposed feedlot site. Water will be pumped to this tank and then distributed, using an existing electric pump, to the water supply system servicing the pens.

The expected vehicle movements and types of vehicles pertaining to the operation of the Feedlot are detailed in this report.

The proposed is to be accessible via Cooyong Road, off Gineroi Road. Site access is considered to be suitable for the purposes of the development and has been designed to accommodate heavy vehicles. Site distances from the feedlot entrance onto Cooyong Road, and Cooyong Road – Gineroi Road intersection, all exceed 200m in both directions. These sight distances are considered to be sufficient.

The proposal is for a small-scale cattle feedlot and the proposed volume and frequency of traffic generated by the development is considered insignificant.

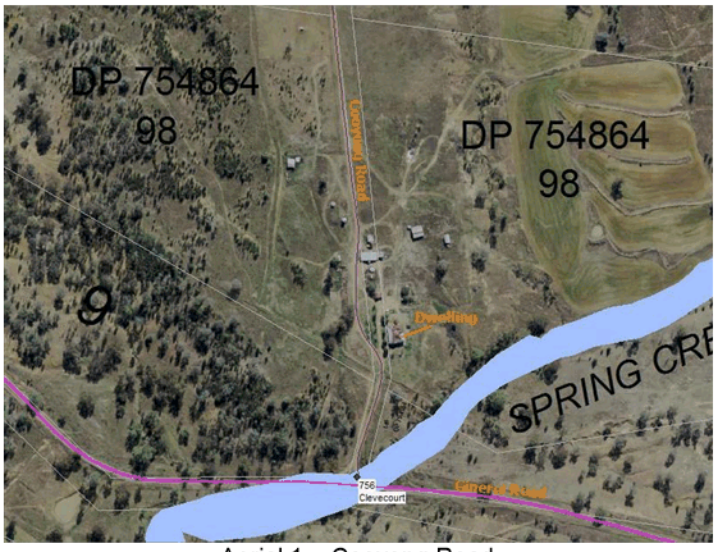
Staff Comment

Under the provision of Schedule 3 of the SEPP the proposed Feedlot is considered "Traffic Generating Development" requiring referral as the proposed Feedlot is a type of "industry".

The proposed feedlot was referred to Council's Technical Services staff.

Cooyong Road is a public road maintained by Council. However the current surveyed alignment of Cooyong Road does not match the path of the physically constructed road.

Additionally, Cooyong Road is located very close to the properties dwelling and through the properties residential complex, as can be seen in the below map (Aerial 1). In order to satisfy safety concerns for the residents of "Clevecourt", especially in light of the increased number and frequency of traffic that will be generated by the proposed feedlot, Cooyong Road is required to be fenced on both sides for the entirety of its length.



Aerial 1 – Cooyong Road

Conditions will be included in the Schedule of Condition to address the surveyed alignment of Cooyong Road, to fence the road and to upgrade the intersection of the Cooyong Road – Gineroi Road to B-Double standards.

1.4.5 SEPP Rural Lands 2008

Proponents Submission

The Shire supports the use of land for cattle Feedlots within zone RU1 Primary Production under the Gwydir Local Environmental Plan, 2013. This development does not include the erection of any buildings or dwellings, or subdivision of land. The proposed development is for a small-scale cattle feedlot and as such is considered unlikely to have a significant impact on existing or future land use of adjoining land.

Staff Comment

As the subject site is located within the Primary Production zone the SEPP applies to the proposed development.

The aims of the policy are:

> *"(a) to facilitate the orderly and economic use and development of rural lands for rural and related purposes,*
> *(b) to identify the Rural Planning Principles and the Rural Subdivision Principles so as to assist in the proper management, development and protection of rural lands for the purpose of promoting the social, economic and environmental welfare of the State,*
> *(c) to implement measures designed to reduce land use conflicts,*
> *(d) to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations,*
> *(e) to amend provisions of other environmental planning instruments relating to concessional lots in rural subdivisions."*

The proposed Feedlot is considered to be rural related development which is not contrary to the orderly and economic development of land in the area and within the Shire. Potential land use conflicts will be discussed later in the report. It is considered that the proposed Feedlot is consistent with the aims of the SEPP.

The Rural Planning Principles are:

> *"(a) the promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas,*
> *(b) recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State,*
> *(c) recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development,*
> *(d) in planning for rural lands, to balance the social, economic and environmental interests of the community,*
> *(e) the identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land,*
> *(f) the provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities,*
> *(g) the consideration of impacts on services and infrastructure and appropriate location when providing for rural housing,*
> *(h) ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.*
>
> ***Note.*** *Under section 117 of the Act, the Minister has directed that councils exercise their functions relating to local environmental plans in accordance with the Rural Planning Principles. Under section 55 of the Act, the Minister may also direct a council to prepare a local environmental plan."*

The proposed Feedlot does not appear to be inconsistent with the Rural Planning Principles of the SEPP.

1.5 Federal Legislation

1.5.1 Environmental Protection and Biodiversity Conservation (EPBC) Act 1997

Proponents Submission

This report includes an assessment of measures designed to protect the environment, promote the conservation and ecologically sustainable use of natural resources, promote biodiversity conservation and provide for the protection and conservation of heritage. An Assessment of Significance was undertaken and identified that no Commonwealth land or Matters of National Environmental Significance (MNES) are likely to be impacted by the proposal. It is concluded that an approval from the Commonwealth Minister is not required. A copy of this assessment has been included within the Flora and Fauna Assessment (Appendix 4 of the Statement of Environmental Effects).

Staff Comment

The EPBC Act commenced on 16th July 2000. The EPBC Act includes the assessment and approvals system for actions that have a significant impact on:

- matters of National Environmental Significance (NES); and
- the environment on Commonwealth land.

Should an action be determined to likely have a significant impact, an approval from the Commonwealth Minister for the Environment and Heritage is required.

The EPBC identifies seven matters of national environmental significance being:

1. World Heritage properties;
2. National Heritage places
3. RAMSAR wetlands of international significance;
4. National listed threatened species and ecological communities;
5. listed migratory species;
6. Commonwealth marine areas; and
7. Nuclear actions

The Environmental Assessment identified that no NES matters or Commonwealth land are likely to be impacted by the proposal and therefore an approval from the Commonwealth Minister is not required.

It is considered that assessment under the Act has been complied with.

2. S.79C (1) (a) (ii) Any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority

No draft environmental planning instrument is applicable to the development application.

3. S.79C (1) (a) (iii) Any Development Control Plan (DCP)

There are no DCP's which are applicable to the proposal.

4. S.79C (1) (b) The likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts on the locality

So as to comment on the likely impacts of the proposal, the following matters have been considered:

4.1 Access, Transport and Traffic

Proponents Submission

The feedlot site is accessible via Cooyong Road, a council road which passes through the property of Clevecourt. Cooyong is a gravel road. Site access is suitable for use by B-Doubles.

Cooyong Rod is accessible from Gineroi Road. Gineroi Road is a gravel road from the north of the intersection with Cooyong Road to 1km to the south of this intersection, after which point it is a sealed asphalt road.

Gineroi Road connects with Allan Cunningham Road (B95). Allan Cunningham Road is a two lane sealed road used as a freight route through the region.

The traffic generated by the Feedlot will include heavy vehicle traffic carrying cattle and stockfeed in, and cattle out, and light vehicles transporting employee, visitors and service personnel.

Table 4 outlines the anticipated numbers of heavy vehicle movements that will be generated by the proposed feedlot operation, in the event that the feedlot operates at maximum capacity throughout the year. It should be noted that this considered unlikely; these calculations therefore present the 'worst case' traffic generation scenario for the feedlot. Actual traffic generation is anticipated to be less than the figures provided in Table 4.

Table 4: Predicted Heavy Vehicle Traffic Numbers – Maximum Occupancy

Predicted Heavy Vehicle Traffic Numbers (100% Occupancy)		
Head Processed	1,043.5	Annually
Cattle Truck Movements	24.8	Annually
	0.5	Weekly
	0.1	Daily
Feed Truck Movements	247.9	Annually
	4.8	Weekly
	0.7	Daily
Total Truck Movements	272.7	Annually
	5.2	Weekly
	0.7	Daily
Total Trucks	**136.3**	**Annually**
	2.6	**Weekly**
	0.4	**Daily**

Traffic to the proposed feedlot is a calculated based on the total capacity, expected occupancy, average length of stay, transport type, and average feed consumption. These numbers will fluctuate based on the market value and availability of stock and grain. The complete traffic calculations have been included in Appendix 7 of the Statement of Environmental Effects.

If the proposed feedlot is operated at maximum capacity (as shown in Table 4), traffic generation would result in five additional heavy vehicle movements (B-Doubles) per week. Therefore, at full capacity the total number of trucks is equivalent to less than one every two days.

Overall the predicted increase in heavy vehicle traffic on Gineroi road generated by the proposed feedlot is considered to minor.

In addition to the heavy vehicle traffic the proposed development is predicted to generate up to ten light vehicle movements per week.

Staff Comment

Council has no Policy or Development Control Plan for off-street carparking. The SoEE does not address onsite parking or vehicle manoeuvring, however due to the size of the property adequate parking space and sufficient vehicle manoeuvring exists on site. This was confirmed during the site inspection.

Cooyong Road is a minor unsealed road and Gineroi Road is a sealed/unsealed connector road. These roads are existing Council maintained roads which can adequately support the additional traffic volumes.

It is noted that a number of issues were raised when the proposed development was referred to Council's Technical Services Department. These issues included the surveyed position of Cooyong Road is not aligned with the physically constructed road, the Cooyong – Gineroi Road intersection needs to be upgraded to B-Double standards and the remaining unfenced portion of Cooyong Road needs to be fenced to provide adequate safety for stock, road users and the property residents.

The proposed development is also deemed Traffic Generating Development under Council's s94 Development Contributions Plan.

It is considered that the proposed development will have minimal impact on surrounding roads. However vehicle movements should be limited during and after wet weather on unsealed sections.

The Draft Schedule of Condition (Attachment 2) will include conditions regarding the s94 Development Contribution Plan for Traffic Generating Development, the survey of Cooyong Road to correct the alignment, the fencing of both sides of Cooyong Road where unfenced and the upgrade of the Cooyong-Gineroi Road intersection to B-Double standards.

4.2 Utilities

Proponents Submission

The property has access to single phase mains power. The feedmill will be powered by an onsite generator. Water for the development will be sourced from bore and onsite dams (harvestable right).

The property has one existing dwelling. Landline and mobile telephone facilities are available onsite.

Staff Comment

Council accepts the information provided by the applicant

4.3 Heritage and Archaeological

Proponents Submission

The proposed development and subject site was assessed in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010).

The process involved the following steps:

- AHIMS register search – a search of the AHIMS to ascertain if there are any known sites within or adjacent to the subject area;
- Assessment of Landscape – assess the study area for the presences, nature and level of disturbance of landscape features that may contain heritage sites;
- Desktop Assessment and Visual Inspection – Physically inspect the development site for artefacts or signs of aboriginal presence;
- If any aboriginal objects are located, further assessment required in conjunction with an archaeologist and the Local Aboriginal community representatives; and
- If disturbance to the area is considerable and no presence of aboriginal artefacts or other signs, a standard summary of the work is to be prepared and the development can proceed subject to approvals.

A copy of this search has been included in Appendix 5 (of the Statement of Environmental Effects).

The proposed development site does not contain landscape features such as rock outcrops, caves, rock shelters and/or rock overhangs, estuarine and coastal dunes, sand hills, waterholes and/or natural springs, wetland and/or floodplains that are considered likely to contain Aboriginal objects. The site has be previously cleared highly disturbed during the conversion of the land from a woodland to open grazing area. Remnant woodland within the wider region may contain some artefacts, however, these areas will not be disturbed by the proposed development.

Non non-indigenous heritage items have been found near the development site, nore is the site listed under Schedule 5 Environment Heritage or the LEP. As such there are no known artefacts or heritage items on the proposed site or within the boundaries of Clevecourt

Staff Comment

The proposal is not in the vicinity of any heritage items in accordance with Council's Local Environmental Plan or under State or Federal Legislation. The consultants found no items of Archaeological or Heritage during the site inspection on the property. It is accepted that due to previous and current farm practices it is unlikely that artefacts now exist.

4.4 Soils

Proponents Submission

The feedlot site is located on brown clay over yellow brown subsoil. Some minor rock outcrops occur outside of the feedlot site, and shale-based soils and gravels occur within the surrounding area. The soils within the manure utilisation area consists of grey brown heavy clay.

A permeability of less than 1×10^{-9} is advised for pen surfaces and sedimentation systems by the *National Guidelines for Beef Cattle Feedlots in Australia* (MLA 2012).

The controlled drainage area and sedimentation system will be underlain by at least 300mm of suitable clay or other compactable material to meet the standards.

During construction soil erosion is a risk to occur once topsoil and/or groundcover is removed. Eroded soil poses a risk to surface waters. To overcome this risk, the construction contractors will need to submit appropriate construction management plans to the proponent to ensure that site runoff is managed during the earthworks phase.

Some land areas will be assigned to a controlled drainage area for the feedlot complex. This land will be substantially modified with top soils and subsoils being stripped from them and the areas made impervious to water. Wastewater will either be disposed of via evaporation or irrigated on the property. In areas with steep slope, grassed embankment should be constructed to hold the structure firm and alleviate erosion issues.

Manure and effluent will be treated as valuable by-products from the operation of the feedlot, not waste products. The nutrient content of these by-products will be accounted for in Clevecourt's cropping enterprise.

Manure will be transported directly from the Feedlot pen cleaning to production fields for use as fertiliser. Manure will also be transported to adjacent properties managed by the proponent, such as Clevecourt South, Murrawombe and Tareelah North. The manure will be spread using a tractor drawn applicator. Some manure may be transported off-site to be traded or sold to neighbouring properties for use as fertiliser.

Clevecourt proposes to spread manure to existing cultivated area in summer and early autumn months prior to planting winter cereals.

In future, the proponent may choose to construct a manure composting program onsite at the feedlot, once an option becomes economically viable. Any composting infrastructure will be installed in accordance with the National Guidelines for Beef Cattle Feedlots in Australia.

Staff Comment

The application of collected waste effluent and manure/compost material will improve the soil structure and nutrient levels.

Construction of feedlot pens and ponds, and irrigation disposal will comply with the *National Guidelines for Beef Cattle Feedlots in Australia* (MLA 2012).

Generally satisfied with the assessment of the soil.

The future manure composting program has not been assessed in this report and will not form part of any approval. Conditions controlling the application of manure across the properties and the testing for nutrient content will be included in the draft schedule of conditions.

4.5 Air and Microclimate

Proponents Submission

Odour nuisance is significant consideration for any cattle feedlot.

A Level 1 odour assessment was undertaken to determine the potential impact of primarily odour from the 1,000 head feedlot. The assessment has been included in Appendix 6 (for the Statement of Environmental Effects). The assessment indicated a "pass" in accordance with the relevant legislation. A pass indicates that the potential for the Feedlot's odour to impact on adjoining landholders is considered acceptable. The Level 1 method shows that the Feedlot site is well separated from the closest receptors to prevent amenity impacts (eg. Odour, dust and noise) from the operation of the Feedlot. This is important in preventing odour nuisance. However, good design, construction and management are to be maintained to the stated standard in order minimise emissions.

The risk associated with odour impacts is considered to be sufficiently infrequent to be considered acceptable. The result is mainly attributed to the available buffer distance from the feedlot to the closest residences.

Cattle in the feedlot make very little noise. The potential noise sources from the site would be dominated by vehicle movements. This would include trucks moving to and from the site as well as the feed wagon and light vehicles. Other noise would include tractors but this would be considered as normal noise for a farming area.

The closest residence not associated with the Feedlot operation is located approximately 1,020m to the east south east of the site. Noise attenuation over this distance is significant and therefore noise emissions from the feedlot operations would not disturb the amenity at this residences.

Staff Comment

The EPA has a Policy: *Assessment and Management of Odour from Stationary Sources in NSW (2006)*. This policy puts in place procedures to help prevent odour conflicts in the future and to help resolve some of the more difficult odour problems between existing facilities and their communities.

Odour assessment

A three-level system of odour impact assessment for point and diffuse odour sources has been developed.

Depending on the individual characteristics of a new development and its proposed location, a varying degree of investigation into potential for odour may

be required. For this reason, three levels of odour assessment have been adopted;

- Level 1 is a screening level technique based on generic parameters for the type of activity and site. It requires minimal data and uses simple equations to provide a broad estimate of the extent of any odour impact. It may be used to assess site suitability and odour mitigation measures for new or modified activities.

- Level 2 is a screening level dispersion modelling technique, using worst-case input data (rather than site-specific data). It is more rigorous and more realistic than a Level 1 assessment. It may be used to assess site suitability and odour mitigation measures for new, modified or existing activities.

- Level 3 is a refined-level dispersion modelling technique using site-specific input data. This is the most comprehensive and most realistic level of assessment available. It may be used to assess site suitability and odour mitigation measures for new, modified or existing activities.

The level of assessment will depend on the specific characteristics of the proposal and the likelihood of operational odour impacts.

The EPA recommended using the NSW Odour Assessment Framework and Notes to evaluate the impact of odour from the feedlot development on the surrounding receptors. The NSW Odour Assessment Notes refer to the QLD Feedlot Manual and the calculations require the selection of an appropriate feedlot "Class", and conversion of cattle numbers to SCU (multipliers for this are provided in the QLD Feedlot Manual).

Odour is the major impact affecting the amenity of the community from feedlots. Odours from a feedlot are a complex issue involving operation, waste, manure spreading and the cattle themselves. The intensity, duration, frequency and intensiveness of feedlot odours are influenced by a wide range of factors, including the size and nature of the feedlot and its waste management system, topographical and meteorological conditions.

Odours from feedlots are mainly due to manure decomposition. Odour from freshly excreted manure is generally less offensive than odour released form anaerobically decomposed manure. The exact nature of odour is affected by type of feed, housing and effluent treatment systems.

Gases generated from cattle effluent include carbon dioxide, ammonia, hydrogen sulphide, methane and many trace compounds.

Methane has no odour and is not toxic. It is lighter than air and only becomes concentrated in a closed area. However, hydrogen sulphide, which is released when effluent is agitated, is heavier than air and is highly toxic at relatively low concentrations.

Decomposed feed materials will also cause objectionable odours. For example, food processing wastes result in severe effluent odours. Other odour sources include dead animals and manure handling facilities will influence odour levels.

Gases emanating from feedlots do not exceed air standards and are not hazardous to humans or other animals. The odour question is essentially one of compatibility with the community surrounding the feedlot.

Odour assessment, outcomes and potential impact on adjoining residences are detailed in the following table taken from Appendix 6 of the Statement of Environmental Effects.

Table 9 Minimum Required Separation Distances

Receptors	Feedlot Capacity (head)	Composite Site Factors (S1)	(S1)	(S1)	(S1)	(S1)	Required Minimum Distance (m)	Available Distance (m)
1	1,000	52	0.3	0.9	0.9	1	400	1,020
2	1,000	52	0.3	0.9	0.9	1	400	1,130
3	1,000	52	0.3	0.9	0.9	1	400	1,520
4	1,000	52	0.3	0.9	0.9	1	400	1,570
5	1,000	52	0.3	0.9	0.9	1	400	2,420
6	1,000	52	0.3	0.9	0.9	1	400	2,580
7	1,000	52	0.3	0.9	0.9	1	400	2,620
8	1,000	52	0.3	0.9	0.9	1	400	3,170
9	1,000	52	0.3	0.9	0.9	1	400	3,220
10	1,000	52	0.3	0.9	0.9	1	400	3,670
Bingara	1,000	52	1.2	0.9	0.9	1	1,600	15,030

The assessment of odour impacts to adjoining residences is considered to meet the minimum separation distances, based on a Level 1 Odour Assessment. As a result the proposed feedlot will meet odour impact standards with next to no impact on the amenity of the adjoining area and residences.

The proposal also has the potential to create dust impacts as a result of traffic movements along the internal un-sealed access road. This occurrence is not uncommon in rural areas. Dust covers are used on milling machinery and as necessary a water cart will be used to suppress road dust.

The NSW Industrial Noise Policy 2000 provides acceptable noise level (ANL) that can be received by 'rural' receivers. The SEE has addressed these levels and the expected noise level during operation of the feedlot are considered to be acceptably within the guidelines.

Council agrees with the proponent's submission. Conditions controlling the operation of the proposed feedlot will be included in the draft schedule of conditions.

4.6 Flora and Fauna

Proponents Submission

The study area consists of cropland (the manure reuse area) and pasture (the feedlot site) which has been extensively cleared and grazed by cattle. In its current state, the subject site does not constitute important habitat for identified species. Extensive regions of remnant vegetation, including Warialda National Park, are located to the east of the study area. Such vegetation, in addition to water based habitat within the riparian zone of the Gwydir River, is likely to serve

as significant remnant vegetation for a variety of threatened species, and is considered to be the preferred habitat for vulnerable species over the study area. The proposed development will not impact upon this habitat.

The proposed development has the potential to impact upon surrounding environments through the runoff of surface water containing high nutrient/sediment loads into surrounding environments, and surface water/groundwater systems. To mitigate against this risk, the following measures should be implemented on site to reduce potential environmental degradation:

- Construction of diversion bank will direct clean water around feedlot;
- Construction of a controlled drainage area which will capture all effluent;
- Re-use of effluent onsite at sustainable rates, with excess effluent to be disposed of via evaporation;
- Sustainable re-use of manure onsite, with excess manure to be transported offsite for use on other properties; and
- Construction of feedlot infrastructure on soils of low permeability to minimise the risk of groundwater contamination.

Additional detail is provided in the Flora and Fauna Assessment included as Appendix 3 and Appendix 4 (for the Statement of Environmental Effects).

Staff Comment

Threatened species are protected under the following three Acts which operate in conjunction with each other:

- The *Threatened Species Conservation Act 1995* deals with the listing of species, the declaration of critical habitat, recovery plans, threat abatement plans, licencing, biodiversity certification and biobanking;
- The *National Parks and Wildlife Act 1974* contains additional licencing provisions, and provisions for criminal offences; and
- The *Environmental Planning and Assessment Act 1979* imposes obligations on developers and consent authorities to assess and consider the impacts of proposed development on threatened species during the development assessment process (e.g. by requiring a species impact statement in some circumstances).

In deciding whether there is likely to be a significant effect on threatened species, populations or ecological communities, the Council must take into account the 7-Part Test set out in Section 5A of the Environmental Planning and Assessment Act, 1979. These 7 factors include whether a viable local population of the species is likely to be placed at risk of extinction, whether habitat will be removed or modified, and whether habitat is likely to become fragmented or isolated from other areas.

The 7 Part Test aims to improve the standard of consideration afforded to threatened species, populations and ecological communities, and their habitats throughout the planning and assessment process and to ensure this consideration is transparent.

Council agrees with the proponent's submission. Conditions controlling the operation of the proposed feedlot will be included in the draft schedule of conditions.

4.7 Water Supply

Proponents Submission

The feedlot cattle are predicted to require up to 55 litres/head/day of good saline water, with consumption up to 65 litres/head/day in the summer months. In addition to water for stock, water is also required for additional purposes including, but not limited to:

- Dust suppression
- Feed processing
- Cattle wash down
- General cleaning

Total Number of Cattle	=	1,000 head
Daily Water Requirement	=	60L
Annual Water Requirement =		1,000 x 60L x 365
	=	21,900,000L
	=	21.9ML

This is based on the feedlot operating at 100% capacity throughout the year.

The property has an area of approximately 179Ha, which includes a harvestable rights entitlement of 12.53ML. A copy of the harvestable rights calculations is presented in Appendix 2 (of the Statement of Environmental Effects). The Proponent intends to construct dams on site to capture surface runoff under harvestable rights. No additional approvals are required under the Water Management Act 2000 for farm dam storage constructed under harvestable rights.

The proponent also has access to water sourced from the Upper Alluvial Groundwater Source under an agreement with neighbouring properties, who share access to a 250ML bore licence (licence number 90BL130269). Water sourced from this licence will make up the remainder of the water supply to the feedlot. Groundwater is considered a reliable water source, ensuring cattle will maintain adequate water supply in the event of a drought.

Water will be pumped from surface water dams and groundwater bore to water storage tanks located on a hill above the proposed feedlot. This tank will be gravity fed to the water supply system for the individual pens.
Water used on site will be maintained at a suitable quality for the feedlot as per the Livestock Drinking Water Guidelines (Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Volume 3,2000). The maximum total dissolved solids concentration for Feedlot cattle is 4,000 mg/L. This is equivalent to an electrical conductivity of 6.25 dS/m. Water available onsite has a salinity level of less of 1 dS/m.

Surface Water

The site is located on the northwest slopes of NSW, within the Gwydir Catchment. The nearest watercourses to the feedlot are Spring Creek and Antimony Gully. Spring Creek is a semi-permanent waterbody feed by groundwater springs, located 370m south-east from the feedlot pens. Antimony Gully is an ephemeral watercourse located 320m south-west from the feedlot pens, and joins Spring

Creek 510m south of the feedlot site. Spring Creek is a tributary of the Gwydir River, located approximately 3km downstream of the subject site.

The feedlot site will be located within a controlled drainage area, which will capture surface water runoff from the feedlot site and divert clean surface water from the surrounding environment away from the feedlot. This is considered to protect surface water quality within the region, by minimising the risk of runoff of surface water containing high nutrient loads from the feedlot into natural waterways.

Ground Water

Clevecourt has access to groundwater sourced from the Upper Gwydir Alluvial Groundwater Source under an agreement with neighbouring properties, who share access to a 250ML bore licence (licence number 90BL130269). Water extracted from this aquifer is managed under the *Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources*, which is a detailed legal document setting rules and limitations on groundwater extraction practices within the region to protect environmental values. Groundwater quality of the region is considered to be moderate and suitable for domestic, stock and some irrigation purposes.

Staff Comment

It appears from plans in the SEE that the proposed infrastructure for the development is located proximity 370m from the watercourse. If any works are proposed within 40 metres of this watercourse a Controlled Activity Approval is required under the *Water Management Act 2000* and all works are to done in accordance with the Guidelines for Controlled Activities.

"Clevecourt" is to use existing surface water through their harvestable right, which represents a proximately half the volume required for the proposed feedlots operation. Watercourses will be protected through good design of effluent controls, but also through the provision of generous buffers.

It is proposed that groundwater will be used to make up the short fall of water required for the proposed feedlot not covered by harvestable rights. NSW Office of Water confirms that a 250ML is currently held by a neighbouring property that falls under the management of the proponent and forms part of the proponents overall business operations. The 250ML licence included 245ML of irrigation (or commercial use) and 5ML for stock and domestic use. The proponent's consultants, SMK Consultants, have confirmed that the proponent has agreement to use part of the 245ML for the feedlot operation on Clevecourt.

Staff agree with the proponent's submission. Conditions controlling the use of water across the property will be included in the draft consent conditions.

4.8 Waste Management

Proponents Submission

Manure and effluent will be treated as valuable by-products from the operation of the feedlot, not waste products. The nutrient content of these by-products will be accounted for on Clevecourt's cropping enterprise.

Manure will be transported directly from the feedlot upon pen clearing to production fields for use as fertilizer. Manure will also be transported to adjacent properties managed by the Proponent, such as Clevecourt South, Murrawombe and Tareelah North. The manure will be spread using a tractor drawn applicator. Some manure may be transported offsite to be traded or sold to neighbouring properties for use a fertilizer.

Clevecourt proposes to spread manure to existing cultivated areas in the summer and early autumn months prior to planting winter cereals.

Effluent will be captured within the evaporation holding pond on site and may be disposed of either by evaporation or by onsite irrigation of crops on Clevecourt.

Soils on the disposal area will require annual soil test to be taken prior to solids application. The soil tests will provide an assessment of nutrient levels for long-term management of soil properties.

Low cattle mortality rates are expected to occur at Clevecourt as the production of Wagyu cattle is a high value enterprise involving extensive veterinary observation and checking of cattle. Expected mortality rates will extremely minor and generally occur as a result of cattle being put-down as a result of an injury. Such cattle would be buttered and used on-farm.

Carcasses will be disposed of appropriately through means including but not limited to burial in soil with clay subsoil, to minimize the risk of spread of disease from the decomposing carcass and leaching of nutrients from the carcass into groundwater.

In the event of a mass death, a pit will be constructed within the effluent disposal area……..the site of the pit would be GPS located and mapped for farm records. The pit will be sited so that it is constructed with a 1m depth of clay below and around the disposal area.

Staff Comment

Waste produced as a result of the development includes liquid effluent, solid waste, carcass and feed waste. Solid waste, (including pen scrapings and sediment from evaporation ponds and waste feed) is proposed to be removed for use as fertiliser on Clevecourt and other properties under the management of the proponent, including Clevecourt South, Murrawombe and Tareelah North. Additionally, solid waste may be sold to other properties in the area for use in place of non-organic fertilisers. It is estimated that 1,000 tonnes of by-product will be produce from the feedlot per year.

Liquid effluent from pen floors and drainage areas will drain to ponds for later disposal by evaporation and/or through irrigation on the nominated effluent disposal area on Clevecourt. It is made up of rain water, water from troughs, manure and some feed collected from the feedlot.

The sediment pond and effluent storage pond are to be constructed in accordance with *National Guidelines for Beef Cattle Feedlots in Australia*, *3rd Edition* (MLA 2012). Design calculations for the sediment and effluent storage ponds are included in Appendix 1 of the proponents Statement of Environmental Effects. The capacity of the sediment and effluent storage ponds are considered to be

sufficient to mitigate environmental impact during storm events and long periods of rainfall.

Draft conditions have been included in the draft schedule of conditions to manage and monitor the storage and application of waste materials.

4.9 Measures to reduce odours, etc

Proponents Submission

Odour and dust from during operation of the Feedlot will be mitigated by:

- Maintaining a minimum separation distance of 400m between the Feedlot site and closest receptor. The actual distance between the feedlot and the closest receptor is 1,020m.
- Setting low speed limit on Clevecourt to minimise the generation of dust on internal roads;
- Frequent, scheduled pen cleaning will ensure the depth of (dry) manure is maintained at 50mm or less;
- Pen cleaning to occur, at minimum, every 13 weeks;
- Management of pen stocking densities to minimise odour and dust generation (the cattle urine and manure add moisture to the pen floors);
- Minimise disturbance of the manure stockpile and ensure pad moisture level are optimal (45-65% moisture content) to reduce odour and dust and increase composting efficiency;
- Manure will only be loaded for transport offsite when wind conditions are favourable; and
- Vehicles moving materials offsite will be required to be covered

The proposed development and associated activities are considered to meet the required separation distances, based on the Level 1 Odour Assessment method from the NSW Odour Framework and Notes. In particular, this assessment addresses the potential for "offensive odour" and demonstrates full compliance with relevant legislation including the provisions for offensive odours contained in Section 129 of the POEO Act. The analysis has identified the proposed development can give a "pass" under the framework of the relevant Guidelines and recommendations.

Staff Comment

The proposed feedlot is located a sufficient distance from the nearest dwelling not associated with the development to receive a "pass" under the relevant guidelines, however this does not mean that dwellings in the area will not be effected by odour from the feedlot from time to time, particular in adverse weather conditions. Simply the assessment demonstrated that the feedlot is adequately separated from the closest residents to satisfactorily minimise the continuous impact of odour on the amenity at that residences.

The proponent has also agreed to a vegetation screen along the eastern side of the feedlot which will also assist in odour disbursement.

When effluent or manure is applied to land, the selected field/s should be downwind of neighbouring residences. Morning application of litter is more desirable than late afternoon application which limits potential drying time. Neighbours are generally

more sensitive to odour problems in the early evening when using outdoor recreational facilities.

Before spreading material it is important to consider meteorological conditions including the use of weather forecasts.

When spreading material on cropping areas, immediately working it into the soil can effectively eliminate most odour complaints.

Draft conditions have been included in the draft schedule of conditions to manage and monitor the operation of the proposed feedlot.

4.10 Noise:

Proponents Submission

This section assesses the potential impact of noise generated by the proposed development. The NSW Industrial Noisy Policy requires noise from new developments to be assessed to meet the following noise criteria:

- Intrusiveness criterion: continuous noise levels from the source should not exceed more than 5 dB above the background noise level; and
- Amenity criterion: this describes an acceptable noise level (ANL) specific to the type of land use and associated activities within an area. The project fits the description of a 'rural' receiver type.

The NSW Industrial Noise Policy 2000 provides acceptable ambient noise levels that can be received by 'rural' receivers. These are outlined in the following table:

Table 10: Noise Level Criteria

Period	Intrusiveness Criterion[1]	Amenity Criterion[2]
Day (7am-6pm)	40dB $L_{Aeq, 15\ minute}$	50dB $L_{Aeq, Day}$
Evening (6pm-10pm)	35dB $L_{Aeq, 15\ minute}$	45dB $L_{Aeq, Day}$
Night (10pm-7am)	35dB $L_{Aeq, 15\ minute}$	50dB $L_{Aeq, Day}$

Notes: 1. Intrusiveness criterion is LAeq, 15 minutes ≤ rating background level +5; 2. Amenity criterion given in Table 2.1 & 2.2 of the NSW Industrial Noise Policy.

During the construction phase the operation of earthmoving machinery will be a noise source. Noise sources during the operation of the feedlot would include vehicle movements transporting grain and cattle to / from the feedlot, and the cattle in the feedlot. Each one of these operations also has the potential to create dust.

Noise attenuation between the feedlot site and the closest receptor has been determined to be sufficient based on the available buffer distances to meet the above criteria.

Calculation of a project specific noise level would be generally be below 35 dB(A) which is considered acceptable within the Guidelines.

Cattle in the feedlot make very little noise. The potential noise sources from the site would be dominated by vehicle movements. This would include trucks moving to and from the site as well as the feed wagon and light vehicles. Other noise would include tractors but this would be considered as normal noise for a farming area.

The closest residence not associated with the Feedlot operation is located approximately 1,020m to the east south east of the site. Noise attenuation over this distance is significant and therefore noise emissions from the feedlot operations would not disturb the amenity at this residences.

Staff Comment

The proposed development has the potential to generate increased noise levels on the subject site, subsequently impacting on surrounding properties.

Activities likely to generate noise include:

- machinery on-site such as mill
- increase in traffic movement (especially the movement of heavy vehicles)

However, distances in excess of 1,000 metres between the development proposal and surrounding residences, combined with the topography between the adjoining property residence and sheds will assist in mitigating potential increased noise levels.

The majority of the noises associated with the proposed feedlot do already occur in the area and do not occur constantly i.e. are generally intermittent in frequency.

The proponent has also agreed to a vegetation screen along the eastern side of the feedlot which will also assist in odour disbursement.

It is considered that noise from the proposal should be adequately managed through the recommended conditions in the draft schedule of conditions.

4.11 Natural and Technological Hazards

Proponents Submission

The land is not subject to geological hazard such as volcanism, earthquake, or soil instability such as subsidence slip or mass movement.

Clevecourt supports areas of pasture, cropland and strands of native vegetation. The subject site is not classified as bushfire prone according to the Rural Fire Service's "Bush Fire Prone Land Mapping Tool". The proponent will take reasonable measures to minimise the risk of fire on site, including:

- An Asset Protection Zone (APZ) at the site, to provide an appropriate buffer between the propose development and adjoining woodland. It is recommended the APZ meet the following minimum requirements:
    - A cleared buffer area of 35m is maintained around the feedlot complex with vegetation limited to short-cut grass.
    - No flammable materials kept within 50m of the feedlot complex.
- Incorporation of Routine Vegetation Management into the feedlot maintenance schedule to ensure the APZ is maintained and weeds are controlled.

The lot is not considered flood prone.

Some land areas will be assigned to a controlled drainage area for the feedlot complex. This land will be substantially modified with topsoils and subsoils being stripped from them and the areas made impervious to water. Wastewater will either be disposed of via evaporation or irrigated on the property. In areas of steep slope, grassed embankment should be constructed to hold the structure firm and alleviate erosion issues.

Staff Comment

According to Council's knowledge, the subject site is not subject to local flooding, (however, there is some flooding over the property), subsidence slip or medium/high bushfire risk. With regard to technological hazards, it is proposed that no hazardous chemicals will be used in the operation of the feedlot facility.

It is considered that hazardous from the proposal should be adequately managed through the recommended conditions in the draft schedule of conditions.

4.12 Insect/Vector Management

Proponents Submission

Vermin such as rodent and flies can be attracted to feedlots by the ready availability of feed and a moist cattle pad. The proponent shall develop a management program to avoid outbreaks of flies or rodents and other pests or vermin around the feed ration areas and the feedlot pens. The odour level from the feedlot pens will be low as the design of the feedlot ration is based on optimising feed efficiency which therefore generates a lower level of nutrient and energy in the manure pad.

Fly, mice and rat populations from the operation of the feedlot will be mitigated:

- Primarily through the feedlot management schedule (ie. minimise feed waste and spillage to reduce the likelihood of attracting vermin); and
- By implementing a baiting program if the vermin population reaches a nuisance level.

The program would include placement of fly baits to manage bush flies and other baits around the milling area to manage outbreaks of mice.

Other disease control measures, will be managed through the implementation of appropriate vaccination programs, workplace health and safety regulations and compliance with the National Feedlot Accreditation Scheme.

Staff Comment

Feedlots can attract large populations of insects that may transmit diseases between animals. The major pests on feedlots are flies. Flies breed in wet areas of manure and garbage disposal sites. Good drainage, watering and waste management will help to minimise the effects of these fly-breeding areas.

Within the feedlot management plan, the following guidelines are adhered to:

- Removal of manure and maintenance of pen surfaces when cattle are removed, typically within every 90-91 days;

- Removal of manure and spilled feed from fence lines, feed bunks, truck washing stations and receival areas as required;
- Daily maintenance of water, ensuring no leaks or overflows throughout the watering and drainage systems;
- Keeping vegetation around wet areas to a minimum; and
- Incorporation of manure as soon as practical after being spread.

In addition to these prophylactic measures, there may be periods when curative controls may be required. Agricultural pesticides may then be employed to remove an undesirable infestation. Best management practices for application of any insecticides will be adhered to with the purpose of eliminating any drift onto stock areas, being their bodies, pens or food. Should the chemicals contact these areas, withholding periods for the use of the food and/or sale of the cattle would be employed to ensure there would be no possibility of contaminated beef.

Draft conditions have been included in the draft schedule of conditions to manage and monitor the operation of the proposed feedlot.

4.13 Social and Economic Impact in the Locality

Proponents Submission

Throughout construction, the proposed development will provide work for two fencing contractors for pen construction, and one earthworks contractor for pond construction. Upon completion of construction (capacity of 1,000 head), the operation and management of the completed feedlot will require an equivalent workforce of 1 permanent staff member. The main tasks likely to occur during these times include feed preparation and distribution, cattle handling, induction and dispatch, pen cleaning and manure management.

Staff Comment

The proposed development has the potential to generate a positive economic impact on the surrounding locality by providing additional employment opportunities. In addition, the proposal has the potential to increase economic activity in the grain supply sector, grain transport sector, livestock transport sector, by-product distribution sector, fuel supplies and associated maintenance and service industries.

However, in the event that the facility is managed in a manner which does not control potential noise, dust, and odour nuisance, the proposal may have a social impact on residential dwelling-houses in the immediate locality.

Council is not in the position to determine whether the proposed development will have either a positive or detrimental effect on surrounding property values.

4.14 Animal Welfare, Biosecurity and Disease Management

Proponents Submission

The Proponent has an economic incentive to maintain a high standard of animal welfare. This is because high standards of animal welfare result in improved productivity and better beef quality. The essential requirements for animal welfare include:

- Suitable quantity and quality of water. This is provided according to age, bodyweight, production level, air temperature, humidity and feed;
- Access to air free from dust or noxious chemicals;
- Suitable quantity and quality of food. Variations to these standards will result in the reduction of stocking rate, and animal monitoring to ensure satisfactory body condition;
- Protection from climatic extremes. These can be shade/cooling systems, wind breaks, fire and flood mitigation; and
- Protection from predators.

Once the feedlot is constructed the Proponent intends to seek accreditation under the National Feedlot Accreditation Scheme (NFAS) This scheme incorporates an extensive animal welfare documentation and procedural activities. The Australian Lot Feeders Association (ALFA) perform annual audits on accredited feedlots to ensure managements standards are maintained.

Heat Stress

Heat stress in cattle is generally measured by Accumulated Heat Load Units (AHLU), which describe the amount of heat that may potentially be stored in the body. Cattle will generally accumulate heat during the day, and dissipate this heat during the night. Throughout the summer months there is potential for insufficient cooling relief overnight, and cattle may enter the following day with an accumulated heat load. The potential accumulated heat load that an individual may carry varies as a result of the surrounding environmental conditions and livestock tolerance.

Cattle will be regularly monitored and allocated to pens based on type, size, and condition. The feedlot will continue to be managed to high standards with open pens and a maintained manure pad depth up to 50mm.

A heat loading risk assessment was undertaken using the Katestone Risk Analysis Program. The results were calculated over the long term for black Wagyu cattle in the Moree district with over 130 days on feed, with no shade, trough water temperatures of 20 to 30 degrees and regular pen cleaning. The
stock described above will begin to accumulate heat load when the Heat Load Index (HLI) exceeds 87. The risk of an extreme event is less than 1 event in 11 years. This is considered an acceptable risk and as such does not require a heat load plan. This risk assessment should be reviewed annually.

Whilst management can undertake effective actions improving livestock tolerance to heat loads, uncontrollable climatic conditions may also predispose feedlot cattle to high body heat loads and increase the risk of heat stress. These conditions can include:

- A recent rain event
- A high ongoing minimum and maximum ambient temperature
- A high ongoing relative humidity
- An absence of cloud cover with a high solar radiation level
- Minimal air movement over an extended period (4-5 days)
- A sudden change to adverse climatic conditions

For this reason, current and forecasted climatic conditions should be continuously monitored, especially during summer. The feedlot will implement an action plan for

the management of Feedlot operations under excessive heat loads if required. Routine management procedures in heat stress events will include the:

- Installation of extra temporary water troughs;
- Implementation of a heat load feeding strategy;
- Strategic cleaning of high manure deposition areas; and
- Monitoring of physical signs and animal behaviours (panting; water consumption).

Sick Cattle

The cattle will be treated with various vaccines to minimise the potential contraction of disease or infection….The vaccines would also reduce other cattle health issues in the feedlot.

All cattle will be inspected regularly to check their welfare (including individual pen walks by feedlot staff). Any sick cattle will be isolated from the production pens and transferred to a designated hospital pen for treatment and monitoring.

Emergency animal disease outbreak and / or mass mortality contingency plans will be developed as required. A suitable site for mass burial of mortalities will be identified that has clay soil. It will be separated from the feedlot complex and groundwater bores.

In the event of a mass death, an area within the designated effluent application area will be selected for disposal of carcasses. The soil beneath this area will consist of heavy clays. This would provide an area where soil permeability is low and therefore the presence of a large burial will present a low risk of local contamination of groundwater or subsoil. In the event of a mass death, appropriate authorities include LLS and potentially EPA would be contacted to review the cause and disposal process.

The Proponent intends to operate the site in accordance with the feedlot industry's quality assurance system, the National Feedlot Accreditation Scheme (NFAS). The NFAS requires all accredited feedlots to adhere to the Code of Practice, along with all other relevant environmental, animal welfare and food safety legislation.

Staff Comment

Council agrees with comments made. A condition has been included in the draft schedule of conditions.

4.15 Cumulative Impacts

Proponents Submission

The Feedlot is sited in an area spatially removed from incompatible land uses. The proposed Feedlot site is in an area designated for rural primary production under the Gwydir LEP 2013. Surrounding land is similarly zoned and used for agricultural production. The likelihood of conflict with neighbours over the development is therefore minimal.

The Feedlot site will not significantly detract from regional visual amenity. The site will not be visible from main roads through the region such as Gineroi Road, as it will be blocked from view by remnant vegetation within the region. The feedlot will be visible

from Cooyong Road, a no-through road leading to one rural residence to the north of Clevecourt. The traffic density of Cooyong Road is considered to be negligible and as such the overall impact of the Feedlot on regional amenity is considered to be minimal.

The Feedlot will be sited and designed such that odour, dust and noise generated by the development has a minimal impact upon community amenity. The proposed development and facilities will comply with management criteria and minimum required separation distances from sensitive receptors to mitigate against any potential amenity impacts.
The subject site has no known significant archaeological or heritage values; therefore, the proposed development is considered to comply with all relevant archaeological and heritage legislation and regulations and to protect heritage values within the region.

The siting and design of the proposed feedlot will not impact upon the safety of the road network. Sight distances at the feedlot entrance, and at the Cooyong Road – Gineroi Road intersection are all in excess of 200m in each direction. The volume of traffic generated by the proposed development is considered to be minimal and is therefore not expected to impact upon road safety by significantly increasing traffic density.

Staff Comment

Council agrees with comments made. A condition has been included in the draft schedule of conditions.

5. S.79C (1) (c) The suitability of the site for the development

The proposed development site has been predominantly utilised for grazing, agricultural buildings, cattle yards and feeding paddocks. It is located along a ridgeline in an area dominated by agriculture, both grazing and cropping. The existing slope of the land naturally lends itself to effective drainage of the proposed feedlot pens with little need for fill or excavation. However, the proposed feedlot complex and effluent disposal area is locate in close proximity to a spring feed semi-permanent creek, being Spring Creek and as such mitigation of surface water runoff from the development is a concern. It is imperative that the feedlot and waste storage ponds are constructed, maintained, operation and monitored in accordance the National Guidelines for Beef Cattle Feedlots in Australia to prevent adverse environmental and social impacts.

Dwelling-houses not associated with the development proposal but which are located in the vicinity of the development site. With regard to separation distances between proposed feedlot development and other dwelling houses, are in excess of separation distances required by NSW Department of Primary Industries. It is predicted that proposed distances on the subject site provide for an effective buffer for noise, odour and visibility impact.

According to Council's knowledge, property is not subject to local flooding, subsidence, slip or bushfire risk.

The development proposal before Council will not have an effect on conserving and using prime / productive agricultural land. In fact, the proposed feedlot and the

associated activity will be beneficial to sustaining the use of productive agricultural land.

6. S.79C (1) (d) Any submission made in accordance with this Act or the Regulations.

As the development is not considered designated development he proposed feedlot was notified in accordance with Council's Consultation Policy and one public submission by way of an objection has been received. Details are provided in the following table.

P. C & A. M. Mack "Peranjou" 653 Gineroi Road BINGARA NSW 2404	Object to the proposal • Adversely impact on surrounding land values; • Adverse impact on farm stay accommodation due to view impacts and odour; • Cooyong Road – Access, inadequate runoff mitigation, odour and dust caused by vehicle movements; • Use of New Mt Rodd Road as a haulage route ; • Biosecurity Hazards along Cooyong Road; • Feral Pigs and Pest Management; • Feedlot Water Supply; • Existing Feeding Practices.

The submission was referred to the proponent for comment. Attached is a summary of the proponents responses to the issues raised. Full detail of the proponent's response can be seen in Attachment 4.

- The applicant believes that there is adequate separation distances between the feedlot and neighbouring residences so as to not have an adverse impact on the surround land values. The area is predominantly rural cropping and grazing land which is further supported by the inclusion of a feedlot in the area to buy their produce or process livestock. Evidence gleamed from the sale of properties surrounding other feedlots in the Gwydir Shire have not shown a significant impact on land values.
- A vegetation screen shall be planted between Cooyong Road and the eastern side of the feedlot so as to screen the feedlot from the road and any residences which may have a view of the proposed site. Additionally, the odour assessment attached to the Statement of Environmental Effect indicates that there is sufficient distance between the farm stay and the feedlot to ensure little impact form odour.
- Cooyong Road is a Council maintained unsealed public road any vehicle transversing the road will cause dust not just those associated with the proposed feedlot development. The proposed development cannot restrict access nor is it liable for mitigating road runoff. The feedlot will use internal road for feeding and the movement of equipment and livestock. Stormwater runoff from the proposed feedlot will be drained towards the western slope of the ridge away from Cooyong Road.
- The proposed feedlot has an interest in maintaining hygiene levels for the livestock, thus dust will be kept to a minimum as it can spread disease and reduce production potential. Additionally, odours attract vermin and flies so pens will be cleaned regularly to keep odours to a minimum.

- New Mount Rodd Road will not be used as part of the haulage routes, however may be used by local trucks who are delivering feed or stock from along that road.
- Cooyong Road is a public road and is subject to the same biosecurity risks as any other road with the Gwydir Shire where livestock are transported or driven, where crops are harvested and transported. Cooyong road being a public road is governed by the same rules as all public roads.
- The proposed feedlot will adopt standard management practices to control pest and vermin which may include control programs, bait stations, eradication programs.
- It is intended to operate the proposed feedlot within the existing water supply allocations for the property which should not affect rock aquifers in the area.
- The existing paddock feeding operations on the property are considered to consistent with extensive agriculture and the two pens of intensively feed cattle are under the 50 head required to be a feedlot. As such currently operations are compliant.

In addition to the notification the proposed feedlot was also internally referred to Council's Technical Service Department for comment. The issues raise are listed below:

- Cooyong Road / Gineroi Road intersection needs to be upgraded to B-Double standard;
- The surveyed alignment of Cooyong Road needs to be corrected to be over the constructed road;
- Cooyong Road is a public road and as such should be fenced on both sides from Gineroi Road to its northern extremity;
- S94 contribution needs to be levied according to Council Development Contributions Plan and applied to the maintenance of both the Cooyong and Gineroi Roads.

As the proposed feedlot is not considered to be integrated or designated the development was not formerly referred to the EPA. However, the EPA after a cursory assessment provided the following points of concern:

- Water balance information supplied – not checked
- Further information on the proposed irrigation/manure application area needed ie are they proposing to have tail water dams in this area to capture the first flush or run off event with rain. Given the small size of the activity the effluent dam could be sized to minimize any requirement for irrigation – maximise evaporation in the first instance.
- Appears to be adequate buffer distances to receptors for noise and odour, have noted the consultants have undertaken a level 1 odour assessment which indicates a clear pass or adequate buffer to the nearest receptor, which is considered acceptable.
- Application of Meat & Livestock Australia National Guidelines/Code of Practice for feedlots in proposed operations, stocking, pen construction and effluent holding ponds/drainage with appropriate impermeable clays employed where required.
- Stock mortality needs to be further addressed.

- Ground water monitoring up and down gradient of feedlot (noted however this facility is on top of the hill) and also surface water monitoring up and down stream of facility – may only be possible at limited times with mostly dry creeks.

- Provide construction documentation and specification of effluent pond/pens.

- Confirmation of the re-alignment of the existing drainage gully or diversion of clean water around or away from pens and proposed effluent dam works. (Plans at present show the gully to the north of the feedlot going through the north-west pen)
- Suggest some adequate screening/plantings to be incorporated with development along Cooyong Road.

Where appropriate conditions have be included with Council's Schedule of Conditions, alleviating or mitigating the matters raised in the above submissions.

7. S.79C (1) (e) The public interest

Federal, State and Local Government Interests and Community Interests.

As the development is not considered designated development the proposed feedlot was notified in accordance with Council's Consultation Policy
There was one public submission received by Council in relation to this proposal.
Where appropriate conditions may be included with Council's Schedule of Conditions of any approval.

Attachment 2

DRAFT SCHEDULE OF CONDITIONS

PART A - GENERAL

1 Development Description

The main component of the applicant's proposal includes the following:

- Construction of 10 individual pens each with an area of 1,440m^2
- Use of existing grain storage/milling area
- Use of existing storage shed and silos
- Use of existing cattle yards for loading/unloading of cattle
- Construction of water supply system
- Construction of internal road works linking pens, feed storage area and existing cattle yards
- Construction of new sediment pond (1ML) and effluent storage pond (10ML)
- Waste disposal area (existing cropped land on property) of approximately 50 hectares

The feedlot is designed to be constructed in accordance with Meat & Livestock Australia's National Guidelines for Beef Cattle Feedlots in Australia, National Beef Cattle Environmental Code of Practice and Beef Cattle Feedlots: Design and Construction standards. Cattle will be fed for approximately 350 days depending on market demand for cattle size.

2 Obligation to Minimise Harm to the Environment

The Applicant/Owner shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, and/or rehabilitation of the development.

3 Scope of Approval

The Applicant/Owner shall carry out the development generally in accordance with:

a) DA No 38/2017;
b) Conditions of this Consent;
c) The following Documents; and
d) The feedlot shall accommodate a maximum of 1,000 head of cattle at any one time.

Submitted Item	Council's Stamp No/Date	Drawing/Job No	Drawn by	Dated
Statement of Environmental Effects	38/2017 TBA	1,000 Head Cattle Feedlot at 'Clevecourt' - Booklet	SMK Consultants	August 2017
Appendices	38/2017 TBA	1,000 Head Cattle Feedlot at 'Clevecourt' - Booklet	SMK Consultants	August 2017
Additional Information	38/2017 TBA	17/144 – Sht's 5/5	SMK Consultants	14 November 2017

4 If there is any inconsistency between the above, the conditions of this consent shall prevail to the extent of the inconsistency.

5 The Applicant/Owner shall comply with any reasonable requirement/s of the Environmental Services Manager or authorised Officer of Council arising from the Council's assessment of:

a) Any reports, plans or correspondence that are submitted by the Applicant/Owner in accordance with this consent; and

b) The implementation of any actions or measures contained in these reports, plans or correspondence.

6 **Prescribed Conditions**

a. The applicant shall comply with the prescribed conditions of project approval under the EP&A Regulations.

b. The proponent will obtain all necessary approvals required by State and Commonwealth legislation in undertaking the project.

c. The proponent will comply with the requirements of the NSW Department of Primary Industries Guidelines, Meat & Livestock Australia's National Guidelines for Beef Cattle Feedlots in Australia (3rd Edition), National Beef Cattle Feedlot Environmental Code of Practice (2nd Edition), Beef Cattle feedlots: Design and Construction standards (August 2016), EPA's Technical Notes on Odour and Noised and the Department of Environment and Conservation (NSW) Environmental Guidelines – Use of Effluent by Irrigation.

d. The proponent will continue to liaise with the local community and Gwydir Shire Council during the development process.

e. The Applicant shall carry out the development in a way that prevents and/or minimises the impacts of the development to the environment, surrounding properties and the community.

7 ***Advisory Note 1***

The applicant is advised that prior to construction of the approved development it is necessary to obtain a **Construction Certificate**. A Construction Certificate may be issued either by a Council or an approved accredited certifier. A separate application, complete with detailed plans and specifications of the pens, sediment pond, effluent storage, internal roads and feed lanes, and any other excavations or earthworks, must be made for a Construction Certificate.

8 **Heritage and Archaeology**

a. **Impact of Works – Aboriginal Relics**

If any Aboriginal archaeological relics are found or uncovered during the course of the work, then all works shall cease immediately in that area and the applicant shall contact the Department of Environment Climate Change and Water and Council. Depending on the possible significance of the relics, an archaeological assessment and an excavation permit under the *National Parks & Wildlife Act 1974* may be required before further works can be considered in that area. The applicant shall comply with any request

made by the Department of Environment Climate Change and Water and/or Council to cease work for the purposes of archaeological recording.

b. **Heritage Removal Permit**

An Aboriginal Heritage Impact Permit Application must be lodged with and approved by the Office of Environment and Heritage prior to the disturbance or removal of any stone artefacts identified adjacent to the proposed feedlot site.

9 Protection of Public Infrastructure

The Applicant/Owner shall:

a) Repair, or pay the full costs associated with repairing any public infrastructure that is damaged by the development; and

b) Relocate, or pay the full costs associated with relocating any public infrastructure that needs to be relocated as a result of the development.

10 Operation of Plant and Equipment

The Applicant/Owner shall ensure that all plant and equipment at the site, vehicles, or used in connection with the development are:

a) Maintained in a state of sound mechanical repair; and

b) Operated in a proper and efficient manner

11 Compliance

a. Prior to commencement of any excavation work, the Applicant/Owner shall contact Council to verify that the Applicant/Owner has complied with the relevant conditions of this consent.

b. The Applicant/Owner shall ensure that at all times, its employees or sub-contractors comply with the conditions of the Development consent.

12 WorkCover

The Applicant/Owner's attention is drawn to the WorkCover Authority's requirements under the Factories, Shops and Industries Act 1962, particularly in respect to amenities. It is recommended that the WorkCover Authority be consulted to ensure requirements will be complied with prior to lodgement of any application for a Construction Certificate.

13 Compliance with Conditions

The use or occupation of the approved development shall not commence until such time as all conditions of this development consent have been complied with. The use or occupation of the development prior to the compliance with all conditions of development consent may make the applicant/developer liable to legal proceedings.

14 Feedlot Design

a. The applicant shall ensure the design, construction and operation of the feedlot is in accordance with the Meat & Livestock Australia's National Guidelines for Beef Cattle Feedlots in Australia (3rd Edition), National Beef

Cattle Feedlot Environmental Code of Practice (2nd Edition) and Beef Cattle feedlots: Design and Construction standards (August 2016).

b. All works subject to an approval shall be constructed, maintained and operated so as to ensure public safety and prevent possible damage to any public or private property.

15 Change of Building Use

Any change of use/classification in relation to the use of the existing buildings shall not be made until approval in writing by this Council is first obtained.

16 Utilities

All adjustments to existing utility services made necessary by the development are to be undertaken by the developer at no cost to Council.

17 Composting and Stockpiling of Manure

The stockpiling or composting of manure onsite has not been assessed and does not form part of this consent. If the applicant should at some future time wish to add the composting of manure to the existing development a separate development application will be required.

18 Feedlot Management Plan

Prior to the occupation of the feedlot the applicant is to supply Council with a Feedlot Management Plan detailing the feedlot operation (including pond maintenance and vermin control programs), and specify how monitoring and reporting requirements will be complied with.

19 A detailed vegetation screening/landscaping plan be supplied to Council prior to the issuing of a Construction Certificate for the proposed development.

PART A - PLANNING

1 Section 94 Plan – Traffic Generating Development

The feedlot operator shall pay a contribution to the Gwydir Shire Council for the movement of trucks on Council's roads in accordance with Council's Section 94 Plan – Traffic Generating Development.

2 Section 94 Plan – Payment Period

Feedlot number declarations are to be received and s94 contributions paid within 30 days from the end of each quarter. Further that the quarterly Feedlot number declarations be audited annually and the auditor's verification be supplied to Council within 60 days after the end of the financial year.

3 The applicant/owner shall ensure that the operation and use of the property comply with the current LEP definition of an intensive livestock keeping establishment, namely.

4 Traffic & Transport

Vehicular Parking and Manoeuvring

a. Any vehicles or plant owned or operated by the occupants of the premises in connection with the conduct of their business are to be parked within the confines of the site in spaces designated on the submitted plans or as otherwise provided in accordance with the conditions of this consent.

a. All vehicular movement to and from the site onto Cooyong Road shall be in a forward direction.

5 Access to Site

a. Main access to the site must be off Cooyong Road.

b. The intersection of Cooyong and Gineroi Road is to be upgraded to B-Double standard at the developer's expense. Engineered plans are to be supplied to Council's Technical Services Department, prior to work commencing, to confirm design.

6 Cooyong Road

a. The surveyed alignment of Cooyong Road is to be corrected so as to reflect path of the physically constructed road, at the developer's expense.

b. Cooyong Road is to be fenced on both sides from Gineroi Road to its northern extremity, at the developer's expense.

7 Impacts of Nutrients and effluent on native vegetation

Mitigation measures as presented in Appendix 3 7 Part Test of the Statement of Environmental Effect Appendices shall be applied to the 1,000 head feedlot proposal.

8 Threatened Species Mitigation

To protected remnant vegetation and existing habitat values for flora and fauna within the area, the following mitigation would be required:

1) Feedlot design, construction and management must be consistent with best management practices outlined in the Meat & Livestock Australia's National Guidelines for Beef Cattle Feedlots in Australia (3rd Edition), National Beef Cattle Feedlot Environmental Code of Practice (2nd Edition), Beef Cattle feedlots: Design and Construction standards (August 2016).

2) Feedlot effluent irrigation must only occur on existing cultivated land as shown in Figure 2: Proposed Development Site of the document *"Statement of Environmental Effects, 1,000 Head Cattle Feedlot at 'Clevecourt'"* by the SMK Consultants dated August 2017.

3) The locations for the spreading the manure from the feedlot shall be mapped be submitted to Council prior to the issue of an Occupation Certificate for the development.

4) The following buffers must be maintained:

(a) A minimum distance of 25m between the feedlot and /or effluent/manure spreading and the edge of remnant vegetation patches. For remnants the grassy groundcover the edge is defined by the outer most grass tussocks, while for any wooded vegetation the predominantly bare ground this edge is defined by the outside edge of the canopy of the outermost trees.

(b) A minimum distance of 50m between environmentally sensitive areas and effluent/manure spreading including:

(i) Antimony Gully;

(ii) the edge of any of remnant vegetation.

5) Effluent must be spread using a travelling irrigator and application rates must not exceed soil infiltrations rates.

6) A manure spreader must be used to spread organic solids to ensure solids are evenly spread over cropping areas.

7) Soil testing must be undertaken prior to any spreading of effluent and/or manure to establish a baseline soil nutrient / organic matter / chemical status within;

(a) cultivation areas

(b) remnant vegetation patches within 50m of Antimony Gully and Spring Creek

8) Soul/crop nutrient balances must be determined for cultivation areas [refer 6) above] to ensure spreading rates do not exceed soil nutrient storage capacity and crop utilisation.

9) Areas identified in 6) above must be re-sampled prior to any subsequent applications of effluent and /or manure to ensure no build- up of nutrients, contaminants and /or salts within the soil profile.

10) Should soil testing show an unacceptable change in the soil nutrient /chemical/salt levels then all effluent/manure spreading must cease on affected or adjoining cultivation areas.

9 Stormwater System and Sediment/Holding Ponds

No tail water drainage being discharged into or onto:

- Any adjoining public or Crown road
- Any other person's land
- Any Crown land
- Any river, creek or watercourse, including Antimony Gully & Spring Creek
- Any ground water aquifer
- Any area of native vegetation

10 Waste Disposal

a. All waste shall be disposed on-site in a manner, which will not impact on the surrounding environment or the amenity of the area.

b. No waste or other material shall be taken from the property for further processing or stockpiling without the prior approval of Council.

11 All works involving soil or vegetation disturbance shall be undertaken with adequate measures to prevent soil erosion and the entry of sediments into any river, lake, water body, and wetland or groundwater system.

12 Disposal of Solids/Manure

a) i) solid waste shall not be spread within 100 metres of a bore site;
ii) solid waste shall not be spread within 50 metres of the high bank of a watercourse
iii) solid waste shall not be spread within 10 metres of any property boundary
iv) solid waste shall not be spread within 25 metres of a public road

b) **Timing**

Spreading of solid waste shall be restricted during months of December to February due to increased likelihood of receiving intense summer storms.

c) Slopes

Slopes in excess of 8% avoided unless composted solid waste is incorporated into soils as soon as possible after spreading and the area is protected by structural soil erosion control measures (e.g. graded bank).

d) **Manure and Other Pen Material**

As stated in the stated section 3.2.4 Feedlot Operation, manure is to be transported directly from the feedlot upon pen cleaning to production fields. Details of areas intended to be used to spread the manure on the properties 'Clevecourt South', 'Murrawombe' and 'Tareelah North' are to be mapped and submitted to Council prior to the issue of an Occupation Certificate for the development.

Note: The stockpiling or composting of manure onsite does not form part of this consent.

13 Soil – Erosion and Sediment Control

a) All topsoil from pen sites (new) and excavated areas shall be removed and stockpiled for later rehabilitation work.

b) All batters shall be a minimum of 4 (h):1(v) re-topsoiled, seed and fertilised immediately on completion. Suitable species to use around sheds and feedlot area are lower growing perennial grass.

c) All drains shall be established at a non-erodible grade and revegetated by re-topsoiling, seeding and fertilising immediately on completion.

d) Disposal of run-off from the Development site shall occur at well-vegetated areas.

14 Watercourse Management

All works shall be constructed outside of 40 metres from Antimony Gully and Spring Creek watercourses.

Chairman ……

15 Groundwater Management

1. Baseline groundwater quality data shall be established prior to use of the feedlot and the impact of the development should be assessed against the minimum harm criteria of the Aquifer Interference Policy.

2. A groundwater monitoring (in particular the quality) and mitigation plan shall be developed in consultation with DPI – Water and submitted to Council, prior to use of the feedlot. The monitoring bores shall be drilled to a depth where they intercept groundwater, so groundwater can be monitored, baseline groundwater quality data can be established and the impact of the development can be assessed against Level 1 criteria of then Aquifer Interference Policy. It is also recommended the proponent use existing bores that intercept groundwater within the property as well.

16 Concentration Limits

For each discharge point or utilisation area specified in the table/s below, the concentration of a pollutant discharge at that point, or applied to that area, must not exceed the concentrations limits specified for that pollutant in the table.

Where a pH quality limit is specified in the Table, the specified percentage of samples must be within the specified ranges.

To avoid any doubt, this condition does not authorise the discharge or emission of any other pollutants.

16.1 Air

Point: all air discharges

Pollutant
Limits as specified in the Protection of the Environment Operations (Clean Air) Regulation 2010 (or as amended)

16.2 Volume and mass limits

The volume/mass of cattle must not exceed the volume/mass limit specified in the table below:

Total number of cattle in the feedlot pens on the premises

Volume Limit	Units of measure	Volume/Mass limit
Total number of cattle in the feedlot pens on the premises	Number of cattle	Maximum 1000 cattle
Stocking density of cattle within the feedlot pens	m^2/head	Minimum 14.4m^2/head

Note: The above stocking density limit is based on the minimum separation distance to prevent odour nuisance from a Class 2 Feedlot to a residence located 1km from the site. This limit may be modified if the applicant can provide more detailed information that includes the exact distance to the nearest receptor, the frequency of winds towards this receptor, and justification of a higher feedlot classification.

16.3 Discharge Points and Utilisation Area

For each discharge point or utilisation area specified below (by a point number), the volume/mass of liquids discharged to water, or solids or liquids applied to the area, must not exceed the volume/mass limit specified for that discharge point or area.

For the point/s identified below, no discharge to waters is permitted unless the specified volume of runoff or flow is exceeded or the condition met.

Point/s	Specified volume of runoff or flow
Overflow points from the holding pond servicing the 'control drainage area'. For the purpose of these general terms of approval, the 'control drainage area' consists of the feedlot pens, manure storage area, and grassed drainage area for the feedlot development.	Either: the runoff volume from the 'controlled drainage area' draining to the effluent holding pond/s and wet weather storage pond/s 1 in 20 year, 24 hour storm event, using volumetric runoff coefficients of 0.8 for the feedlot pens, roadways and other hard stand areas and 0.4 for grassed areas within the controlled drainage area; Or; the runoff volume from the controlled drainage area in a 96 percentile wet year determined from a water balance, calculated using: not longer than average monthly evaporation losses from the ponds, monthly withdrawals for irrigation, daily (or weekly) input data and using volumetric runoff coefficients of 0.4; Whichever is greater. *Note: Calculations for the water balance must reflect actual irrigation scheduling suited to the soils, cropping regime and local climate including all input and effluent draw off) rather than follow a simple theoretical moisture deficit irrigation regime.*

For the purposes of these general terms of approval, data from the current "Australian Rainfall and Runoff", The Australian Institution of Engineers and rainfall data from the Australian Bureau of Meteorology for the Premises is to be used to calculate the volume of run-off from a 1 in 20 year, 24 hour storm event and a 96 percentile wet year.

16.4 Waste

The applicant must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly detailed as part of the development approval or as otherwise amended by the conditions of this consent.

16.5 Noise Limits

The Applicant/Owner shall ensure that the noise generated by the development does not exceed the following limits at any privately-owned land.

Noise Limits

Day $L_{Aeq(15\ minute)}$	Evening	Night
48 dB(A)	45	40

Notes:

a) Noise from the development is to be measured at the most affected point on or within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary, to determine compliance with the $L_{Aeq\ (15\ minutes)}$ noise limits (ie the equivalent continuous noise level when measured over a 15 minute period) in the above table. 5dBA must be added to the above limits if the noise is substantially tonal or impulsive in character.

b) If it can be demonstrated that direct measurement of noise from the development is impractical, the Council may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy – EPA, 2000). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.

c) The noise emission limits identified in the above table apply under meteorological conditions of:
- *Wind speeds of up to 3m/s at 10 metres above ground level, and*
- *Temperature inversion conditions of up to 3°C/100m.*

d) Noise impacts that may be enhanced by temperature inversions must be addressed by quantifying the enhanced impacts and developing and implementing measures to ameliorate the impacts.

$L_{Aeq\ (15\ minute)}$ is the equivalent continuous noise level – the level of noise equivalent of the energy-average of noise levels occurring when measured over a 15 minute period.

Note: Noise measurement

For the purpose of noise measures required for this condition, the L_{Aeq} noise level must be measured or computed at any point within 30 metres of any residential or other noise sensitive receiver over a period of 15 minutes using "FAST" response on the sound level meter.

For the purpose of the noise criteria for this condition, 5 dB (A) must be added to the measured level if the noise is substantially tonal or impulsive in character. The location or point of impact can be different for each development, for example at the closest residential receiver or at the closest boundary of the development. Measurement locations can be:

1 metre from the facade of the residence for night time assessment;

at the residential boundary;

30 metres from the residence (rural situations) where boundary is more than 30 metres from residence.

The noise emission limits identified in paragraph 1 of this condition apply for prevailing meteorological conditions (winds up to 3m/s), except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by:

- documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions;
- where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversions conditions should be developed and implemented.

17 Potentially offensive odour

The applicant must not cause or permit the emission of offensive odours from the premises, as defined under Section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the applicant must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

18 A ground water monitoring program must be developed and implemented prior to the construction of the feedlot.

a. At least one effective monitoring bore be constructed on the down-gradient side of the holding pond, with the necessary consent of NSW Office of Water. The monitoring bores must intercept groundwater to provide adequate information on contamination. Monitoring bores in a dry hole are not considered useful in indicating if leakage is occurring from the holding pond. That is, if leakage from the pond is in a vertical direction until reaching the shallowest aquifer and then spreading laterally down gradient, the 'early warning indicator' being a dry hole will not identify this spread of contamination. Therefore all monitoring bores will need to intercept groundwater to provide adequate information on groundwater contamination.

b. A ground water mitigation program must be outlined in the event that unacceptable levels of contamination are identified.

19 Provide approved type of shade for sick animals in hospital pen(s)

Conduct a risk analysis using ALFA Risk Assessment Program for the feedlot site using the standard "fat black steer" as a model –

a) If the calculated ***"Over-all Risk"*** for the ***"extreme risk probability"*** of heat stress due to an ***"event duration"*** of ***3 or more days,*** is ***"less than 1/decade"***.

- No further requirement;
- Recommend following the principles outlined in MLA NSW and National guidelines for managing animals during summer
- Recommend membership of National Feedlot Accreditation Scheme (NFAS) to encourage best practice

b) if calculated ***"Over-all Risk"*** for the ***"extreme risk probability"*** of heat stress due to an ***"event duration"*** of ***3 or more days*** is ***"1/decade",*** or greater feedlots must have a "Summer Action Plan (SAP)" in place:

- Must follow NFAS standards and become a member of NFAS;
- Non-member of NFAS required to meet conditions during Dec-Feb to keep probability less than once/decade.

Either through:

- Approved "Summer Action Plan (SAP)" developed with the NSW DPI Livestock Officer (Beef Feedlots) Jeffrey House using the ALFA/MLA

RAP software to design suitable mitigations measures (breed, water, shade, pen cleaning etc.) for implementation.

Or

- Approved shade required in all pens

Note:
- *RAP software available at www.katestone.com.au/mla*
- *Use climatic data from nearest appropriate centre*
- *"Flat black steer" is Black, British breed (Box Taurus), condition score 4, no access to shade, healthy and in a class 3 feedlot.*
- *"Approved shade" to a minimum of 3 sq. metres per head, design and aspect to conform to recommendations published by MLA.*
- *Limit of acceptable risk based on probability of an extreme evet of 3 days, less than once per decade.*

20 Operating Conditions

20.1 Dust

a. Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises.

b. The developer shall take appropriate measures to assist in the mitigation of potential dust nuisance which may arise including from vehicular movements on the subject site.

20.2 Maintenance of holding ponds

a. The holding ponds must be maintained to ensure that sedimentation does not reduce their capacity by more than 20% of the design capacity.

b. All effluent holding ponds/evaporation ponds and associated drains must be maintained to prevent infiltration.

20.3 Maintenance of feedlot pens

a. The feedlot pen surface must be maintained to prevent infiltration.

b. The manure pad depth:
- does not exceed 50mm above the interface layer;
- is left intact during pack removal; and
- is left in a smooth, durable and uniform state following pack removal.

c. No pen has a slope less than 3%, or drains into another pen.

d. i) All feed trough, water trough and bin aprons slope away from the trough and bin to facilitate drainage; and
ii) water trough drains are constructed so that wash water is always discharged outside the pens.

e. Under-fence cleaning is carried out at least monthly.

f. Wet patches are eliminated at least weekly.

g. Potholes are repaired at least weekly.

20.4 Solids storage

a. Solids must be stored on an impermeable pad within the controlled drainage area.

b. Manure with moisture content of greater than 35% is not placed in the main stockpiles.

20.5 Management of Utilisation Areas

a. The quantity of effluent/solids applied to the utilisation area/s must not exceed the capacity of the area to effectively utilise the effluent/solids.

b. For the purpose of this condition, 'effectively utilise' include the use of the effluent/solids for pasture or crop production, as well as the ability of the soil to absorb the nutrient, salt, hydraulic load and organic material.

20.6 Carcass Disposal

Carcass disposal pits must be shaped to prevent inflow of surface runoff and must be suitably lined to prevent infiltration.

20.7 Controlled Drainage Area

a. A controlled drainage area (CDA) must prevent 'clean' runoff entering the site and collects all 'contaminated' runoff.

b. For the purpose of this condition the CDA must include the feedlot pen areas, unloading and processing yards, hospital pens, cattle lanes, and the solids stockpile areas.

20.8 Activities must be carried out in a competent manner

Development activities must be carried out in a competent manner.

This includes:

- processing, handling, movement and storage of materials and substances used to carry out the activity; and
- the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

20.9 Maintenance of plant and equipment

All plant and equipment installed at the premises or used in connection with the licensed activity:

- must be maintained in a proper and efficient condition; and
- must be operated in a proper and efficient manner.

20.10 Spreading of Manure

a. All intended sites being used for the spreading of manure are to be nominated and provided to Council prior to the issue of an Occupation Certificate.

b. Manure spreading is:

- not conducted one day before, or during weekends and public holidays; and
- only conducted when conditions are favourable to dispersion.

c. Manure is incorporated into cultivation as soon as practicable after spreading.

20.11 Feed Spillage

Feed residues and spilt feed are removed at least weekly.

20.12 Control of Vermin and Flies

Fly, mice and other vermin shall be controlled via the implementation of effective baiting programs and shall operate continuously from the commencement of the feedlot.

Details of the fly, mice and other vermin control program shall form part of the Feedlot Management Plan to be presented to Council prior to the issue of Occupation Certificate.

21 Monitoring and Recording Conditions

21.1 Monitoring records

Any monitoring required to be conducted by the conditions of consent in relation to the development must be recorded and retained as set out in the following 2 paragraphs.

a. All records required to be kept by these conditions must be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least 4 years after the monitoring or event to which they relate took place; and
- produced in a legible form to any authorised officer of Council and the EPA who asks to see them.

b. The following records must be kept in respect of any samples required to be collected, the date/s on which the sample was taken;

- the time/s at which the sample was collected;
- the point at which the sample was taken; and
- the name of the person who collected the sample.

21.2 Requirement to monitor concentration of pollutants discharged

a. For each monitoring/discharge point or utilisation area specified below (by a point number), the applicant must monitor (by sampling or obtaining results by analysis) the concentration of each pollutant specified in Column 1. The applicant must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

b. **Point/s – overflow points on effluent holding and sedimentation pond/s**

Pollutant	Units of measure	Frequency	Sampling Method
Total Kjeldahl Nitrogen	mg/L	Each overflow event	Representative sample
Nitrate + Nitrite	mg/L	Each overflow event	Representative sample
Ammonia Nitrogen	mg/L	Each overflow event	Representative sample
Total Phosphorus	mg/L	Each overflow event	Representative sample
Reactive Phosphorus	mg/L	Each overflow event	Representative sample
Conductivity	uS/cm	Each overflow event	In situ
PH	pH	Each overflow event	In situ
Total Suspended Solids	mg/L	Each overflow event	Representative sample

Note: The frequency of monitoring and the pollutant/s to be monitored may be varied by Council once the variability of the water quality is established.

c. **Point/s – groundwater in effluent utilisation area and below effluent holding ponds.**

Pollutant	Units of measure	Frequency	Sampling Method
Total Nitrogen	mg/L	Establish background then every 6 months	Representative sample
Nitrate Nitrogen	mg/L	Establish background then every 6 months	Representative sample
Total Phosphorus	mg/L	Establish background then every 6 months	Representative sample
Conductivity	uS/cm	Establish background then every 6 months	In situ
PH	pH	Establish background then every 6 months	In situ
Reactive Phosphorus	mg/L	Establish background then every 6 months	Representative sample
Standing Water Level	Meters	Establish background then every 3 months	In situ
Ammonia N	mg/L	Establish background then every 6 months	Representative sample
E Coli	mg/L	Establish background then every 6 months	Representative sample
TKN	mg/L	Establish background then every 6 months	Representative sample

Chairman ……

Final location of groundwater monitoring points and groundwater monitoring program is to be approved by Council.

Note: The frequency of monitoring and the pollutant/s to be monitored may be varied by Council once the variability of the groundwater quality is established.

d. **Point/s – Spring Creek down stream of its junction with Antimony Gully.**

Pollutant	Units of measure	Frequency	Sampling Method
Total Nitrogen	mg/L	Establish background then every 6 months	Representative sample
Nitrate Nitrogen	mg/L	Establish background then every 6 months	Representative sample
Total Phosphorus	mg/L	Establish background then every 6 months	Representative sample
Conductivity	uS/cm	Establish background then every 6 months	In situ
PH	pH	Establish background then every 6 months	In situ
Reactive Phosphorus	mg/L	Establish background then every 6 months	Representative sample
Standing Water Level	Meters	Establish background then every 3 months	In situ
Ammonia N	mg/L	Establish background then every 6 months	Representative sample
E Coli	mg/L	Establish background then every 6 months	Representative sample
TKN	mg/L	Establish background then every 6 months	Representative sample

Final location of groundwater monitoring points and groundwater monitoring program is to be approved by Council.

Note: The frequency of monitoring and the pollutant/s to be monitored may be varied by Council once the variability of the groundwater quality is established.

e. **Point/s – soils on solids utilisation areas**

Pollutant	Units of measure	Frequency		Sampling Method
		Top Soil	Sub Soil	
pH	pH	Annually	Annually	Special Method 1
Conductivity	uS/cm	Annually	Annually	Special Method 1
Total Kjeldahl Nitrogen	mg/kg	Annually	N/A	Special Method 1
Nitrate Nitrogen	mg/kg	Annually	Annually	Special Method 1
Total Phosphorus	mg/kg	Annually	Every 3 years	Special Method 1
Available Phosphorus	mg/kg	Annually	Annually	Special Method 1
Exchangeable sodium percentage	%	Annually	Annually	Special Method 1
Cation Exchange Capacity	cmol(+)/kg	Annually	Annually	Special Method 1
Exchangeable cations (Ca, Mg, Na, K)	cmol(+)/kg	Annually	Annually	Special Method 1
Chloride	mg/kg	Annually	Annually	Special Method 1
Organic Carbon	%	Annually	N/A	Special Method 1
P sorption capacity	kg/ha	Every 3 years	Every 3 years	Special Method 1
Bulk Density	kg/m^3	Every 3 years	Every 3 years	Special Method 1
Aggregate stability	%	Every 3 years	Every 3 years	Special Method 1

Special Method 1 - means composite soil samples must be taken of the:

1. top soil,
2. sub soils

for each soil monitoring point. The monitoring of the pollutants must be done in accordance with methods approved by the EPA.

Note: Final location of soil monitoring points and soil monitoring program is to be approved by Council. Soil monitoring points are to be established to monitor soil management units taking into account different soil types and landscape variables and solid waste utilisation procedures.

f. **Point/s – waste solids (manure)**

Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	Special Frequency 1	Representative Sample
Conductivity	uS/cm	Special Frequency 1	Representative Sample
Total Kjeldahl Nitrogen	mg/kg	Special Frequency 1	Representative Sample
Nitrate Nitrogen	mg/kg	Special	Representative

		Frequency 1	Sample
Ammonia Nitrogen	mg/kg	Special Frequency 1	Representative Sample
Total Phosphorus	mg/kg	Special Frequency 1	Representative Sample
Dry matter	%	Special Frequency 1	Representative Sample
Sodium	mg/kg	Special Frequency 1	Representative Sample
Calcium	mg/kg	Special Frequency 1	Representative Sample
Chloride	mg/kg	Special Frequency 1	Representative Sample
Magnesium	mg/kg	Special Frequency 1	Representative Sample
Potassium	mg/kg	Special Frequency 1	Representative Sample
Organic Carbon	%	Special Frequency 1	Representative Sample

Special Frequency 1 *– Prior to solids application.*

Note: The frequency of monitoring and the pollutant/s to be monitored may be varied by Council once the variability of the manure quality is established.

21.3 Air

a. **Point – at feedlot – on-site weather**

Parameter	Units of measure	Frequency	Averaging Period	Sampling Method
Air temperature	°C	Continuous	1 hour	AM-4
Wind direction	°	Continuous	15 minute	AM-2 & AM-4
Wind speed	m/s	Continuous	15 minute	AM-2 & AM-4
Sigma theta	°	Continuous	15 minute	AM-2 & AM-4
Rainfall	mm	Continuous	24 hour	AM-4
Evaporation	mm	Continuous	24 hour	Instrument calculation or approved BoM station data

21.4 Requirements to monitor volume or mass

For each discharge point or utilisation area specified below, the applicant must monitor the volume of liquids discharged to water or applied to the area:

- the mass of solids applied to the area;
- over the interval, at the frequency and using the method and units of measure, specified below.

Point	Frequency	Units of Measure	Sampling Method
Capacity of effluent holding and sedimentation pond/s	Monthly	kL	Method approved by Council
Overflow discharge from effluent holding and sedimentation pond/s	Every overflow event	kL/day	Estimate
Solids applied to utilisation area/s	Every application	Location, application area (ha), and mass of solids applied (T/day)	Estimate
Solids utilisation area/s	Each cropping cycle	Crop yield (tonnes) and crop nutrient content (mg/kg of N, P, K)	Method approved by Council

Testing methods – concentration limits

Monitoring for the concentration of a pollutant discharged to water or applied to a utilisation area required by this condition must be done in accordance with:

- the Approved Methods Publication; or
- if there is no methodology required by the Approved Methods Publication or by the conditions of consent in relation to the development or the relevant load calculation protocol, a method approved by Council in writing before any tests are conducted.

21.5 Mass Animal Disposal

The disposal of dead cattle by burning is prohibited; the applicant/licensee must develop a "Mass Animal Disposal Plan" within four (4) months of the issuing of the Development Consent.

The plan can consider a number of disposal options but at the very least must address the requirements to dispose of all animals within the feedlot by burial. Burial options must consider:

- Site location, a specific site needs to be set aside for pit establishment should it be required. In considering site location the following issues have to be considered:
  - Proximity to flood zones;
  - Proximity to groundwater tables;
  - Soil characterisation, to determine the suitability or otherwise of the soil to act as an impermeable barrier for leachate contamination to groundwater;
  - Site volume being sufficient to hold all cattle within the feedlot.
- The ability to access materials to line a pit if required;
- The ability to access machinery to construct the hole;
- The ability to set up monitoring regimes to ensure that disposal pits do not pollute adjacent environments.

Chairman ……

21.6 Storage Tanks

All grain or feed storage facilities associated with the proposal are to be fully enclosed or suitably covered so as not to attract or support vermin and birds.

21.7 Complaints Procedure and Records

a. Throughout the life of the development, the Applicant/Owner shall ensure that the following contacts are available for community complaints:

i) A telephone number on which complaints about the development may be registered;
ii) A postal address to which written complaints may be sent; and
iii) An email address to which electronic complaints may be transmitted.

b. The telephone number, the postal address and the email address shall be advertised in at least one appropriate local newspaper prior to the commencement of work at the development site.

b. The Applicant/Owner shall record legible details of all complaints made to the owner, operator, applicant or any employee or agent in relation to pollution from the development. The record must include, but not necessarily be limited to:

i) The date and time, where relevant of the complaint;
ii) The means by which the complaint was made (telephone, mail or email);
iii) Any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
iv) The nature of the complaint
v) Any action(s) taken by the Applicant/Owner in relation to the complaint, including any follow-up contact with the complainant; and
vi) If no action was taken by the Applicant/Owner in relation to the complaint, the reason(s) for no action being taken.

d. A sign shall be erected at the site boundary giving contact details. The record of a complaint must be kept for at least four (4) years after the complaint was made.

e. Records shall be made available for inspection by an authorised officer of Council upon request. The Applicant/Owner shall also make summaries of the Register, without details of the complainants, available for public inspection.

PART A - HEALTH

There are no relevant conditions for this section.

PART A – BUILDING

1 Building - Structural Adequacy

The Applicant shall ensure that all structures are constructed in accordance with the relevant requirements of the National Construction Code.

Notes:
- *Under Part 4A of the EP&A Act, the Applicant/Owner is required to obtain construction and occupation certificates for the proposed building works.*
- *Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of development.*

PART B – PRIOR TO COMMENCEMENT OF BUILDING WORKS

1 Notification of Commencement of Work

At least two (2) days prior to work commencing on site, Council must be informed, by the submission of Form 7 of the *Environmental Planning & Assessment Regulation, 1998*, of the name and details of the Principal Certifying Authority and the date construction work is proposed to commence

2 Advisory Note 2

Signs to be Erected on Building and Demolition Sites

(1) A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:

(a) stating that unauthorised entry to the work site is prohibited, and
(b) showing the name of the person in charge of the work site and a telephone number at which that person may be contacted outside working hours.

(2) Any such sign is to be removed when the work has been completed.

(3) This clause does not apply to:

(a) building work carried out inside an existing building, or

(b) building work carried out on premises that are to be occupied continuously (both during and outside working hours) while the work is being carried out.

3 Advisory Note 3

Toilet Facilities:

(1) Toilet facilities are to be provided, at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

(2) Each toilet provided:

(a) must be a standard flushing toilet, and

(b) must be connected:
(i) to a public sewer, or
(ii) if connection to a public sewer is not practicable, to an accredited sewage management facility approved by the Council, or

(iii) if connection to a public sewer or an accredited sewage management facility is not practicable, to some other sewage management facility approved by the Council.

(3) The provision of toilet facilities in accordance with this clause must be completed before any other work is commenced.

(4) In this clause:

accredited sewage management facility means a sewage management facility to which Division 4A of Part 3 of the Local Government Act (Approvals) Regulation 1993 applies, being a sewage management facility that is installed or constructed to a design or plan the subject of a certificate of accreditation referred to in clause 95B of the Regulation.

approved by the Council means the subject of an approval in force under Division 1 of Part 3 of the *Local Government (Approvals) Regulation 1993.*

public sewer has the same meaning as it has in the *Local Government (Approvals) Regulation 1993.*

sewage management facility has the same meaning as it has in the *Local Government (Approvals) Regulation 1993.*

4 Site Management

Run-off and erosion controls must be implemented before construction to prevent soil erosion, water pollution or the discharge of loose sediment on surrounding land, as follows:

a) divert uncontaminated run-off around cleared or disturbed areas,
b) erect a silt fence to prevent debris escaping into drainage systems or waterways,
c) prevent tracking of sediment by vehicles onto roads,
d) stockpile topsoil, excavated material, construction, landscaping supplies and debris within the site.

5 Advisory Note 4

Dial before you Dig

Underground assets may exist in the area that is subject to this application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial before you Dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contacting the Dial before you Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial before you Dig service in advance of any construction or planning activities.

6 Advisory Note 5

Telecommunications Act 1997 (Commonwealth)

Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any person interfering with a facility or installation owned by Telstra is committing an offence under the Criminal Code Act 1995 (Cth) and is liable for prosecution. Furthermore, damage to Telstra's infrastructure may result in interruption to the provision of essential services and significant costs. If you are aware of any works or proposed works which may affect or impact on Telstra's assets in any way, you are required to contact Telstra's Network Integrity Team on Phone Number 1800810443.

7 Advisory Note 6

Disturbance or Impact on Telecommunications Infrastructure

1. If the development is likely to disturb or impact upon telecommunications infrastructure, written confirmation from the service provider that they have agreed to the proposed works must be submitted to the Principal Certifying Authority prior to the issue of a Construction Certificate or any works commencing.
2. The arrangements and costs associated with any adjustment to telecommunications infrastructure shall be borne in full by the applicant/developer.

PART C – DURING BUILDING WORK

1 Compliance with the Building Code of Australia

All building work must be carried out in accordance with the provisions of the *Building Code of Australia*.

2 Advisory Note 8

(a) Except as specified in (b) below, the critical stage inspections may be carried out by the Principal Certifying Authority (PCA) or, if the PCA agrees, by another Certifying Authority.

(b) The last critical stage inspection required to be carried out must be carried out by the Principal Certifying Authority.

The applicant is advised that the critical stage inspections as listed are mandatory. Council, if chosen as the Principal Certifying Authority (PCA) will require the listed inspections.

A Compliance Certificate or other form of documentary evidence shall be issued/provided for the following applicable stages of the building construction in order that the work may immediately progress:

Mandatory Inspections

Stage	Work
a. Pens, Sediment Pond and Effluent Storage Pond	Prior to lining or filling
b. Completion	Before occupation or use.
Note: Any Compliance certificate issued for the above stages of construction shall certify that all relevant ancillary or dependent work has been undertaken in accordance with the Building Code of Australia and any other condition of this consent.	

PART D – PRIOR TO ISSUE OF OCCUPATION CERTIFICATE

1 Feedlot Management Plan

A Feedlot Management Plan will be development and presented to Council prior to the issue of the Occupation Certificate.

2 Compliance with Conditions:

The use or occupation of the approved development shall not commence until such time as all conditions of this development consent have been complied with. The use or occupation of the development prior to compliance with all conditions of development consent may make the applicant/developer liable to legal proceedings.

3 Road Damage

The cost of repairing any damage caused to Council's assets in the vicinity of the subject site as a result of construction works associated with the approved development is to be met in full by the applicant/developer prior to the issue of an Occupation Certificate.

4 Removal of Temporary Facilities:

(a) All temporary builder's signs or other site information signs are to be removed upon the completion of site works.

(b) Any temporary toilet facilities provided during construction works are to be appropriately dismantled, disconnected and removed from the site.

PART D – POST OCCUPATION

1 Reporting conditions

The applicant must provide an annual return to Council in relation to the development. In the return the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with consent conditions.

2 Deadline for Annual Return

The Annual Return for the reporting period must be supplied to Council not later than 60 days after the end of each reporting period.

3 Rehabilitation and maintenance

At cessation of the feedlot operation the consent the owner/operator shall rehabilitate/restore the site (in particular the sediment and effluent holding ponds) to its preceding to feedlot use and preform maintenance for a period of two years after practical completion, in order to prevent unmonitored and unmitigated runoff contamination of Antimony Gully and Spring Creek or any other impacts to the surrounding lands.

PART E – OTHER APPROVALS

There were no other approvals issued with is consent.

Definitions

Listed below are the definitions used in the Development Consent Conditions

Applicant	SMK Consultants
Council	Council of the Shire of Gwydir
DA	Development Application
Day	Day is defined as the period from 7am to 6pm on Monday to Saturday
DPI	Department of Primary Industries (includes the former Department of Mineral Resources)
EP&A Act	*Environmental Planning & Assessment Act 1979*
EP&A Regulation	*Environmental Planning & Assessment Regulation 2000*
EPA	Environment Protection Authority
GLEP	Gwydir Local Environmental Plan 2013
Land	Land means the whole of a lot in a current plan registered at the Land Titles Office at the time of this consent
Night	Night is defined as the period from 6pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
Owner	Owner of the land – Jason & Anne Lewis
PCA	Principal Certifying Authority appointed under Section 109E of the EP&A Act
SEE	Statement of Environmental Effects
Site	Land to which the DA applies
Work	The development and operation of the proposed cattle feedlot, including associated infrastructure and access, which is the subject of this Development Consent

REASONS FOR CONDITIONS:

The above conditions have been imposed:

(a) to ensure compliance with the terms of the Environmental Planning Instrument and/or Development Control Plan;

(b) having regard to Council's duties of consideration under *Section 79C (1) of the Environmental* Planning *and Assessment Act, 1979 (as amended)* as well as Section 80A of the Act which authorises the imposing of consent conditions.

(c) to protect the existing and likely future amenity of the locality;

(d) prevent, minimise, and/or offset adverse environmental impacts;

(e) set standards and performance measures for acceptable environmental performance;

(f) require regular monitoring and reporting;

(g) provide for the on-going environmental management of the development;

(h) having regard to the circumstances of the case and the public interest; and

(i) to ensure compliance with the *Building Code of Australia* and referenced standards.

SMK

CONSULTANTS

surveying – irrigation – environmental – planning

1,000 Head Cattle Feedlot at 'Clevecourt'

STATEMENT OF ENVIRONMENTAL EFFECTS

Jason Lewis

'Clevecourt', 756 Gineroi Road, Bingara NSW 2404

August 2017

SMK

CONSULTANTS

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1,000 Head Cattle Feedlot at 'Clevecourt'

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Jason Lewis

'Clevecourt', 756 Gineroi Road, Bingara NSW 2404

Prepared by: **SMK Consultants**

39 Frome Street, Moree, NSW 2400

August 2017

DOCUMENT CONTROL

Project Name	***Statement of Environmental Effects***
Proponent	Jason Lewis
Project Reference	17-144
Report Number	17-144 – SOEE
Prepared for	Jason Lewis 'Clevecourt', 756 Gineroi Road Bingara NSW 2404 Ph: 0428 672 941 info@jacwagyu.com.au
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Revision History			
Version Number	**Date**	**Authority**	**Details**
0	August 2017	Peter Taylor (SMK Consultants)	Draft

Executive Summary

Applicant:	Jason Lewis "Clevecourt" 756 Gineroi Road Bingara NSW 2404
Owner:	Jason Lewis Ann-Catreen Lewis "Clevecourt" 756 Gineroi Road Bingara NSW 2404
Land involved:	"Clevecourt" 756 Gineroi Road Bingara NSW 2404 Lot 98, 99 & 121 in Deposited Plan 754864
Local Government Authority:	Gwydir Shire Council
Zoning:	RU1 – Primary Production under the Gwydir LEP 2013

Description of Proposal

The applicant is applying for approval to develop a cattle feedlot with a capacity of up to 1,000 head. The Feedlot enterprise would be located on Lots 98 and 99 in DP754864. The proposed effluent and manure disposal area will extend onto Lot 121 in DP754864. The property is known as "Clevecourt" and is located approximately 15 kilometres north-north-west of Bingara on Gineroi Road. "Clevecourt" currently supports a grazing and cropping enterprise.

The development would involve the construction of up to ten (10) production pens stocked at 14m^2/head if it reaches a total capacity of 1,000 head of cattle. Ancillary structures and uses include use of an existing shed and mill area as a feedmill for the feedlot, use of existing cattle yards for processing of incoming and outgoing cattle, cropping and hay production on an adjoining area of cultivation and improved pasture in addition to a carcass disposal area, an effluent holding pond and a stormwater diversion bank and channel. The property will utilise existing infrastructure to operate and maintain the feedlot including cattle handling facilities, machinery and machinery sheds.

The feedlot will be designed, constructed and managed in accordance with the standards described in The National Guidelines for Beef Cattle Feedlots in Australia 3rd Edition (Meat and Livestock Australia, 2012). The Guidelines provide extensive guidance on the setup and operation of cattle feedlots, including procedures and guidelines for:

- Environmental protection and community amenity, including recommended separation distances for feedlot pens and effluent disposal areas, pen clean-out requirements, and clean-up of spilled or spoiled feed to prevent odour generation or pest infestation
- Feeding system management;

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- Biosecurity and animal health; and
- Supply chain management.

The development proposal meets all recommended separation distances between the development and sensitive receptors. Noise, odour and dust generated by the feedlot will be managed to minimise impact on the existing environment, land use or community amenity of the surrounding area. The preferential siting of the feedlot within a previously cleared area, means the development will require minimal vegetation clearing, and the impact of the development on flora and fauna is considered minor.

In conclusion, the proposal complies with all relevant guidelines, is congruent with neighbouring land uses and will provide some positive economic and social benefits to the local community.

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1 Introduction

This Statement of Environmental Effects (SoEE) has been prepared to accompany a Development Application to the Gwydir Shire Council for a proposed 1,000 head cattle feedlot on the property "Clevecourt", located in the Gineroi district of the Shire. The SoEE has been prepared on behalf of the proponent, Jason Lewis.

The activities associated with the construction and operation of the proposed feedlot, including intensive livestock agriculture constitute prescribed actions or activities in the following legislation, regulations, policies or plans:

- Gwydir Shire Council Local Environmental Plan 2013

1.1 Proponent Details

The proponent is Jason Lewis. The applicant's details are summarised in Table 1 below.

Table 1: Proponent Details

Contact Name	Jason Lewis
Business Name	Jac Wagyu Farms
ABN	86 955 742 707
Entity Name	The Trustee for J&A Lewis Investment Trust
Address	"Clevecourt" 756 Gineroi Road
	Bingara NSW 2404
Email	info@jacwagyu.com.au

1.2 Authors and Guidelines

SMK Consultants have over 28-years of experience in preparing planning applications, layouts and construction of cattle and sheep Feedlots. This experience is incorporated in the design and assessment of the proposed development. The persons involved in the preparation of this Statement of Environmental Effects and its appendices are:

- **Natasha Livingstone** B.Sc. (Hons)
- **Peter Taylor** B.Sc. MEIANZ CIAg

The following reference documents have been used in the preparation of the design and supporting documents for the proposed feedlot at Clevecourt. The documents provide best practice methods for operation and management:

- Assessment and Management of Odour from Stationary Sources in NSW – Technical Framework (DEC 2006a); referred to as the **NSW Odour Assessment Framework**
- Assessment and Management of Odour from Stationary Sources in NSW – Technical Notes (DEC 2006b); referred to as the **NSW Odour Assessment Notes**
- National Guidelines for Beef Cattle Feedlots in Australia 3rd Edition, Meat & Livestock Australia, 2012.
- National Beef Cattle Feedlot Environmental Code of Practice 2nd Edition, Meat & Livestock Australia, 2012.

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2 Site Analysis

2.1 Title Description and Land Tenure

The land titles and their descriptions are set out in the following table.

Table 2: Site Details and Title Description

Parameter	Value
Address	'Clevecourt' 756 Gineroi Road Bingara NSW 2404
Land Parcel Type	Freehold
Lot and Plan Number	Lot 98, 99 & 121 in Deposited Plan 754864
Owners	Jason John Lewis, Ann-Catreen Lewis
Town	Bingara
Area of Property	179.17 Ha
Local Government Area	Gwydir Shire Council
Current Land Use	Grazing
Land Use Zoning	Primary Production

2.2 Locality

The proposed feedlot would be developed on the property Clevecourt, which is located approximately 15 kilometres north- west of Bingara, in northern New South Wales. The development site involves Lot 98 and 99 in Deposited Plan 754864, located in the Gineroi district of the Gwydir Shire. A locality plan presenting an aerial photograph of the subject area in relation to Bingara is included as Figure 1.

Figure 1: Locality Plan

2.3 Property Description

Clevecourt has been historically utilised predominantly grazing. The land is zoned as RU1 Primary Production under the Gwydir Local Environment Plan 2013 (the LEP). The subject land is currently utilised for grazing with some cultivation used for cropping and pasture. The property has existing sheds, fencing and several small dams.

2.4 Surrounding Land Uses

The region surrounding the development is primarily agricultural and used for grazing and crop production. All properties adjacent to Clevecourt are also zoned RU1 – Primary Production under the Gwydir LEP. As a result, the development will not be out of character for the surrounding area.

"Clevecourt" and surrounding properties have been extensively cleared for grazing and crop production. Scattered areas of regrowth and remnant vegetation are retained across the landscape. The subject site is approximately 8km south west of Warialda National Park.

The township of Bingara is located approximately 15 kilometres south east of Clevecourt. Bingara is a small town with a population of 1,093 as of the 2011 Census. The main economic activity is agriculture and tourism. The town relies on the surrounding rural community for the bulk of its income. The surrounding rural community utilises the town for its school, merchandise and sporting and social facilities.

There is no concern regarding the surrounding properties in respect to land use conflict. The surrounding area is zoned as RU1 and therefore the potential for additional subdivision and construction of additional residences is considered limited. The closest neighbour, not associated with Clevecourt, is located approximately 1,020 metres east south east of the proposed development site.

2.5 Services and Utilities

The feedlot site is accessible via Cooyong Road, a council road which passes through the property of Clevecourt. Cooyong road is a gravel road. Site access is suitable for use by B-Doubles.

Cooyong Road is accessible from Gineroi Road. Gineroi Road is a gravel road from the north of the intersection with Cooyong Road to 1km to the south of this intersection, after which point it is a sealed asphalt road.

Gineroi Road connects with Allan Cunningham Road (B95). Allan Cunningham Road is a two-lane sealed road used as a freight route through the region.

The property has access to single phase mains power. The feedmill will be powered by an on-site generator. Water for the development will be sourced from bore water and onsite dams (harvestable right).

The property has one existing dwelling. Landline and mobile telephone facilities are available onsite.

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3 The Development Proposal

3.1 Objectives of the Development

The primary objective of the development is to produce high quality grain fed Wagyu beef to mainly the export market.

3.2 Proposal Outline

The Proponent intends to develop a 1,000-head cattle feedlot on Clevecourt. The development would involve the construction of up to ten (10) production pens stocked at 14m²/head when the facility is full. The general aim is to operate the site with an 80% or higher occupancy rate. The Feedlot will utilise existing infrastructure to operate and maintain the feedlot including cattle handling facilities, machinery and machinery sheds.

The feedlot will utilise internal farm roads. The internal roads will provide all weather access.

3.2.1 Feedlot Capacity

It is proposed that the Feedlot will have a maximum capacity of 1,000 head. The feedlot has been designed for a stocking density of 14 m²/head within the feedlot pens.

Cattle will be fed for an average of 350 days at the feedlot, resulting in an average maximum cattle turnover of 1043 cattle/year. Approximately 500 cattle are expected to be bred on-farm, with the remainder to be trucked in as progeny from Jac Wagyu bulls.

3.2.2 Feedlot Plan

The proposed development involves the construction of the following infrastructure:

- Ten (10) feedlot pens;
- Sedimentation basin and holding pond for wastewater treatment; and

The following figure 2 presents an aerial image of the property showing the feedlot location, effluent storage ponds and proposed effluent disposal area. The Feedlot site is currently used as holding pens to finish off Wagyu bred in the paddock for markets. The primary market for the Wagyu is the restaurant trade in Asia. The cattle are fed to produce a highly marbled beef which has a significantly high value in Asian markets.

The existing pens are extended along Cooyong road which is a Council road servicing one property to the north of Clevecourt. This is a gravelled road which is also utilised as an internal road by the Proponent. Traffic along this road consists of one or two light vehicle trips per day.

Figure 3 presents a preliminary layout of the pens and pond system. The pens are based around the available land within the existing fenced paddock area. The chosen area has a pen slope range from 2% through to 5% slope. Drainage is to the west.

An access road for feed vehicles servicing feedlot pens will be constructed alongside Cooyong Road. The access road will be gravelled to enable all weather access. The feedlot will consist of two rows of 5-pens. Row 1 along the eastern side has a standard pen size of 40m deep by 36m wide (bunk width). Row 2 will have similar pen sizes but the northern pen will be constrained by the construction of a diversion channel which will divert upslope runoff around the facility and effluent ponds.

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Figure 2: Proposed Development Site

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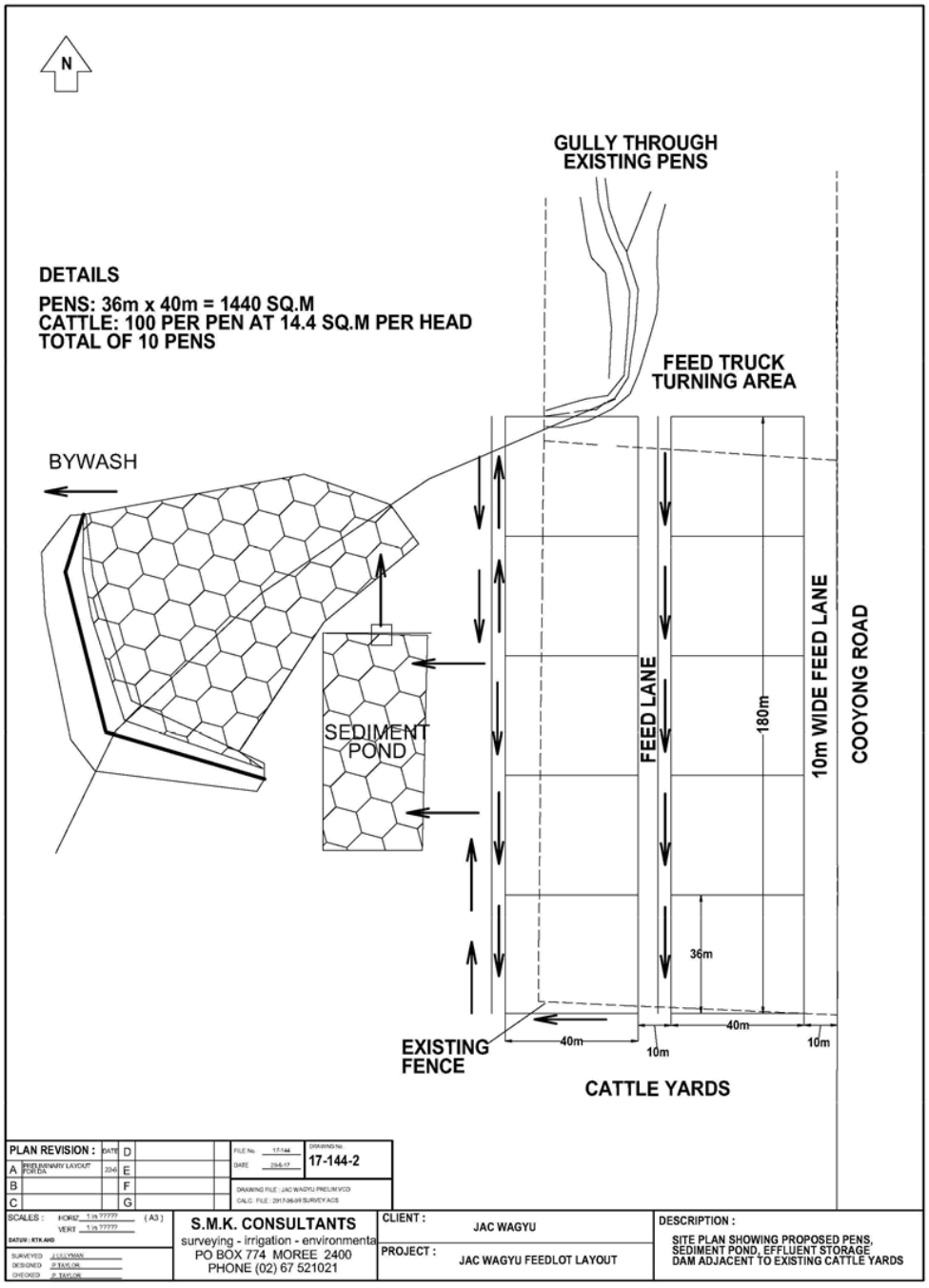

Figure 3: Site Plan

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3.2.3 Feedlot Construction

The site construction will include pens, a controlled drainage area, sediment and effluent disposal system and all associated drainage for the feedlot. The natural slope of the land allows for minimal earthworks to create the required slope for the pens. Excavation is required for the wastewater system. A table drain will be constructed along the west side of the two rows to control runoff from the pens. A raised feed road will be constructed along the east side of row 2 to prevent runoff from row 1 entering these pens. The table drains will direct runoff from the pens into carrier drains which will control the flow of runoff into the sediment pond to be located on the downslope side of row 2.

Vegetation clearing is considered minimal as the subject site is a previously cleared grazing paddock.

The construction of the proposed feedlot will not require any additional dwellings or buildings.

Controlled Drainage Area

The controlled drainage area (CDA) is the area of land where waste will be collected and stored. The CDA encompasses the entire feedlot complex, including the:

- Pens;
- Drains and ponds;

A clean water diversion bund will be placed upslope of the feedlot complex to direct uncontaminated runoff away from the feedlot complex. These drains will be directed into existing contour banks to control the flow of local runoff from approximately 1 Ha of catchment above the proposed feedlot site. This clean runoff can be directed to the east or west of the feedlot pens and ponds.

Runoff from within the Feedlot pens will be collected within an effluent disposal system. The drainage channels will be made of compacted impermeable clay and designed to minimise the settling of solids. The catch drains will be designed to have a slope of 1 – 1.5 %.

Pens

The feedlot pens have been designed as 36m x 40m in size. The *National Guidelines for Beef Cattle Feedlots in Australia* (MLA 2012) recommend a minimum stocking density of 11 m^2/head. The proposed design will allow each pen to hold approximately 100 head of cattle with an average stocking density of 14.4 m^2/head.

The flooring material of pens will be an impermeable layer of clay covered with a manure pad up to 50mm in depth. The pen area has a natural slope and therefore no earthworks are required to shape the individual pens. The existing surface will be utilised as it has a 20-50 mm manure layer over most of the surface from current feeding operations which are generally limited to 50-head for final preparation prior to sale.

The pen surfaces will be maintained to reduce manure load to the drainage system, with pen cleaning not to exceed 13 weeks.

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Sedimentation Basin

Effluent runoff from within the CDA will gravitate via the catch drains into a sedimentation basin. The intended design function of the sedimentation basin is to reduce the velocity of contaminated effluent to allow settling of suspended solids (manure) before entering the effluent holding pond. The settled sediments can then be collected and combined with manure scrapings for disposal offsite.

Sedimentation basin are typically wide and shallow storages having a designed top water level (TWL) less than 1.2 m. The base of the basin will slope gently (approximately 0.1%) towards a control weir that regulates discharge from the basin into the effluent holding pond. Control weirs typically consist of a concrete base and horizontal timber slats that can be removed for cleaning purposes (see Figure 4). After each runoff event, the sedimentation basin will drain completely (down to bed level).

With each runoff event manure is deposited in thin layers over the base of the basin, which allows the material to dry. The dried manure is then removed at the earliest possible opportunity and transferred to the manure stockpiles / carcass composting area.

Appendix 1 includes the design calculations for the effluent management system, including the sedimentation basin. The sediment basin will require a minimum volume of 930m^3 (0.93ML).

Figure 4: Typical Control Weir from a Sediment Basin

Effluent Holding Pond

The sedimentation system will discharge its effluent to the holding pond. The holding pond is designed to capture and store the normal runoff from the CDA. Water in the holding pond will be subject to microbial degradation (principally anaerobic) on the entrained organic matter. A portion of any mineralised nitrogen may be lost to volatilisation and denitrification processes, and over time the water will be lost to evaporation.

The holding pond will be constructed with a clay base to ensure the permeability does not exceed 1 x 10^{-9} m/s. Compacted material under the clay liner will undergo stability treatment as required. Effluent captured in the pond may be disposed of either by evaporation or by re-use for irrigation purposes on site. The *National Guidelines for Beef Cattle Feedlots in Australia* (MLA 2012) require evaporation ponds to have an average spill frequency not exceeding one spill in 10 years.

Appendix 1 includes the design calculations for the holding pond. The design has been assessed using a 1 in 20-year, 24-hour storm event volume as well as an annual water balance for a 90-precentile rainfall year. The calculations indicate that the latter calculation requires the larger storage volume of 8.25 ML. The storm event calculation indicated a storage requirement for only 2.17 ML.

The sediment control pond is to be built as a rectangular dam along the western side of row 2 pens. This area has been subject to clearing and pasture improvement. The pond will be excavated and the

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excavated material will be compacted into a bank to surround the pond. Freeboard design will allow for 1m of wall above top water level. The pond will drain to the north via a control outlet weir.

The holding pond is to be built as a gully dam in the adjoining hillside. An embankment to approximately RL. 330 AHD will be constructed across the gully. Natural storage capacity will be in the order of 10 ML which exceeds the requirement of 8.25 ML. The embankment to this level will provide a freeboard of approximately 1.2m above the bywash level. The pond will bywash on the western side across a natural flat area through the grassed paddock. This will flow over a small gravel ridge and dissipate into the grass paddock. An excessive overflow event will continue toward Antimony gully. The probability for this to occur is less than once in 10-years.

A small pump will be installed on the dam with a pipe connection across to a portable travelling irrigator in the effluent disposal area. The effluent will be pumped across to the paddock on an opportunity basis when effluent is available. The effluent will be applied at a rate of less than 10 mm per day to avoid runoff. An area of 10 Ha is available for irrigation. Average annual runoff is predicted to be 2 ML. The potential application rate over a 10 Ha area is minimal. The effluent applied will be utilised by the improved pasture. The pasture could be cut and baled for use on the farm to extract the nutrient applied.

3.2.4 Feedlot Operation

Induction Procedures

Cattle will be transported to the handling facilities located adjacent to the Feedlot site. These facilities are existing infrastructure. The cattle will be assessed individually on arrival for:

- Traceability
- Health and Welfare
- Performance

When livestock first arrive at Clevecourt they will be held at the holding pens, separate from the general population and processed in quarantine to ensure that no diseases are introduced to the feedlot. Details from the National Livestock Identification System (NLIS) devices should be recorded and verified. Livestock may also be tagged to assist livestock management within the feedlot.

During induction, livestock will be weighed and this weight should be recorded. They will be treated for internal and external parasites and vaccinated against clostridial diseases and infectious diseases, such as bovine respiratory disease, while held in quarantine.

Upon arrival, livestock will be provided with clean water and fresh hay. They will then be gradually introduced to the feedlot ration whilst in quarantine. This will allow the cattle to settle after being trucked to the site and allow any initial issues to be assessed. Once processed, the cattle will be transferred to the production pens. The cattle will be grouped based on sex, weight, size and target market.

Water Requirements and Supply

The feedlot cattle are predicted to require up to 55 litres/head/day of good low saline water, with consumption up to 65 litres/head/day in the summer months. In addition to water for stock, water is also required for additional purposes including, but not limited to:

- dust suppression
- feed processing
- cattle wash down
- general cleaning

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Total Number of Cattle:	= 1,000 head
Daily Water Requirement:	= 60 L
Annual Water Requirement:	= 1,000 x 60 L x 365
	= 21,900,000 L
	= 21.9 ML

This is based on the feedlot operating at 100% capacity throughout the year.

The property has an area of approximately 179 ha, which includes a harvestable rights entitlement of 12.53 ML. A copy of the harvestable rights calculation is presented in Appendix 2. The Proponent intends to construct dams on site to capture surface runoff under harvestable rights. No additional approvals are required under the *Water Management Act* 2000 for farm dam storages constructed under harvestable rights.

The Proponent also has access to water sourced from the Upper Gwydir Alluvial Groundwater Source under an agreement with neighbouring properties, who share access to a 250 ML bore licence (licence number 90BL130269). Water sourced from this licence will make up the remainder of the water supply to the feedlot. Groundwater is considered a reliable water source, ensuring cattle will maintain adequate water supply in the event of a drought.

Water will be pumped from surface water dams and groundwater bore to water storage tanks located on a hill above the proposed feedlot. This tank will be gravity fed to the water supply system for the individual pens.

Water used on site will be maintained at a suitable quality for the feedlot as per the Livestock Drinking Water Guidelines (Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Volume 3, 2000). The maximum total dissolved solids concentration for Feedlot cattle is 4,000 mg/L. This is equivalent to an electrical conductivity of 6.25 dS/m. Water available onsite has a salinity level of less than 1 dS/m.

Waste Disposal

Manure and effluent will be treated as valuable by-products from the operation of the feedlot, not waste products. The nutrient content of these by-products will be accounted for in Clevecourt's cropping enterprise.

The by-products will substitute a percentage of the synthetic fertilisers that would otherwise be trucked in for use in the broad acre cropping enterprise on Clevecourt. Clevecourt will apply the by-products to existing cultivated areas to grow crops.

Figure 2 shows the proposed by-product reuse areas on Clevecourt. This will be applied prior to cropping events or in the case of a permanent pasture, applied once per year.

Methods of Manure Reuse

Manure will be transported directly from the Feedlot upon pen cleaning to production fields for use as fertiliser. Manure will also be transported to adjacent properties managed by the Proponent, such as Clevecourt South, Murrawombe and Tarelah North. The manure will be spread using a tractor drawn applicator. Some manure may be transported off-site to be traded or sold to neighbouring properties for use as fertiliser.

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In future, the Proponent may choose to construct a manure composting program on-site at the Feedlot, once such an option becomes economically viable. Any composting infrastructure will be installed in accordance with the National Guidelines for Beef Cattle Feedlots in Australia.

Quantity of Manure Produced Per Year

The following calculations approximate the annual mass of manure (dry and wet weight) that would be generated at the feedlot over the course of one year when operating at maximum capacity.

The total number of cattle:	= 1,000 head
Solid waste production per head/year:	= 1 tonne
Manure production:	= 1,000 x 1 t/ yr
	= 1,000 t/ yr

Nutrient Budget for Manure Reuse

This Section provides a nutrient balance to determine the minimum land area required to sustainably reuse the nutrients in the manure, taking into account the nutrient demand of the crops to be grown on the effluent reuse area.

The Proponent currently produces hay on site at Clevecourt, using a range of crops including wheat. Wheat production at Clevecourt averages an overall productivity of 4t/ha dry matter yield.

Reuter & Robinson (1997) outline crop removal rates for Australian conditions. The following summarises the potential dry matter removal rates for wheat grown on Clevecourt.

- Wheat grain: 19 kg/ha/yr of N 4 kg/ha/yr of P 5 kg/ha/yr of K

The National Guidelines for Beef Cattle Feedlots in Australia includes the nutrient concentrations of manure for the major nutrients:

- Nitrogen (N) 2%
- Phosphorus (P) 0.8%
- Potassium (K) 2%

Based on the above concentrations the following nutrient mass in manure for 1,000 head of cattle were calculated:

- Nitrogen = 0.02 x 1,000 t
  = 20 tonnes of N
- Phosphorus = 0.008 x 1,000 t
  =8 tonnes of P
- Potassium = 0.02 x 1,000 t
  = 20 tonnes of K

Clevecourt proposes to spread manure to existing cultivated areas in the summer and early autumn months prior to planting winter cereals. Table 3 shows a nutrient balance that has been calculated for the manure and compost reuse areas assuming potential crop nutrient removal from winter wheat harvested as grain.

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Table 3: Manure Application for Wheat Production Nutrient Balance

	N	P	K
Nutrients in manure prior to reuse (kg)	20,000	8,000	20,000
Nutrients available for crop uptake after 20% N volatilisation during spreading and from soil surface (kg)	16,000	8,000	20,000
Nutrients removed in wheat grain 4t of DM/ha (kg of DM/ha)	76	16	20
Minimum area required to utilise all the nutrients available (ha)	210.5	500	1000

43 hectares are available on site for manure reuse (Figure 2). The available land area on Clevecourt is insufficient to sustainably reuse all manure produced from the feedlot. Excess manure produced will be transported off site to be used on neighbouring properties at sustainable rates.

Effluent

Effluent will be captured within the evaporation holding pond on site, and may be disposed of either by evaporation or by on-site irrigation of crops on Clevecourt.

The concentration of salts in stockpiled manure and effluent is heavily influenced by the amount of salt in the diet, salts in the water supply (for cattle drinking and feed preparation) and the amount of evaporation from the effluent holding pond.

Soils on the disposal area will require annual soil tests to be taken prior to solids application. The soil tests will provide an assessment of nutrient levels for long-term management of soil properties.

Carcasses

Low cattle mortality rates are expected to occur at Clevecourt as the production of Wagyu cattle is a high value enterprise involving extensive veterinary observation and checking of cattle. Expected mortality rates will extremely minor and generally occur as a result of cattle being put-down as a result of an injury. Such cattle would be butchered and used on-farm. If a mortality rate of 0.1% is applied the Feedlot, out of a maximum turnover of 1,043 head per year, there will be a requirement to dispose of approximately 1.04 carcasses per year. This is considered a small source of waste with minimal potential to result in environmental harm. Carcasses will be disposed of appropriately through means including but not limited to burial in soil with clay subsoil, to minimise the risk of spread of disease from the decomposing carcass and leaching of nutrients from the carcass into groundwater.

In the event of a mass death, a pit will be constructed within the effluent disposal area. Figure 2 presents an outline of the manure disposal field. In the event of a mass death, the site of the pit would be GPS located and mapped for farm records. The pit will be sited so that it is constructed with a 1m depth of clay below and around the disposal area. Management would assess the cause of the deaths in conjunction with the Vet engaged to assist the Feedlot. If concern is raised as a result the cause of the deaths, LLS and other relevant bodies will be notified.

Feed Storage and Usage

Stock feed will comprise of a mixture of hay (approximately 300-500 tonne/year), grain (approximately 4,700 tonnes/year) and other feed supplements as required. Hay will be sourced from on-site

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production, whilst grain and other feed supplements will be imported. Feed preparation will occur on site using a grinding mill and mobile feed mixer.

For design purposes, the NSW Department of Primary Industries recommends feedlot cattle consume an average of 3% of their liveweight per day. Assuming an average of 450 kg per head, each animal would consume approximately 14 kg of ration each day. At maximum capacity, the feedlot would need to secure a supply of approximately 14 tonne of feed/day, or approximately 5,000 tonne/year. It is unlikely that the feedlot would be operating at maximum capacity for the duration of a year.

The feedlot would need to store approximately 3-weeks of ration to ensure feed is always available. The on-farm storage would therefore be in the order of 290 t of grain and hay for when the feedlot is operating at maximum capacity. This will be stored in portable silos and existing sheds.

The Wagyu cattle are fed a varied ration to enhance marbling of the meat. The feedlot ration will vary between pens as the rations will be different from the new cattle to cattle that have been on-feed for extended periods. Feed ration will be monitored through marbling results and regular assessment of the cattle for weight and proportioning. Feed will be delivered to the cattle in feed troughs along the upslope edge of the pens and self-feeders will be placed in each pen for hay or other mixed rations.

Animal welfare guidelines recommend a requirement for between 150 mm and 600 mm of bunk width per head. At maximum capacity, this is equivalent to a minimum of 150m of troughs. The width requirement is similar for self-feeders, however as the feed is constantly available, the minimum width is not as significant as the cattle would have access to feed at all times. An example of a self-feeder is presented in Figure 5.

Figure 5: Typical Self-Feeder

Employment

Throughout construction, the proposed development will provide work for two fencing contractors for pen construction, and one earthworks contractor for pond construction. Upon completion of construction (capacity of 1,000 head), the operation and management of the completed feedlot will

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require an equivalent workforce of 1 permanent staff member. The main tasks likely to occur during these times include feed preparation and distribution, cattle handling, induction and dispatch, pen cleaning and manure management.

Hours of Operation

The standard hours of operation for the feedlot will be 07:00 - 17:00, 7 days a week. Some heavy vehicle movements are likely to occur outside normal operating hours (e.g. in summer, it is desirable to transport cattle either at night or in the early hours of the morning for animal welfare reasons). The feedlot will therefore require the flexibility to allow strategic heavy vehicle movements outside of the normal operating hours. This would be considered similar to existing stock operations on Clevecourt. Grain deliveries and feed movements onsite would generally be restricted between the hours of 7 am and 5 pm, Monday to Friday with only minor exceptions for weekends during local harvest times.

Construction activities will be limited to 07:00 - 17:00 Monday to Friday, and 07:00 - 13:00 on Saturday. There will be no construction activities on Sundays or public holidays.

Traffic and Access

The traffic generated by the Feedlot will include heavy-vehicle traffic carrying cattle and stockfeed in, and cattle out, and light vehicles transporting employees, visitors and service personnel.

Table 4 outlines the anticipated numbers of heavy-vehicle movements that will be generated by the proposed feedlot operation, in the event that the feedlot operates at maximum capacity throughout the year. It should be noted that this is considered unlikely; these calculations therefore present the 'worst case' traffic generation scenario for the feedlot. Actual traffic generation is anticipated to be less than the figures provided in Table 4.

Additional assumptions made include the following:

- A movement is considered one-way (i.e. A truck entering and leaving is considered 2 movements);
- Feed ration consumption will be approximately 14 kg per head per day;
- Approximately 4,700 tonnes of grain and other feed supplements will be delivered per year;
- B-Double carrying capacity of 38 tonnes per unit;
- Cattle will be transported in dual deck trailers;
- Cattle entering the Feedlot will weigh approximately 350 kg, therefore a B-double will transport approximately 90 head;
- Cattle exiting the Feedlot for processing will weigh approximately 700 kg, therefore a B-double will transport approximately 50 head;
- Manure will be collected at the same time as feed is delivered, therefore the vehicle movements associated with this activity are not considered separately; and
- Some seasonal variations will occur.

Table 4: Predicted Heavy Vehicle Traffic Numbers – Maximum Occupancy

Predicted Heavy Vehicle Traffic Numbers (100% Occupancy)		
Head Processed	1,043.5	Annually
Cattle Truck Movements	24.8	Annually
	0.5	Weekly
	0.1	Daily
Feed Truck Movements	247.9	Annually
	4.8	Weekly
	0.7	Daily

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Predicted Heavy Vehicle Traffic Numbers (100% Occupancy)		
Total Truck Movements	272.7	Annually
	5.2	Weekly
	0.7	Daily
Total Trucks	**136.3**	**Annually**
	2.6	**Weekly**
	0.4	**Daily**

If the proposed Feedlot is operated at maximum capacity (as shown in Table 4), traffic generation would result in an additional 5 heavy vehicle movements (2.6 trucks) per week. Therefore, at full capacity the total number of trucks is equivalent to less than 1 every two days. The potential traffic generation capacity of the proposed development is therefore considered minimal.

During grain harvest periods, the Feedlot would generally receive additional grain which would be stored in grain silos. This would result in a short-term traffic peak of grain trucks. These truck trips would involve existing truck movements on the Shire roads which would be diverted to the Feedlot site.

It is proposed that traffic will enter/exit Clevecourt via Cooyong Road, off Gineroi Road. The region is classified as an Approved Area with Travel Conditions for B-Doubles, as identified in Restricted Access Vehicles (RAV) mapping provided by the NSW Roads and Maritime Services (RMS). Heavy vehicle traffic on Gineroi road is generally seasonal. Peak truck traffic periods are associated with grain harvest periods. Throughout the remainder of the year, truck traffic generally consists of stock haulage trucks.

Sight distances from the feedlot entrance onto Cooyong Road, and Cooyong Road-Gineroi Road intersection, all exceed 200m in both directions. These sight distances are considered sufficient.

Lighting

Any outdoor lighting installed will comply with Australian Standard AS1158.1.1 (1997 – Road Lighting) and AS4282 (1997 – Control of the Obtrusive Effects of Outdoor Lighting). The isolation of the site from neighbouring residents is considered sufficient to avoid any offsite impacts.

Fire Management Strategy

An Asset Protection Zone (APZ) will be maintained around the Feedlot complex for a minimum of 35m. There will be no flammable chemicals (fuel) stored near the Feedlot complex.

There is an existing shed located to the south of the proposed Feedlot complex. Fuel and chemicals will be stored in this area. The fuel is stored in appropriate facilities with approved separation buffers and fire control facilities (fire extinguishers). All chemicals (including veterinary chemicals) used at the facility are stored appropriately in compliant containment facilities. Chemicals with specific storage requirements (such as vaccines and other veterinary chemicals), are stored in accordance with label specifications. The majority of these chemicals are considered non-flammable.

The Rural Fire Service will be contacted in the event of a fire. Staff will fight the fire, if it is reasonably safe to do so. If initial firefighting attempts are unsuccessful, or too dangerous, all staff would be evacuated to a safe area and the cattle let out of the pens into the surrounding paddocks.

Vermin and Disease Control Measures

Fly, mice and rat populations will be managed primarily through the Feedlot management schedule. (i.e. minimise feed wastage and spillage to reduce the likelihood of attracting vermin). If the vermin population reaches a nuisance level the Feedlot will implement a baiting program. The program would

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include placement of fly baits to manage bush flies and other baits around the milling area to manage outbreaks of mice.

Other disease control measures, will be managed through the implementation of appropriate vaccination programs, workplace health and safety regulations and compliance with the National Feedlot Accreditation Scheme.

Emergency Animal Disease and Mass Mortality Contingency Plans

In the event of an Emergency Animal Disease (EAD) outbreak the Australian Veterinary Emergency Plan (AUSVETPLAN) Enterprise for Beef Cattle Feedlots will be invoked. The Feedlot will be required to:

- Quarantine the premises and/or control movements;
- Destroy and dispose of infected and exposed susceptible animals;
- Decontaminate infected premises;
- Conduct surveillance of susceptible animals; and
- Restrict certain activities.

If the EAD is deemed to be low risk, it may be mitigated through:

- Vaccination;
- Vector or wild animal control; and
- Treatment of affected animals.

Personnel at the Feedlot will call the NSW DPI 24-hour Emergency Animal Disease Hotline on 1800 675 888 to notify the authorities of any notifiable diseases.

In the event of a mass death, the AUSVETPLAN Operational Manual – Disposal will be invoked. Feedlot staff would excavate an appropriate pit according to the scale of the deaths. The cattle would be buried and covered by 1m of clay once an investigation is completed to determine the cause of the deaths. Management must advise the relevant authorities of a mass death event.

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4 Statutory Matters

4.1 Permissibility

The development proposal is considered Local Development under Part 4 of the Environmental Planning and Assessment Act, 1979. The proposal therefore requires development consent from the Gwydir Shire Council as the determining authority.

The development is not considered Designated Development as the proposal does not exceed the maximum capacity threshold of 1,000 head. Cattle feedlots that do not exceed 1,000 head of cattle do not require an Environment Protection Licence under the POEO Act 1997. The proposal therefore does not require any additional approvals or licences.

The proposed development is considered compatible with the objectives of the site's RU1 – Primary Production zoning, and permission, with development consent, under the provisions of the Gwydir Local Environmental Plan 2013 (LEP). Concurrence is not required from any other authority before the development may lawfully be carried out.

Do any policy statements from Federal or State Governments have relevance?
The Federal and State Government policies relevant to this proposal are discussed in detail within this report. Main policies applicable to this application are State Environmental Planning Policies (SEPPs).

Are there any relevant planning studies or strategies?
No.

Is there any management plan, planning guidelines or advisory document that is relevant?
No.

4.2 Local Environmental Plan

The Gwydir Shire is a local government area in the northern region of New South Wales. The Gwydir Local Environmental Plan 2013 (LEP) is the current local government planning policy for the Warrumbungle Shire. The framework of the LEP is derived from the Environmental Planning and Assessment Act 1979. Clevecourt is located within Zone RU1 – Primary Production of the Gwydir Shire.

4.2.1 Land Use Definition

The proposed "feedlot", as intended for this development, is defined in the LEP as a "*confined or restricted area that is operated on a commercial basis to rear and fatten cattle, fed (wholly or substantially) on prepared and manufactured feed, for the purpose of meat production or fibre products, but does not include a poultry farm, dairy or piggery*".

This type of development is permissible with consent from council within land zoned as RU1: Primary Production. Use of land for a feedlot according to the LEP is included as "intensive livestock agriculture". This type of agriculture is defined as the *"keeping or breeding, for commercial purposes, of cattle, poultry, pigs, goats, horses or other livestock that are fed wholly or substantially on externally-sourced feed*". Furthermore, the land use as intended for the proposed Feedlot is compatible with existing land uses in the surrounding area.

Comment

The intended land use, as defined in the LEP as intensive livestock agriculture, is a permissible land use, with development consent, within the RU1 – Primary Production zone.

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4.2.2 Zone RU1 – Primary Production

The LEP states that the objectives of the zone are:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

Comment

The development of a cattle feedlot, as intensive livestock agriculture, is permissible with consent from council within the Zone RU1. The proposal is for an agricultural land use that will sustain efficient and effective agricultural production potential. The development will encourage diversity in primary industry operations at the property without restricting the use of surrounding land for other agricultural purposes. The protection of natural resources and places has been fully taken into consideration in the planning for this development. The utilisation of the land for agricultural purposes will minimise fragmentation and alienation. The proposal is not considered to conflict with the adjoining land uses. The proposal is likely to enhance the potential of surrounding grazing enterprises.

The proposed development is therefore considered to be both compatible and consistent with the surrounding land uses and would be considered to satisfactorily meet the objectives of the RU1 Primary Production Zone.

4.2.3 Preservation of Trees or Vegetation

Section 5.9 of the LEP deals with the preservation of trees or vegetation. The objective of the clause is to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation.

The clause requires that a person must not ringbark, cut down, top, lop, remove, injure or wilfully destroy a tree or other vegetation without the authority conferred by a development consent or a permit granted by the Council.

The clause does not apply to:

- A tree or other vegetation that the Council is satisfied is dying or dead and is not required as the habitat of native fauna.
- A tree or other vegetation that the Council is satisfied is a risk to human life or property.
- Clearing of vegetation permitted by the Native Vegetation Act 2003
- Plants declared to be noxious weeds under the Noxious Weeds Act 1993

Comment

The proposed development will not involve the clearing of any trees. The feedlot is to be built over an existing cattle pen area which has no native vegetation.

4.2.4 Heritage Conservation

Section 5.10 of the LEP deals with heritage items and heritage conservation areas. These are listed in Schedule 5 of the LEP. The objectives of this clause are as follows:

a) To conserve the environmental heritage of Gwydir,
b) To conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,

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c) To conserve archaeological sites,
d) To conserve Aboriginal objects and Aboriginal places of heritage significance.

Comment

The proposal is not in the vicinity of any heritage items in accordance with Council's Local Environmental Plan or under State or Federal legislation.

4.2.5 Bushfire Hazard Reduction

Section 5.11 of the LEP deals with land that is considered bushfire prone and may require bushfire hazard reduction work. Bushfire hazard reduction work authorised by the *Rural Fires Act 1997* may be carried out on any land without development consent. Bushfire hazard reduction work includes the following:

a) the establishment or maintenance of firebreak on land, and
b) the controlled application of appropriate fire regimes or other means for the reduction or modification of available fuels within a predetermined area to mitigate against the spread of a bushfire,

But does not include construction of a track, trail or road.

Comment

The development does not involve the erection of any buildings or dwellings. The proposed development will be primarily located on an existing cleared area of land. The majority of the area will be bare of vegetation and other readily flammable materials. Some reduction work will be undertaken to minimise the bushfire hazard to the development. A firebreak will be maintained around the development footprint. All weather roads will provide access for fire-fighting and the firebreak will provide access around the feedlot. Water from on-site storages will provide an adequate supply for fire-fighting purposes.

4.2.6 Earthworks

Section 6.1 of the LEP deals with development requiring earthworks. The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighboring uses, cultural or heritage items or features of the surrounding land. Development consent is required for earthworks unless:

a) the earthworks are exempt development under this Plan or another applicable environmental planning instrument, or
b) the earthworks are ancillary to development that is permitted without consent under this Plan or to development for which development consent has been given.

Before granting development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters:

a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,
b) the effect of the development on the likely future use or redevelopment of the land,
c) the quality of the fill or the soil to be excavated, or both,
d) the effect of the development on the existing and likely amenity of adjoining properties,
e) the source of any fill material and the destination of any excavated material,
f) the likelihood of disturbing relics,

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g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,
h) the proximity to and the potential for adverse impacts on any heritage item, archaeological site or heritage conservation area,
i) the effect of the development on native fauna and flora, including threatened species, populations or ecological communities and their habitats,
j) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

Comment

Ancillary earthworks will be required for construction of the proposed feedlot to achieve appropriate design standards. As the feedlot will be located on an existing cleared area of land, of which the majority of the area will be bare of vegetation, any earthworks will not have a detrimental impact on environmental functions and processes, neighboring uses, cultural or heritage items or features of the surrounding land.

4.3 Section 94 Development Contribution Plan

The Gwydir Development Contributions Plan No. 1 – Traffic Generating Development 2011 is relevant to this proposal. This plan was developed to ensure the operation of traffic generating development does not adversely impact on local roads and allow Council to assess the demand for road maintenance, repair and reconstruction arising from traffic generating development. Section 94 of the Environmental Planning and Assessment Act, 1979 enables Council to levy contributions from developers for the provision of public amenities and services required as a consequence of development.

Traffic generating development is considered as those developments that:

- Require the use of road haulage vehicles to support the operation of the enterprise;
- Generate additional traffic movements above levels of traditional agricultural activities;
- Developments which include the following enterprises:
  - Wool scouring plants
  - Abattoirs
  - Rendering Plants
  - Saleyards
  - Wood or timber milling or processing works including wood preservation works
  - Wineries or associated works
  - Warehouses
  - Light industry
  - Intensive Agricultural Enterprises
    - Feedlots
    - Poultry farms
    - Piggeries
    - Dairies
  - Composting Works
  - Transport Terminals
  - Grain Storage Complex
  - Feedmills
  - Extractive Industries
  - Mine

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- Rural Industry

The proposed development is for a construction of a Feedlot. This is considered a traffic generating development under the Gwydir Development Contributions Plan. The traffic generation potential of the proposed development has been calculated and is presented in Section 3.2.4. These estimations should be utilised when calculating the appropriate development contribution fee.

Under the provisions of the Environmental Planning and Assessment Act 1979, Council may include a condition of consent that details the following:

- Require land to be dedicated free of cost;
- Require money to be contributed for works and facilities to be provided in the future;
- Require money to be contributed towards the cost of works in kind, in satisfaction of Section 94 requirements; or
- Require or accept a combination of any of the above.

In applying Section 94 contributions the Council must be fair and reasonable, and as such the contributions levied on development with the Gwydir Shire are limited to essential or base-line works.

4.4 State Legislation

4.4.1 National Parks and Wildlife Act 1974

The proposal includes minor clearing of pasture, including native grass species, improved pasture species and invasive species, within an area previously cleared of trees and utilised for agricultural purposes. The clearing will be kept to the minimum extent necessary to allow for the construction of the feedlot.

An Aboriginal Heritage search was undertaken on relevant databases and supported by a walk-over of the subject site in accordance with appropriate Due diligence assessment guidelines. The results of the search and survey concluded that there are no visible or recorded sites of archeological significance within the development proposal. The development work will include excavations and therefore appropriate actions will be enforced if objects of Indigenous or European heritage are encountered during this work.

4.4.2 The Heritage Act 1977

An Aboriginal Heritage search was undertaken on relevant databases and supported by a walk-over of the subject site. The results of the search and survey concluded that there are no visible or recorded sites of archeological significance within the development proposal. There are no known non-indigenous heritage items identified within or near the development site. The development work will include excavations and therefore appropriate actions will be enforced if objects of Indigenous or European heritage are encountered during this work.

4.4.3 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 provides the framework for NSW Planning Legislation. Under this Act, local councils prepare Local Environmental Plans (LEPs) that specify planning controls for specific parcels of land. The Act also provides for State Environmental Planning Policies (SEPPs). The applicable SEPPs have been discussed in detail within this report. This SoEE has been prepared in accordance with the requirements of this Act. It provides an environmental impact assessment and details of how the feedlot will be developed and operated to protect the environment, the community and provide for ecologically sustainable development.

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4.4.4 Threatened Species Conservation Act 1995

This report has been prepared as per the requirements of this Act. An Assessment of Significance for threatened species has been included as Appendix 3. The Assessment of Significance concluded the proposed development will not have significant impact on NSW and / or Commonwealth listed threatened species, populations or ecological communities if the Feedlot complex and associated systems are constructed and managed as detailed in this report.

4.4.5 Rural Fires Act 1997

The Rural Fires Act 1997 provides the framework for the prevention and management of bush fires on rural land within NSW. Under Section 63 of the Act: "(2) It is the duty of the owner or occupier of land to take the notified steps (if any) and any other practicable steps to prevent the occurrence of bush fires on, and to minimise the danger of the spread of a bush fire on or from, that land."

The subject site has been assessed by the Rural Fire Service's Bushfire Prone Land Mapping Tool and was not found to be bush fire prone. The site is located within a region characterised by scattered cropland, pastures and stands of native vegetation. The proponent will take practicable steps to reduce the risk of fire on site.

The proposed design incorporates a 35m buffer zone around the development footprint. This firebreak will be free of vegetation and other readily flammable materials. All weather roads will provide access for fire-fighting and the firebreak will provide access around the Feedlot. Water from on-site storages will provide an adequate supply for fire-fighting purposes.

The development does not involve the erection of any buildings or dwellings as classified under the Building Code of Australia. The feedlot will be located on a cleared area of land with construction work including fencing, excavation of a dam and the provision of feeders and water tanks.

4.4.6 Protection of the Environment Operations Act 1997

Under the Protection of the Environment Operations Act, it is an offence to cause water, air, noise or land pollution. The proposal is below the applicable threshold "capacity to accommodate more than 1,000 head of cattle at any time" included in Clause 22 Schedule 1. Therefore, the proposed development does not require a licence under the POEA Act. However, specific recommendations for environmental protection are included within this report.

4.4.7 Water Management Act 2000

The objects of the Water Management Act 2000 are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations.

The objects of this Act were considered throughout the planning and design phases of this development. Feedlots require a secure and reliable water supply to operate. The Proponent intends to utilise harvestable rights entitlements and existing bore water entitlements to obtain the water supply required for the proposed development. The water storages to be built as part of the Feedlot are considered permissible under the Act as they will be capturing effluent runoff.

4.4.8 Native Vegetation Act 2003

This report has been prepared as per the requirements of this Act. The proposed development will involve an area of land that is predominantly cleared and currently used for agricultural purposes. The construction of the effluent ponds may require some clearing of native groundcover and grasses, which will be kept to the minimal extent possible.

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4.5 State Environmental Planning Policies and Development Codes

The following table presents a summary and comment on State Environmental Planning Policies and development code relevance to the proposed development.

Table 5: State Environmental Planning Policies and Development Codes

SEPP No. & Codes	Title	Relevance
No. 1	Development Standards	Not Relevant
No. 14	Coastal Wetlands	Not Relevant
No. 15	Rural Land Sharing Communities	Not Relevant
No. 19	Bushland in Urban Areas	Not Relevant
No. 21	Caravan Parks	Not Relevant
No. 26	Littoral Rainforests	Not Relevant
No. 29	Western Sydney Recreation Area	Not Relevant
No. 30	Intensive Agriculture	Refer to following section for Intensive Agriculture
No. 32	Urban Consolidation (Redevelopment of Urban Land)	Not Relevant
No. 33	Hazardous & Offensive Development	Refer to following section for Hazardous & Offensive Development
No. 36	Manufactured Home Estates	Not Relevant
No. 39	Spit Island Bird Habitat	Not Relevant
No. 44	Koala Habitat Protection	Not Relevant – Gwydir LGA not covered by SEPP 44
No. 47	Moore Park Showground	Not Relevant
No. 50	Canal Estate Development	Not Relevant
No. 52	Farm Dams and Other Works in Land and Water Management Plan Areas	Not Relevant
No. 55	Remediation of Land	Refer following section for Remediation of Land Review
No. 59	Central Western Sydney Regional Open Space and Residential	Not Relevant
No. 62	Sustainable Aquaculture	Not Relevant
No. 64	Advertising and Signage	Not Relevant
No. 65	Design & Quality Residential Flat Development	Not Relevant
No. 70	Affordable Housing (Revised Schemes)	Not Relevant
No. 71	Coastal Protection	Not Relevant
	Affordable Rental Housing 2009	Not Relevant
	Building Sustainability Index: BASIX 2004	Not Relevant
	Exempt and Complying Development Codes 2008	Not Relevant
	Housing for Seniors or People with a Disability 2004	Not Relevant
	Infrastructure 2007	Refer following section for Infrastructure Review
	Kosciuszko National Park—Alpine Resorts 2007	Not Relevant
	Kurnell Peninsula 1989	Not Relevant
	Major Development 2005	Not Relevant
	Mining, Petroleum Production and Extractive Industries 2007	Not Relevant
	Miscellaneous Consent Provisions 2007	Not Relevant
	Penrith Lakes Scheme 1989	Not Relevant
	Rural Lands 2008	Refer following section for Rural Land Review
	State and Regional Development 2011	Not Relevant
	Sydney Drinking Water Catchment 2011	Not Relevant
	Sydney Region Growth Centres 2006	Not Relevant
	Three Ports 2013	Not Relevant

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SEPP No. & Codes	Title	Relevance
	Urban Renewal 2010	Not Relevant
	Western Sydney Employment Area 2009	Not Relevant
	Western Sydney Parklands 2009	Not Relevant

4.5.1 State Environmental Planning Policy No. 30 – Intensive Agriculture

The proposed development meets the definition of intensive agriculture, as a cattle Feedlot with capacity to accommodate greater than 50 head of cattle. This report has addressed the policy aims of SEPP 30. In particular, the report assesses the potential for odour, water pollution and soil degradation; and measures to mitigate any potential adverse impacts. The site is considered suitable for the proposed development and is adequately separated and shielded from neighbouring residents. The Proponent intends to seek accreditation under the National Feedlot Accreditation Scheme which requires the implementation of appropriate mitigation measures and best management practices.

4.5.2 State Environmental Planning Policy No. 33 – Hazardous and Offensive Developments

SEPP No 33 applies to proposals falling under the definition of *'potentially hazardous industry'* or *'potentially offensive industry'*. Under SEPP No 33 the permissibility of industrial proposals is linked to safety and pollution control performance. The SEPP aims to ensure the merit of proposals are properly assessed before being determined. It aims to ensure that developments can only proceed if they are suitably sited and can demonstrate that they will be built and operated with an adequate level of safety.

This SoEE demonstrates that the proposed Feedlot is suitably sited. The main waste products from the Feedlot are manure, effluent and compost. However, these can be sustainably reused as a valuable alternative to inorganic fertilizers. The Feedlot will not produce hazardous waste products. While all Feedlots produce some odour, this will be minimised through good design and management. Additional protection is provided through separation distances between the site, the closest residences and other areas with sensitive land uses. Hence, nuisance odours are not expected at nearby residences or other surrounding areas with sensitive land uses.

4.5.3 State Environmental Planning Policy No. 55 (SEPP 55) – Remediation of Land

The proposed development site is currently utilised for grazing with a history of agricultural use. It is unlikely historical grazing of the site would have resulted in contamination. During an inspection of the property no evidence of visible contamination from current or post practices was identified. Further, the subject land is not identified as being potentially contaminated and is therefore considered to be suitable for the intended use. It was accordingly determined that no further investigation under SEPP 55 was required.

4.5.4 State Environmental Planning Policy (Infrastructure) 2007

This SoEE has addressed the main policy aim to facilitate the effective delivery of infrastructure across the state and does not require any additional provision of services. The proposed feedlot will use existing state roads and power infrastructure. The homestead is connected to mains power, whilst the feedmill is to run using an on-site generator. In the event of a power failure, there are portable generators onsite.

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A water storage tank is to be located adjacent to the proposed feedlot site. Water will be pumped to this tank and then distributed, using an existing electric pump, to the water supply system servicing the pens.

The expected vehicle movements and types of vehicles pertaining to the operation of the feedlot are detailed in this report.

The proposed development is to be accessible via Cooyong Road, off Gineroi Road. Site access is considered to be suitable for the purposes of the development and has been designed to accommodate heavy vehicles. Sight distances from the feedlot entrance onto Cooyong Road, and Cooyong Road-Gineroi Road intersection, all exceed 200m in both directions. These sight distances are considered to be sufficient.

The proposal is for a small-scale cattle feedlot and the proposed volume and frequency of traffic generated by the development is considered insignificant.

4.5.5 State Environmental Planning Policy (Rural Lands) 2008

The Shire supports the use of land for cattle Feedlots within zone RU1 Primary Production under the Gwydir Local Environmental Plan, 2013. This development does not include the erection of any buildings or dwellings, or subdivision of land. The proposed development is for a small-scale cattle feedlot and as such is considered unlikely to have a significant impact on existing or future land use of adjoining land.

4.6 Federal Legislation

4.6.1 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation (EPBC) Act is the central piece of environmental legislation. The EPBC Act protects the environment, particularly matters of National Environmental Significance (Protected Matters). The Act streamlines the national environmental assessment and approvals process, protects Australian biodiversity and integrates management of important natural and cultural places. This report includes an assessment of measures designed to protect the environment, promote the conservation and ecologically sustainable use of natural resources, promote biodiversity conservation and provide for the protection and conservation of heritage. An Assessment of Significance was undertaken and identified that no Commonwealth land or Matters of National Environmental Significance (MNES) are likely to be impacted by the proposal. It was concluded that an approval from the Commonwealth Minister is not required. A copy of this assessment has been included within the Flora and Fauna Assessment (Appendix 4).

4.7 Development Application and Licence Requirements

4.7.1 Development Assessment

Under the Environmental Planning and Assessment Act 1979, local Councils / Shires prepare Local Environmental Plans (LEPs) that specify planning controls for specific parcels of land. The subject land is zoned RU1: Primary Production. The operation of a cattle Feedlot in RU1 represents a permissible land use of Intensive Livestock Agriculture. Consent from the Gwydir Shire Council is required to develop the proposed 1,000-head cattle feedlot.

4.7.2 Licences Required

The proposed development is for a 1,000-head cattle feedlot. Once development approval is given by the consent authority, Gwydir Shire Council, no other licences are required. However, the Proponent intends to seek accreditation with the National Feedlot Accreditation Scheme. This can be achieved once development approval is issued. The development will remain below the threshold which would trigger a requirement for a Licence under the POEO Act for an intensive animal facility.

5 Description of Site

5.1 Meteorological and Climatic Data

Clevecourt is situated in northern NSW at an elevation of approximately 340m AHD. The climate is best described as temperate. Rainfall and temperature data is based on Bureau of Meteorology (BOM) information for Bingara Post Office (Site: 54004), which is the closest recording station to Clevecourt that could provide adequate datasets. Table 6 provides a summary of the average monthly and annual climate conditions.

Rainfall in the area is variable with monthly averages ranging from approximately 50mm in winter to 90 mm in summer. The wettest months of the year are November to February. Temperature also varies with averages of about 16°C to 34°C in summer and about 2°C to 18°C in winter.

Table 6: Climate statistics for Bingara Post Office

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean max temp (°C)	33.6	32.8	30.8	26.7	22.1	18.1	17.7	19.1	23.2	26.9	30.3	32.9	-
Mean min temp (°C)	18.1	17.3	14.8	10.1	6.2	3.7	2.2	3.4	6.0	10.2	13.6	16.5	-
Mean rainfall (mm)	92.9	87.7	61.6	41.2	48.8	50.3	50.9	43.9	46.3	65.2	71.6	80.9	741.3

Based on an annual average evaporation of between 1800-2000mm (see Figure 6) and an annual average rainfall of 741.3mm, the site generally has a moisture deficit on an annualised basis of >1000mm. This is equivalent to 10ML/ha/year.

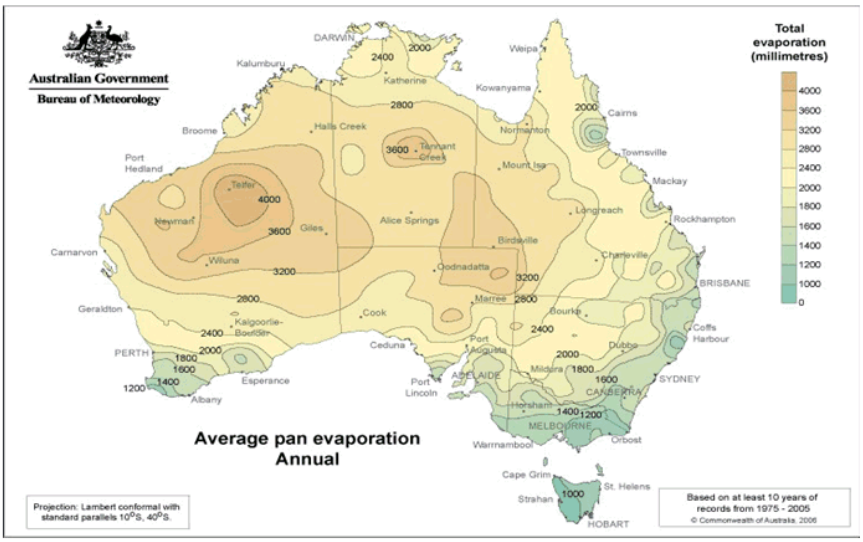

Figure 6: Average Annual Pan Evaporation across Australia

Wind data was sourced from BOM information available for Inverell (Site:056017). The average wind speed and direction for the area varies according to the season and time of day. Annual average wind data is depicted in Figure 7.

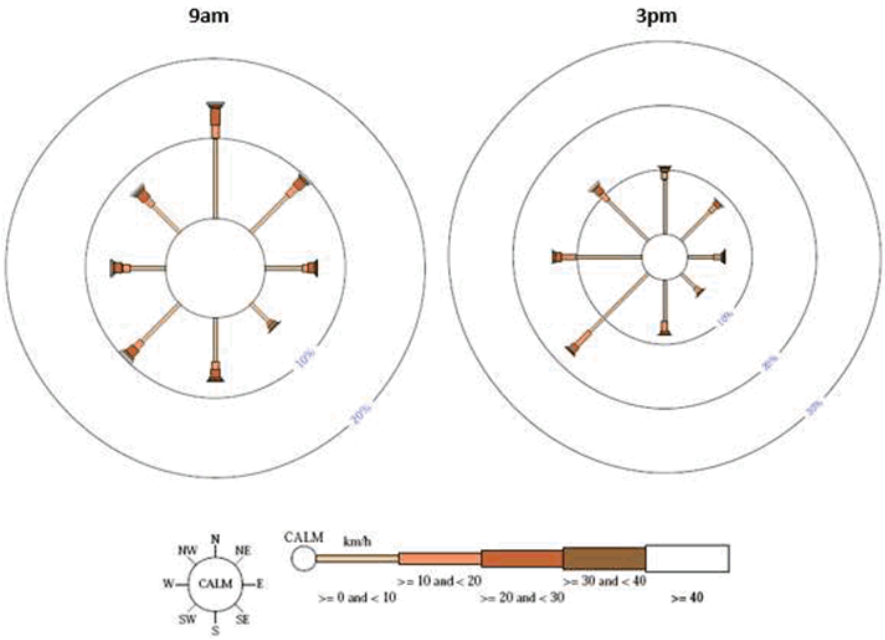

Figure 7: Wind Roses for Inverell. Source: BoM Data 1874-1997

Design Storm IFD Data

The Bureau of Meteorology website provided Rainfall Intensity-Frequency-Duration (IFD) data for storm events at the proposed development site. A 1 in 20-year storm event with a 24-hour duration produces 137mm of rainfall in total. A 1 in 100-year storm event with a 1-hour storm duration produces 70mm of rainfall.

5.2 Geology and Topography

Bingara is located on the western slopes of the Great Dividing Range within the New England Fold Belt. The site is located at approximately 320m ASL, on the mid-slope of a hill of average 2.2% gradient. The site is not considered to be within a flood zone; the Gwydir River, located 2.8km to the south-east of the development site, has an elevation of located just under 280m ASL (approximately 40m below the subject site).

The region has been mapped by as part of the NSW Geological Survey, with results made available by the NSW Department of Planning and Environment: Resources & Energy. Survey results (shown in Figure 8) indicate that the area surrounding the subject site has high geological diversity, whilst the site itself is likely to be located atop of Carboniferous sedimentary rocks.

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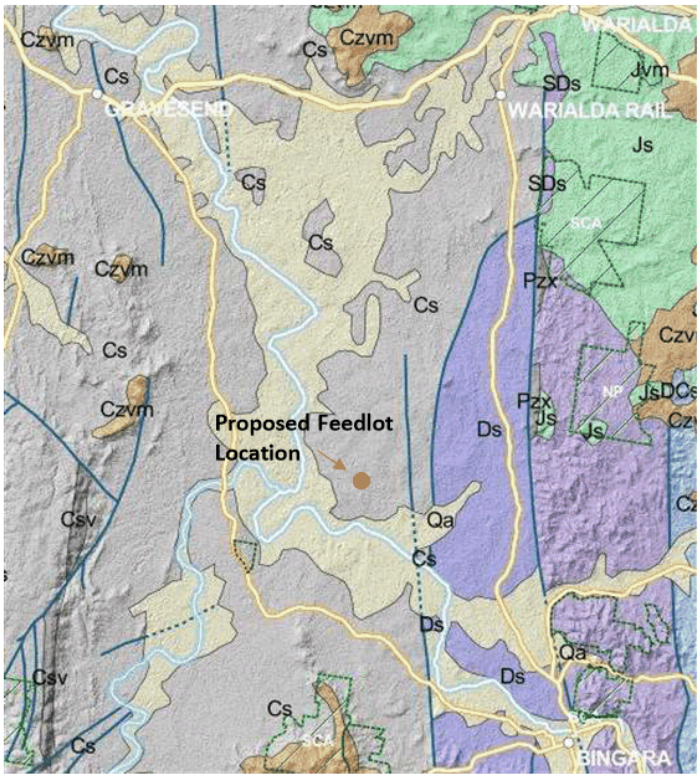

Figure 8: Geology of the Region Surrounding the Subject Site. Source: NSW Geological Survey.

Legend:

Qa: Quaternary alluvial deposits: Current and recent mud, silt, sand and gravel deposited by river (alluvial) systems.

Cs: Carboniferous sedimentary rocks: A wide range of sedimentary rocks, including feldspar-rich sandstone, siltstone, mudstone and conglomerate units.

Ds: Devonian sedimentary rocks: Variable sedimentary rocks including conglomerate, sandstone, siltstone and mudstone. Some intercalated volcaniclastic rocks (clastic rocks derived from a volcanic source).

Czvm: Cainozoic mafic volanics: Mafic volcanic rocks are those that were erupted from widespread volcanic activity through the eastern part of the state over the last 65 million years. Basalt lava flows are typical examples.

Csv: Carboniferous sedimentary and volcanic rocks: A range of sedimentary and volcanic rocks. Sedimentary rocks including conglomerate and sandstone deposited by fluvial (river) processes. Volcanic rocks include rhyolite (quartz-feldspar rich) and dacite (feldspar rich). These latter rocks were erupted from volcanoes, including airfall tuffs and pyroclastic flows.

Js: Jurassic sedimentary rocks: A range of sedimentary and volcanic rocks. Sedimentary rocks including conglomerate and sandstone deposited by fluvial (river) processes. Volcanic rocks include rhyolite (quartz-feldspar rich) and dacite (feldspar rich). These latter rocks were erupted from volcanoes, including airfall tuffs and pyroclastic flows.

SDs: Silurian-Denovian sedimentary rocks: Sedimentary rocks including sandstone, siltstone, mudstone and basal conglomerate units. May be fossiliferous.

DCs: Devonian-Carboniferous sedimentary rocks: Sedimentary rocks including quartz-rich pebbly sandstone and conglomerate units deposited in fluvial (river) systems, and also siltstone, mudstone and sandstone with lithic fragments (wackes).

Pzx: Palaeozoic undifferentiated rocks: A package of deformed rocks showing a strong sense of shear. Includes schist (metamorphosed sedimentary rocks), serpentinite (altered ultramafic rocks), gabbro and dolerite.

Jvm: Jurassic mafic volcanics: Basaltic lava flows, sills and dykes. These rocks contain plagioclase and ferromagnesian minerals like pyroxene.

Publicly available bore data was examined for groundwater bores in the vicinity of the proposed development (Figure 9; Table 7). Bore logs indicate spatial variation in soil depth (from <1m to >9m depth). Bedrock encountered consisted of shale, basalt and trapp rock.

Figure 9: Groundwater Bores Present Near Proposed Feedlot Site. Scale = 1:27,000

Table 7: Public Bore Log Data - Geology

Bore ID	Year of Drilling	Depth of Bore (m)	Soil Texture	Soil Depth (m)	Bedrock
GW054975	1981	91.44	Not Recorded	0.61	Not Recorded
GW054967	1981	21.30	Not Recorded	6.00	Shale
GW054917	1981	76.20	Clay	1.52	Shale above Basalt
GW049656	1979	83.82	Not Recorded	9.14	Trapp above Shale
GW052714	1981	30.50	Not Recorded	2.44	Basalt

5.3 Land Capability and Biophysical Strategic Agricultural Land

The NSW OEH eSPADE soil and land information mapping has mapped the subject site with the following land and soil capability (as shown in Figure 16):

- Class 4 – Moderate to severe limitations. Land generally not capable of sustaining high impact land uses unless using specialised management practices with a high level of knowledge, expertise, inputs, investment and technology. Limitations are more easily managed for lower impact land uses (e.g. grazing).

The property does not contain land identified by NSW Planning and Infrastructure as Biophysical Strategic Agricultural Land (BSAL) as shown in Figure 10.

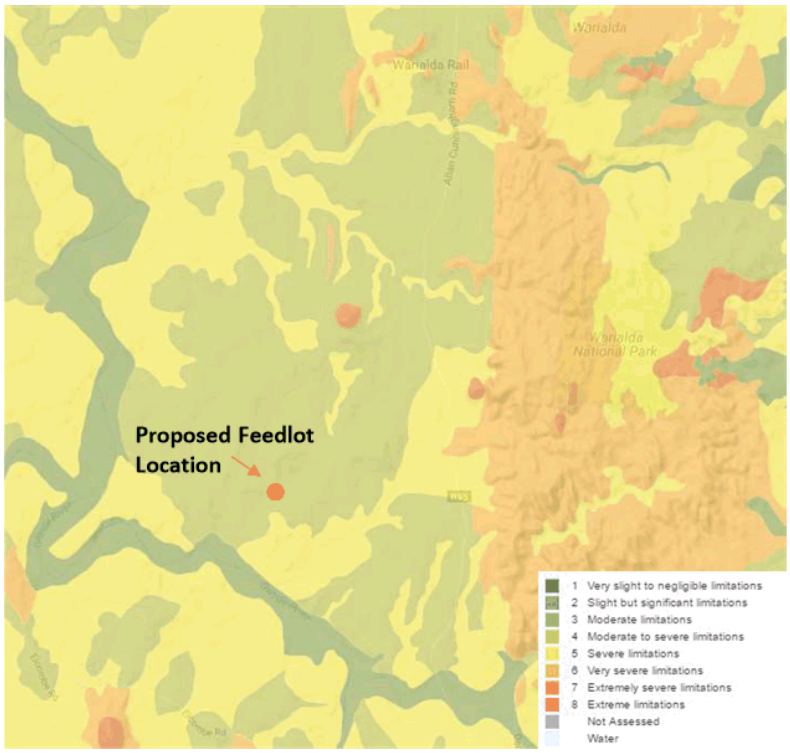

Figure 10: Land Capability Mapping eSPADE (NSW OEH 2017).

5.4 Soils

The feedlot site is located on brown clay over yellow brown subsoil. Some minor rock outcrops occur outside of the feedlot site, and shale-based soils and gravels occur within the surrounding area. The soils within the manure utilisation area consists of grey brown heavy clay.

A permeability of less than 1 x 10^{-9} is advised for pen surfaces and sedimentation systems by the *National Guidelines for Beef Cattle Feedlots in Australia* (MLA 2012).

The controlled drainage area and sedimentation system will be underlain by at least 300mm of suitable clay or other compactable material to meet the standards.

5.5 Site Hydrology and Water Quality

5.5.1 Surface Water

The site is located on the northwest Slopes of NSW, within the Gwydir Catchment. The nearest watercourses to the feedlot are Spring Creek and Antimony Gully. Spring Creek is a semi-permanent waterbody fed by groundwater springs, located 370m south-east from the feedlot pens. Antimony Gully is an ephemeral watercourse located 320m south-west from the feedlot pens, and joins Spring Creek 510m south of the feedlot site. Spring Creek is a tributary of the Gwydir River, located approximately 3km downstream of the subject site.

The feedlot site will be located within a controlled drainage area, which will capture surface water runoff from the feedlot site and divert clean surface water from the surrounding environment away from the feedlot. This is considered to protect surface water quality within the region, by minimising the risk of runoff of surface water containing high nutrient loads from the feedlot into natural waterways.

There were no recent water quality data for the upper Gwydir River to make any detailed assessment of the existing water quality condition. Current public discussions regarding water quality of the Gwydir River near Bingara suggest that cold water pollution from Copeton Dam poses a significant environmental risk to aquatic ecosystems. Otherwise, the results included in the NSW State of the Catchments 2010 Border Rivers-Gwydir Region, identified that overall the upper Gwydir catchment was in moderate to good hydrological condition.

5.6 Groundwater

Due to variation of geology in the region, there are a variety of aquifers within the upper Gwydir catchment, most of which are classed as fractured rock aquifers, with a smaller number of porous rock and alluvial aquifers (Figure 11). Clevecourt has access to groundwater sourced from the Upper Gwydir Alluvial Groundwater Source under an agreement with neighbouring properties, who share access to a 250ML bore licence (licence number 90BL130269). Water extraction from this aquifer is managed under the *Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources*, which is a detailed legal document setting rules and limitations on groundwater extraction practices within the region to protect environmental values. Groundwater quality of the region is considered to be moderate and suitable for domestic, stock and some irrigation purposes (Figure 12).

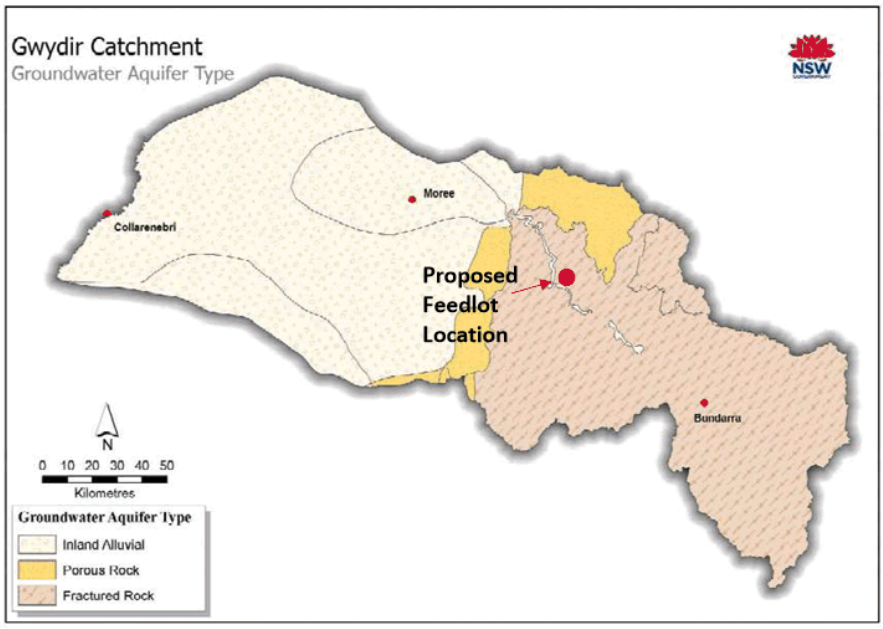

Figure 11: Aquifers Within the Gwydir Catchment

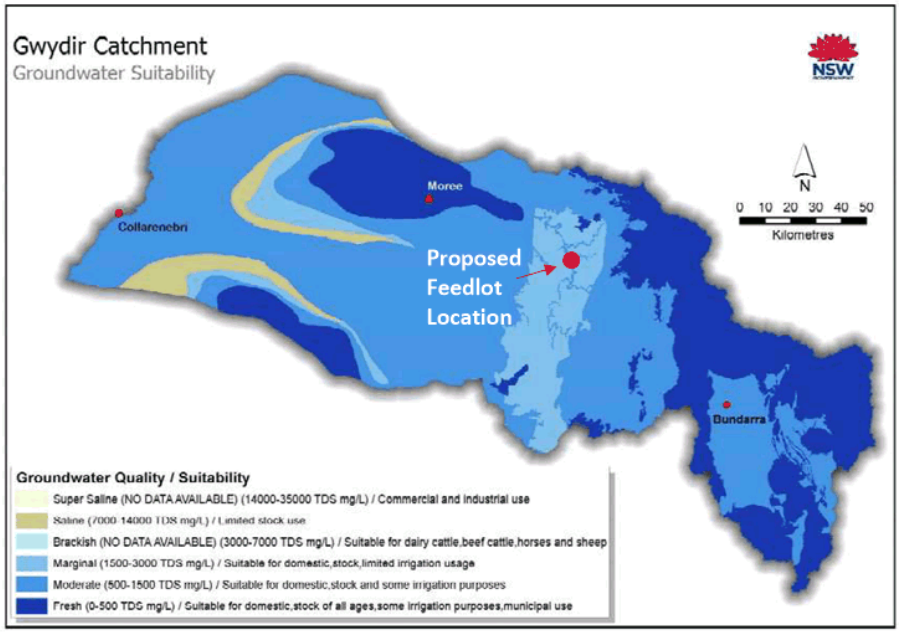

Figure 12: Groundwater Quality Within the Gwydir Catchment

Publicly available bore data was examined for groundwater bores in the vicinity of the proposed development (Figure 9; Table 8). Bore logs indicate spatial variation depth to water bearing zones (7.6m to over 30m depth). Water bearing zones were encountered within fractured bedrock.

Table 8: Public Bore Log Data - Groundwater

Bore ID	Year of Drilling	Depth of Bore (m)	Depth to Water Bearing Zone (m)
GW054975	1981	91.44	Not Recorded
GW054967	1981	21.30	7.60
GW054917	1981	76.20	38.71
GW049656	1979	83.82	Not Recorded
GW052714	1981	30.50	18.90

Groundwater dependent ecosystems (GDE's) are defined as ecosystems which have their species composition and their natural ecological processes determined by groundwater (ARMCANZ & ANZECC, 1996). The closest watercourse to the proposed feedlot, Spring Creek, is a spring fed creek, and therefore has a high degree of groundwater interaction. The Bureau of Meterology's Atlas of Groundwater Dependent Ecosystems was also searched to identify ecosystems near the proposed development with potential for groundwater interaction. Results obtained from the Atlas search identified the Gwydir River, 3km downstream of the proposed feedlot, as having high potential for groundwater interaction (Figure 13). It is classed as an "ecosystem that relies on the surface expression of groundwater".

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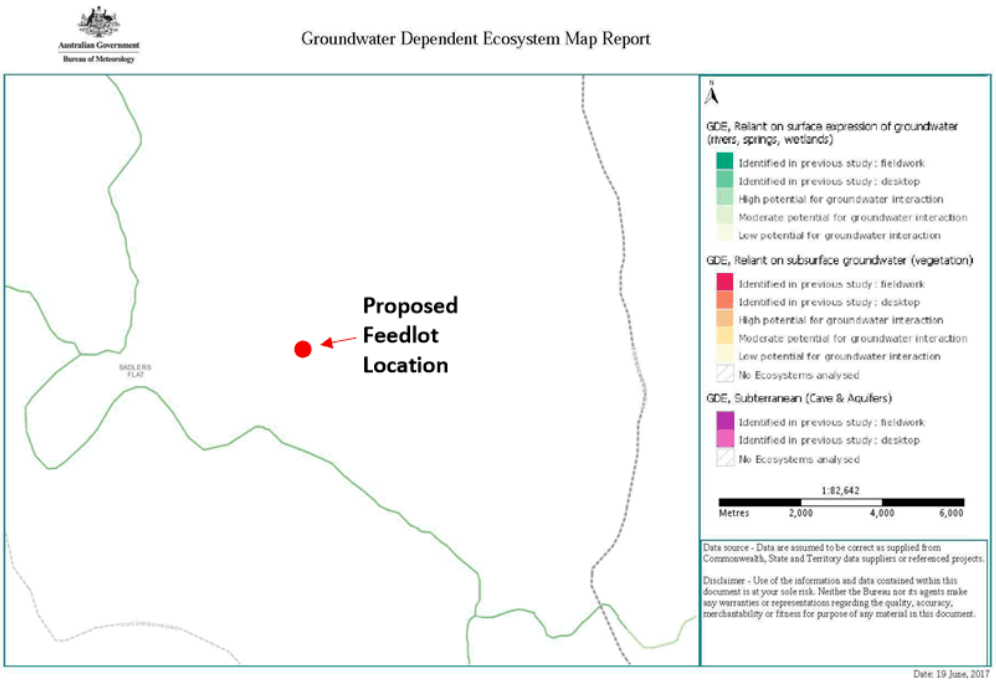

Figure 13: Groundwater Dependent Ecosystem Map.

5.7 Noise

The background sound level in rural areas is characteristically low, and often variable. Typically, ambient levels are in the range of 25 to 45 dBA. However, seasonal factors, both natural (e.g. cicada, frog or bird activity) and anthropogenic (e.g. harvesting, pesticide spraying, or other seasonal farming operations) may ordinarily produce higher background levels. In contrast, factors such as night-tine inversion layers and low wind speeds, which may be more pronounced in rural areas, may also act to increase propagation or decrease attenuation in these areas. The site currently does not produce much noise as the primary land use is grazing.

5.8 Archaeological and Heritage Matters

A search for heritage sites using the EPBC Act Protected Matters Report found no World Heritage or National Heritage listed sites on the property or surrounding properties.

A search of the NSW State Heritage Register found no heritage listed sites on the property or surrounding properties.

The Gwydir Shire Council Local Environmental Plan showed no heritage sites on the property or surrounding properties.

A search of the Aboriginal Heritage Information Management System found no aboriginal heritage sites on Lots 98, 99 & 121 in DP 754864 (Appendix 5).

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5.9 Fauna and Flora

The study area consists of cropland (the manure reuse area) and a cleared cattle pen area (the feedlot site) which has been cleared and grazed by cattle. The cropland has been cultivated and cleared of all native vegetation other isolated trees which will be retained. The pasture supports a mixture of native and invasive grass, herb and forb species commonly found in pastures throughout the region. Some regrowth trees occur throughout the wider region (including iron bark and pine trees), which are regularly managed as part of routine farm operations and are not considered to provide significant habitat to native species (such as tree hollows).

In its current state, the subject site does not constitute important habitat for identified species. The region surrounding the proposed development site is disturbed by agricultural activities. Extensive regions of remnant vegetation, including Warialda National Park, are located to the east of the study area. Such vegetation, in addition to water-based habitat within the riparian zone of the Gwydir River, is likely to serve as significant remnant vegetation for a variety of threatened species, and is considered the preferred habitat for vulnerable species over the study area. The proposed development will not impact upon this habitat.

Overall, the potential impact of the proposed development upon native flora and fauna is considered minimal. Detailed assessments of potential impacts are presented in Appendix 3 and Appendix 4.

5.10 Bushfire

Clevecourt is located in an area interspersed with regions of cropland, pasture and stands of native vegetation. The subject site has been assessed by the Rural Fire Service's Bushfire Prone Land Mapping Tool and was not found to be bush fire prone. The proposed development will be located away stands of native vegetation and protected by a firebreak maintained for a minimum of 35m. The potential bushfire risk to the development is considered minimal.

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6 Environmental Considerations

6.1 Land Use Conflict

The proposed development is consistent with the zoning for the lot. Clevecourt is in a rural zoned part of the Gwydir Shire and is surrounded by grazing and cultivation properties. It is therefore considered that the risk of land use conflict is minimal.

6.1.1 Neighbouring development

The surrounding area is zoned as RU1 and therefore the potential for additional subdivision and construction of additional residences is considered limited. The region is predominantly utilised for agriculture including cattle and crop production.

6.1.2 Proximity to Receptors

The general principle adopted for selection of the feedlot site is summarised in the following excerpt:

Feedlots should be sited so as not to cause unreasonable interference with the comfortable enjoyment of life and property off-site or with off-site commercial activity (ARMCANZ, 1997). Accordingly, feedlots should be separated from sensitive receptors by a sufficient distance to limit any adverse impacts resulting from odour, dust, noise or aesthetic considerations to an acceptable level.

Figure 14 presents an aerial image locating the closest individual receptors to the Feedlot complex within a 1km, 2km and 5km radius from the development site. Table 9 outlines the available separation distances between the identified receptors and the proposed feedlot.

The closest receptor is a rural residence which is separated from the proposed development site by woodland vegetation. The proposed development allows for a separation distance of approximately 1,020 metres to the nearest receptor.

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Figure 14: Closest Identified Sensitive Receptors

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Table 9: Available Separation Distances to Sensitive Receptors from the Proposed Feedlot

Receptor	Receptor Type	Direction	Distance (m)
1	Rural Dwelling	ESE	1,020
2	Rural Dwelling	SE	1,130
3	Rural Dwelling	NNE	1,520
4	Rural Dwelling	NNW	1,570
5	Rural Dwelling	NE	2420
6	Rural Dwelling	SE	2,580
7	Rural Dwelling	NE	2,620
8	Rural Dwelling	SSW	3,170
9	Rural Dwelling	WSW	3,220
10	Rural Dwelling	WNW	3,670
11	Rural Dwelling	NNW	3,840
12	Rural Dwelling	NE	4,000
13	Rural Dwelling	WNW	4,500
14	Rural Dwelling	NNE	4,910
Bingara	Medium Town	SSE	15,030

6.2 Visual Amenity

Due to the undulating character of the surrounding land and the retained woodland on the property, the proposed feedlot will be largely hidden from view. The feedlot will not be visible from any major roads or townships.

6.3 Natural Hazards

The land is not subject to geological hazard such as volcanism, earthquake, or soil instability such as subsidence slip or mass movement.

6.3.1 Bushfire Risk

Clevecourt supports areas of pasture, cropland and stands of native vegetation. The subject site is not classified as bushfire prone according to the Rural Fire Service's "Bush Fire Prone Land Mapping Tool". The Proponent will take reasonable measures to minimise the risk of fire on site, including:

- An Asset Protection Zone (APZ) at the site, to provide an appropriate buffer between the proposed development and adjoining woodland. It is recommended the APZ meet the following minimum requirements:
  - A cleared buffer area of 35m is maintained around the feedlot complex with vegetation limited to short-cut grass.

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- No flammable material kept within 50 m of the feedlot complex.

- Incorporation of Routine Vegetation Management into the feedlot maintenance schedule to ensure the APZ is maintained and weeds are controlled.

The risk of fire on site is considered to be minimal if the above recommendations are implemented.

6.3.2 Flood Liability

The lot is not considered flood prone. The land is located at a height of approximately 320 m AHD, well above the 1:100 flood planning level for the locality. Given there is no change of use and no new buildings are proposed no further consideration is provided to the potential flood hazard for this proposal.

6.3.1 Land Management

Some land areas will be assigned to a controlled drainage area for the feedlot complex. This land will be substantially modified with topsoils and subsoils being stripped from them and the areas made impervious to water. Wastewater will either be disposed of via evaporation or irrigated on the property. In areas with steep slope, grassed embankments should be constructed to hold the structure firm and alleviate erosion issues.

6.4 Water Resources

Baseline conditions for both surface and groundwater have been discussed in detail within Section 5.

6.4.1 Surface Water

Contamination of surface water may lead to toxic effects on the aquatic and riparian ecosystems downstream. This means that water quality should be maintained at a healthy level as much as possible upstream.

The main potential source of surface water contamination from the feedlot is likely to be from offsite runoff during high rainfall events in the wet season, as the nearest creek is located downhill of the feedlot site.

Once the operation phase begins, the water from the controlled drainage area will enter the drainage system due to the design and topography of the site. Rainfall runoff will flow out of the back of the pens into a catch drain. The drain will be designed to carry the effluent to an effluent pond. The design of the pond is based on standard guideline requirements for capture and settlement of manure sediments and liquid from the cattle feedlot pens.

Due to the capacity of the drainage system, it is unlikely that the site will have an impact on surface water quality during operation, except if annual rainfall exceeds a 90 percentile rainfall year. This process would ensure that any such releases would occur when appropriate dilution of the wastes can occur and no concentrated waste enters local watercourse systems.

The proposed feedlot has been sited and designed to prevent adverse impacts on surface waters external to the feedlot CDA.

- The proposed development of the feedlot complex is not located in a flood prone area.
- The proposed feedlot complex is to be enclosed within a CDA with appropriate diversion banks installed to divert clean water away from the Feedlot site.
- The feedlot may reuse manure and effluent on site for fertiliser and irrigation purposes at sustainable rates.
- No works will occur within 300m of Spring Creek.

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6.4.2 Groundwater

The greatest risk to groundwater from the proposed development is the potential leaching of contaminants through the soil to below-ground aquifers. The design of the feedlot includes an impermeable clay lining of pens, compost manure pad, sediment basin and holding pond that will decrease the risk of contamination of groundwater via the soil. If necessary, the following design measures should also be incorporated:

- Bunding of any diesel tanks, as well as chemical storage areas.
- Where appropriate, heavily trafficked areas will also be compacted clay or concreted.

The proposed feedlot is unlikely to have any adverse impacts on the quality of groundwater or potential GDE's based on the following:

- The completed feedlot complex is to be located on compacted soil to a minimum depth of 300mm to an impermeability of less than 1×10^{-9} m/s.
- Given the relatively small scale of the development and existing impermeable attributes of the clay subsoil, it is unlikely the proposal will have an adverse effect on groundwater recharge.
- Shallow aquifers are uncommon in upper slope and mid-slope areas within the region and typical groundwater tables are approximately ≥7m below ground. The subsoil in the area is considered impermeable. It is therefore considered unlikely that any potentially contaminated seepage could have an effect on the water quality of deep underlying or adjoining groundwater systems.
- No works will occur within 300m of Spring Creek (a tributary of the Gwydir River).
- The Gwydir River, located approximately 3km downstream of the subject site, is considered to have a high potential for interaction with groundwater. To protect groundwater resources, it is therefore important that contaminated runoff from the feedlot site will not enter the river. This will be controlled by maintaining the feedlot within a controlled drainage area, to capture runoff from the site and divert clean surface water away from the feedlot.
- The feedlot complex is not sited in a salinity hazard area, nor is the area prone to risk or salinity. The proposed design will minimise the risk of new salinity outbreaks.
- The storage and use of hazardous materials does not pose an unacceptable risk to the pollution of groundwater.

Given the suitability and existing characteristics of the site it is unlikely that the proposed development will have any potential impacts on the surrounding habitat, groundwater levels or connectivity between groundwater sources. Accordingly, there is no potentially significant threat to GDE's within the vicinity of the site.

6.5 Flora and Fauna

The study area consists of cropland (the manure reuse area) and pasture (the feedlot site) which has been extensively cleared and grazed by cattle. In its current state, the subject site does not constitute important habitat for identified species. Extensive regions of remnant vegetation, including Warialda National Park, are located to the east of the study area. Such vegetation, in addition to water-based habitat within the riparian zone of the Gwydir River, is likely to serve as significant remnant vegetation for a variety of threatened species, and is considered to be the preferred habitat for vulnerable species over the study area. The proposed development will not impact upon this habitat.

The proposed development has the potential to impact upon surrounding environments through the runoff of surface water containing high nutrient/sediment loads into surrounding environments, and

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surface water/groundwater systems. To mitigate against this risk, the following measures should be implemented on site to reduce potential environmental degradation:

- Construction of a diversion bank which will direct clean water around feedlot;
- Construction of a controlled drainage area which will capture all effluent water;
- Re-use of effluent on site at sustainable rates, with excess effluent to be disposed of via evaporation;
- Sustainable re-use of manure on site, with excess manure to be transported off-site for use on other properties; and
- Construction of feedlot infrastructure on soils of low permeability to minimise the risk of groundwater contamination.

These measures will minimise the risk of run-off of high nutrient load pollutants from the subject site, thus protecting the surrounding environment from environmental degradation. Additional detail is provided in the Flora and Fauna Assessment included as Appendix 3 and Appendix 4.

6.6 Cultural Heritage

6.6.1 Aboriginal Cultural Heritage

The proposed development and subject site was assessed in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010). In order to follow the guidelines, a due diligence assessment process was undertaken. This process involved the following steps:

- AHIMS Register Search – a search of the AHIMS to ascertain if there are any known sites within or adjacent to the subject area;
- Assessment of Landscape – assess the study area for the presence, nature and level of disturbance of landscape features that may contain heritage sites;
- Desktop Assessment and Visual Inspection – Physically inspect the proposed development site for artefacts or signs of aboriginal presence;
- If any aboriginal objects are located, further assessment required in conjunction with an archaeologist and the Local Aboriginal community representatives; and
- If disturbance to the area is considerable and no presence of aboriginal artefacts or other signs, a standard summary of the work is to be prepared and the development can proceed subject to approvals.

A search of the NSW AHIMS register indicated that there are no recorded sites on the proposed development site or within a 1 kilometre radius of Lots 98 and 99, DP 754864. This is potentially a result from a lack of survey on the property more than a lack of aboriginal history on this land. A copy of this search has been included as Appendix 5.

The proposed development site does not contain landscape features such as rock outcrops, caves, rock shelters and/or rock overhangs, estuarine and coastal dunes, sand hills, waterholes and/or natural springs, wetland and/or floodplains that are considered likely to contain Aboriginal objects. The site has been previously cleared highly disturbed during the conversion of the land from a woodland to open grazing area. Remnant woodland within the wider region may contain some artefacts; however, these areas will not be disturbed by the proposed development.

Traverses across the area to be disturbed by earthworks for the feedlot complex and associated infrastructure did not identify any objects of aboriginal origin such as artefacts.

In summary, the following presents a summary of the site investigation:

- Previous clearing for agricultural purposes would have affected the intactness of any deposit based archaeological sites, if they had been present;
- The broad scale clearance characteristic of the area reduces the likelihood that culturally modified trees remain in situ. However, the proposed development will not result in any excavation or removal of culturally modified trees, if present;
- An AHIMS search did not identify any objects or places of Aboriginal heritage significance within or adjacent to the site;
- There are no landscape features which are likely to indicate the presence of Aboriginal objects (i.e. no waterways or caves); and
- The site has been significantly modified by previous activities, thus decreasing the likelihood of artefacts of integrity being found.

The result of this investigation has therefore determined that the likelihood of disturbing objects of aboriginal cultural significance are extremely low. It is therefore recommended that the project proceed on the basis that if items or sites of cultural heritage are identified during the work to be undertaken, that this work should cease until further investigation is undertaken in accordance with the recommendations of traditional owners.

6.6.2 European Heritage

No non-indigenous heritage items have been found near the development site, nor is the site listed under Schedule 5: Environmental Heritage; or the LEP. As such there are no known artefacts or heritage items on the proposed development site or within the boundaries of Clevecourt.

6.7 Resources

The feedlot intends to use surface water available under harvestable rights and groundwater available under an existing groundwater licence to supply all water to the feedlot. The feedlot will also utilise electricity and diesel to operate the facility. No other significant resources will be consumed at the site other than agricultural produce.

6.8 By-Product Management

The feedlot will need to manage and store manure, contaminated runoff, and a small number of cattle mortalities that will be composted. The manure and carcass compost (by-products) can be managed and reused in place of inorganic fertilisers in crop production. Hence, they are considered to be valuable resources, not waste products. Some by-products will be used on site for crop production, whilst the remainder will either be sold or traded.

6.9 Air Quality

Feedlots should be sited so as not to cause unreasonable interference with the comfortable enjoyment of life and property off-site or with off-site commercial activity (Armcanz & Anzecc 1997). Accordingly, feedlots should be separated from sensitive receptors by a sufficient distance to limit any adverse impacts resulting from odour, dust, noise or aesthetic considerations to an acceptable level. The existing environment surrounding the proposed feedlot site is a rural landscape with farm residences and agricultural operations.

6.9.1 Odour and Dust

Feedlots can be a source of fugitive odour and dust emissions. Once emitted into the atmosphere the significance of these fugitive emissions depends largely on the atmospheric dispersion and dilution that takes place between the source of the emission and the potential receptor. For coarser particulate emissions, such as feedlot dust, some degree of settling will occur between the source and the receptor. Vegetation screens can be useful in diminishing the impact of both dust and odours. The amount of dispersion, dilution and settling after emission is a function of distance, and this will vary with the prevailing atmospheric stability.

A Level 1 odour assessment was undertaken to determine the potential impact of odour from the proposed 1,000 head cattle feedlot. The assessment has been included as Appendix 6. The assessment indicated a "pass" in accordance with the relevant legislation. A pass indicates that the potential for the Feedlot's odour to impact on adjoining landholders is considered acceptable. The Level 1 method shows that the Feedlot site is well separated from the closest receptors to prevent amenity impacts (e.g. odour, dust and noise) from the operation of the Feedlot. This is important in preventing odour nuisance. However, good design, construction and management are to be maintained to the stated standard in order to minimise emissions.

The risk associated with odour impacts is considered sufficiently infrequent to be considered acceptable. This result is mainly attributed to the available buffer distances from the feedlot to the closest residences.

During the construction phase the earthworks will be a potential source of dust emissions. The main sources of dust during operations will be the feedlot pens and associated yards and laneways during periods of dry weather and vehicle movements transporting grain and cattle to / from the feedlot. Additionally, feed preparation, pen maintenance and management of compost windrows also have the potential to create dust. Dry emissions can occasionally cause a nuisance for neighbours, particularly during prolonged periods of hot, dry weather.

During construction, the following measures should be implemented to minimise dust:

- A speed limit will be applied to unsealed roads and areas where vehicles will travel onsite, and should be sprayed with water as required.;
- Using water trucks to minimise dust from roads and the feedlot site during construction, where necessary;
- During all stages of the development, all disturbed areas, including stockpiles, are to have a maximum C-factor of 0.15 (50 percent groundcover or more) after 20 days; and
- Where possible, only handling moist topsoil (not dry).

Odour and dust from during operation of the Feedlot will be mitigated by:

- Maintaining a minimum separation distance of 400m between the Feedlot site and closest receptor (Receptor 1). The actual distance between the feedlot and the closest receptor (Receptor 1) is 1,020m;
- Setting a low speed limit on Clevecourt to minimise the generation of dust on internal roads;
- Frequent, scheduled pen cleaning will ensure the depth of (dry) manure is maintained at 50mm or less;
- Pen cleaning to occur, at minimum, every 13 weeks;
- Management of pen stocking densities to minimise odour and dust generation (the cattle urine and manure add moisture to the pen floors);

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- Minimise disturbance of the manure stockpile and ensure pad moisture levels are optimal (45-65% moisture content) to reduce odour and dust and increase composting efficiency;
- Manure will only be loaded for transport offsite when wind conditions are favourable; and
- Vehicles moving materials off-site will be required to be covered.

6.9.2 Noise

This section assesses the potential impact from noise generated by the proposed development. The NSW Industrial Noise Policy requires noise from new developments to be assessed to meet the following noise criteria:

- **Intrusiveness criterion:** continuous noise levels from the source should not exceed more than 5 dB above the background noise level; and
- **Amenity criterion**: this describes an acceptable noise level (ANL) specific to the type of land use and associated activities within the area. The project fits the description of a 'rural' receiver type.

The NSW Industrial Noise Policy 2000 provides acceptable ambient noise levels that can be received by 'rural' receivers. These are outlined in the following table.

Table 10: Noise Level Criteria

Period	Intrusiveness Criterion[1]	Amenity Criterion[2]
Day (7am-6pm)	40 dB $L_{Aeq,\ 15\ minute}$	50 dB $L_{Aeq,\ Day}$
Evening (6pm-10pm)	35 dB $L_{Aeq,\ 15\ minute}$	45 dB $L_{Aeq,\ Evening}$
Night (10pm-7am)	35 dB $L_{Aeq,\ 15\ minute}$	40 dB $L_{Aeq,\ Night}$

Notes: 1. Intrusiveness criterion is LAeq, 15 minute ≤ rating background level + 5; 2. Amenity criterion given in Table 2.1 & 2.2 of the NSW Industrial Noise Policy.

During the construction phase the operation of earthmoving machinery will be a noise source. Noise sources during the operation of the feedlot would include vehicle movements transporting grain and cattle to / from the feedlot, and the cattle in the feedlot. Each one of these operations also has the potential to create dust.

Noise attenuation between the feedlot site and the closest receptor has been determined to be sufficient based on the available buffer distances to meet the above criteria.

The level of noise that reaches a receptor is affected by the following factors:

- the nature of the surrounding terrain;
- the atmospheric conditions; and
- the frequency and tonal qualities of the noise

In a rural area, such as Clevecourt, background levels throughout the day and night are mainly affected by what is described as environmental noise which include insects, animals and wind in the trees. Calculation of a project specific noise level would generally be below 35 dB(A) which is considered acceptable within the Guidelines.

Cattle in the feedlot make very little noise. The potential noise sources from the site would be dominated by vehicle movements. This would include trucks moving to and from the site as well as the feed wagon and light vehicles. Other noise would include tractors but this would be considered as normal noise for a farming area.

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The closest residence not associated with the Feedlot operation is located approximately 1020m to the east south east of the site. Noise attenuation over this distance is significant and therefore noise emissions from the Feedlot, operations would not disturb the amenity at this residence.

Noise impacts are not considered to be a potential issue from the proposed development. However, noise and dust from the construction and operation of the Feedlot will be mitigated by:

- Maintaining a minimum separation distance of 400m between the Feedlot site and closest receptor (receptor 1). Note the actual distance between the feedlot and the closest receptor (receptor 1) is 1,020m;
- Only using machinery fitted with complaint mufflers during both the construction and the operation of the feedlot;
- Requesting that truck drivers do not use engine brakes when entering / exiting Clevecourt;
- Setting a low speed limit on Clevecourt to minimise the generation of dust on internal roads;
- Using water trucks to minimise dust from roads and the feedlot site during construction;
- Using a cattle stocking density that minimises dust generation (the cattle urine and manure add moisture to the pen floors); and
- Avoiding spreading of very dry manure.

No other issues relating to odour, dust or noise are considered to have the potential to cause significant additional impact as a result of the proposed development. As identified above, this can be attributed to the available separation distance between the feedlot site and neighbours as well as the level of management to be adopted on the site.

6.10 Soils and Surface Waters During Construction

During construction soil erosion is a risk to occur once topsoil and / or groundcover is removed. Eroded soil poses a risk to surface waters (turbidity and nutrients). To overcome this risk, construction contractors will need to submit appropriate construction management plans to the Proponent to ensure that site runoff is managed during the earthworks phase.

The sedimentation and effluent evaporation pond are designed to contain water in the event of a 95th percentile wet year and a 1-in-20-year weather event.

The proposed feedlot has been sited and designed to prevent adverse impacts on surface waters external to the feedlot controlled drainage area. The following key points form the basic mitigation measures aimed at avoiding potential contamination of surface waters outside of the CDA:

- Ensure that feedlot activity is not located in a flood prone areas - the feedlot complex is sited well above the height of a 100-year average recurrence interval (Q_{100}) flood;
- The proposed feedlot complex is to be enclosed within a controlled drainage area, with appropriate diversion banks installed to divert clean water away from the feedlot site;
- The storage of feedlot by-products is to be undertaken in accordance with appropriate management actions to avoid surface runoff of effluent;
- The reuse of effluent and solid waste application will occur within sustainable limits on site. Excess manure will be transported off site, whilst excess effluent will be disposed of via evaporation;
- Recommended buffer zones around native vegetation and stream areas are to be maintained; and
- The storage and use of hazardous and dangerous materials is to occur in accordance with relevant legislation to ensure spillages are contained.

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Providing the above mitigation measures are implemented in accordance with this report, the potential impact on soils and surface waters during construction of the feedlot should be sufficiently mitigated.

6.11 Vermin and Pests

Vermin such as rodents and flies can be attracted to feedlots by the ready availability of feed and a moist cattle pad. The Proponent shall develop a management program to avoid outbreaks of flies or rodents and other pests or vermin around the feed ration areas and the feedlot pens. The odour level from the feedlot pens will be low as the design of the feedlot ration is based on optimising feed efficiency which therefor generates a lower level of nutrient and energy in the manure pad.

Fly, mice and rat populations from the operation of the Feedlot will be mitigated:

- primarily through the Feedlot management schedule (i.e. minimise feed wastage and spillage to reduce the likelihood of attracting vermin); and
- by implementing a baiting program if the vermin population reaches a nuisance level.

6.12 Traffic and Transport

Traffic to the proposed feedlot is a calculated based on the total capacity, expected occupancy, average length of stay, transport type, and average feed consumption. These numbers will fluctuate based on the market value and availability of stock and grain. The complete traffic calculations have been included in Appendix 7.

If the proposed Feedlot is operated at maximum capacity (as shown in Table 4), traffic generation would result in five additional heavy vehicle movements (B-doubles) per week. Therefore, at full capacity the total number of trucks is equivalent to less than one every two days.

Overall the predicted increase in heavy vehicle traffic on Gineroi Road generated by the proposed feedlot is considered minor.

In addition to heavy vehicle traffic the proposed development is predicted to generate up to ten light vehicle movements per week. The light vehicle movements are not considered to significantly increase the traffic on Gineroi Road.

6.13 Animal Welfare, Biosecurity and Disease Management

The Proponent has an economic incentive to maintain a high standard of animal welfare. This is because high standards of animal welfare result in improved productivity and better beef quality. The essential requirements for animal welfare include:

- Suitable quantity and quality of water. This is provided according to age, bodyweight, production level, air temperature, humidity and feed;
- Access to air free from dust or noxious chemicals;
- Suitable quantity and quality of food. Variations to these standards will result in the reduction of stocking rate, and animal monitoring to ensure satisfactory body condition;
- Protection from climatic extremes. These can be shade/cooling systems, wind breaks, fire and flood mitigation; and
- Protection from predators.

Once the feedlot is constructed the Proponent intends to seek accreditation under the National Feedlot Accreditation Scheme (NFAS) This scheme incorporates an extensive animal welfare documentation

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and procedural activities. The Australian Lot Feeders Association (ALFA) perform annual audits on accredited feedlots to ensure managements standards are maintained.

Heat Stress

Heat stress in cattle is generally measured by Accumulated Heat Load Units (AHLU), which describe the amount of heat that may potentially be stored in the body. Cattle will generally accumulate heat during the day, and dissipate this heat during the night. Throughout the summer months there is potential for insufficient cooling relief overnight, and cattle may enter the following day with an accumulated heat load. The potential accumulated heat load that an individual may carry varies as a result of the surrounding environmental conditions and livestock tolerance.

The ability of livestock to tolerate heat load varies depending on factors such as cattle breed, health status, coat colour, degree of finish, and pen conditions. Cattle fed through the feedlot will be selected on a breed basis to ensure that the cattle are either acclimatised to local conditions or can tolerate the high summer temperatures experienced in this region. Cattle will be regularly monitored and allocated to pens based on type, size, and condition. The feedlot will continue to be managed to high standards with open pens and a maintained manure pad depth up to 50mm.

A heat loading risk assessment was undertaken using the Katestone Risk Analysis Program. The results were calculated over the long term for black Wagyu cattle in the Moree district with over 130 days on feed, with no shade, trough water temperatures of 20 to 30 degrees and regular pen cleaning. The stock described above will begin to accumulate heat load when the Heat Load Index (HLI) exceeds 87. The risk of an extreme event is less than 1 event in 11 years. This is considered an acceptable risk and as such does not require a heat load plan. This risk assessment should be reviewed annually.

Whilst management can undertake effective actions improving livestock tolerance to heat loads, uncontrollable climatic conditions may also predispose feedlot cattle to high body heat loads and increase the risk of heat stress. These conditions can include:

- A recent rain event
- A high ongoing minimum and maximum ambient temperature
- A high ongoing relative humidity
- An absence of cloud cover with a high solar radiation level
- Minimal air movement over an extended period (4-5 days)
- A sudden change to adverse climatic conditions

For this reason, current and forecasted climatic conditions should be continuously monitored, especially during summer. The feedlot will implement an action plan for the management of Feedlot operations under excessive heat loads if required. Routine management procedures in heat stress events will include the:

- Installation of extra temporary water troughs;
- Implementation of a heat load feeding strategy;
- Strategic cleaning of high manure deposition areas; and
- Monitoring of physical signs and animal behaviours (panting; water consumption).

It is noted that Wagyu cattle have a high tolerance of heat.

Sick Cattle

The cattle will be treated with various vaccines to minimise the potential contraction of disease or infection. In particular, this should help to decrease the occurrence of respiratory problems referred

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to as Bovine respiratory diseases (BRD). The vaccines would also reduce other cattle health issues in the feedlot. Feedlot staff will be required to undergo vaccination procedures for potential cattle related diseases, including Q-Fever. Disease management for staff is covered under the NFAS and WHS documentation.

All cattle will be inspected regularly to check their welfare (including individual pen walks by feedlot staff). Any sick cattle will be isolated from the production pens and transferred to a designated hospital pen for treatment and monitoring.

Emergency animal disease outbreak and / or mass mortality contingency plans will be developed as required. A suitable site for mass burial of mortalities will be identified that has clay soil. It will be separated from the feedlot complex and groundwater bores.

In the event of a mass death, an area within the designated effluent application area will be selected for disposal of carcasses. The soil beneath this area will consist of heavy clays. This would provide an area where soil permeability is low and therefore the presence of a large burial will present a low risk of local contamination of groundwater or subsoil. In the event of a mass death, appropriate authorities include LLS and potentially EPA would be contacted to review the cause and disposal process.

The Proponent intends to operate the site in accordance with the feedlot industry's quality assurance system, the National Feedlot Accreditation Scheme (NFAS). The NFAS requires all accredited feedlots to adhere to the *Code of Practice*, along with all other relevant environmental, animal welfare and food safety legislation.

6.14 Community

The Feedlot is sited in an area spatially removed from incompatible land uses. The proposed Feedlot site is in an area designated for rural primary production under the Gwydir LEP 2013. Surrounding land is similarly zoned and used for agricultural production. The likelihood of conflict with neighbours over the development is therefore minimal.

The Feedlot site will not significantly detract from regional visual amenity. The site will not be visible from main roads through the region such as Gineroi Road, as it will be blocked from view by remnant vegetation within the region. The feedlot will be visible from Cooyong Road, a no-through road leading to one rural residence to the north of Clevecourt. The traffic density of Cooyong Road is considered to be negligible and as such the overall impact of the Feedlot on regional amenity is considered to be minimal.

The Feedlot will be sited and designed such that odour, dust and noise generated by the development has a minimal impact upon community amenity. The proposed development and facilities will comply with management criteria and minimum required separation distances from sensitive receptors to mitigate against any potential amenity impacts.

The subject site has no known significant archaeological or heritage values; therefore, the proposed development is considered to comply with all relevant archaeological and heritage legislation and regulations and to protect heritage values within the region.

The siting and design of the proposed feedlot will not impact upon the safety of the road network. Sight distances at the feedlot entrance, and at the Cooyong Road – Gineroi Road intersection are all in excess of 200m in each direction. The volume of traffic generated by the proposed development is considered to be minimal and is therefore not expected to impact upon road safety by significantly increasing traffic density.

Finally, the feedlot will operate with high safety standards. Potentially hazardous chemicals or waste materials used on site will be used by qualified persons and stored in accordance with relevant guidelines.

Overall, the proposed feedlot is considered to pose minimal risk to community amenity and values.

7 Conclusion

This Statement of Environmental Effects has detailed the activities, potential environmental impacts, and proposed mitigation measures associated with the construction and operation of a 1,000 head cattle feedlot on Clevecourt.

The feedlot is considered a viable enterprise to 'value add' to the existing grazing enterprise on the property. The intensive feeding of animals within the feedlot provides a controlled environment for the animals where weight gain efficiencies can be managed. It allows for self-feeders and troughs to be used, requiring less labour. It also reduces the risk of disease and subsequent loss of weight gain.

The site for the proposed feedlot complies with the required criteria in selection of a feedlot location. The feedlot design is based on a typical layout where the landscape provides ideal natural slopes. Earth is to be excavated from the effluent pond and drain system to allow for a storage capacity in excess of the minimum requirements for accumulation of all effluent for as required by guidelines.

Guideline calculations indicate that the available buffer zone between neighbouring residences and the feedlot is sufficient not to cause any significant or frequent disturbance to the amenity of these houses.

This investigation of the potential impact of the proposal has determined that the 1000-head feedlot is not considered to produce any major environmental impacts due to the scale of the development and the location of the development. Minor issues associated with intensive production of cattle can be dealt with by suitable management of the site.

In conclusion, the proposal complies with all relevant guidelines, is congruent with neighbouring land uses and will provide net economic and social benefits to the regional community.

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8 References

Animal Health Australia (2010). Enterprise Manual: Beef cattle feedlots (Version 3.0). Australian Veterinary Emergency Plan (AUSVETPLAN), Edition 3, Primary Industries Ministerial Council, Canberra, ACT.

Animal Health Australia (2015). Operational manual: Disposal (Version 3.1). Australian Veterinary Emergency Plan (AUSVETPLAN), Edition 3, National Biosecurity Committee, Canberra, ACT.

Armcanz and Anzecc (1997). National Water Quality Management Strategy, Australian Guidelines for Sewerage Systems, Effluent Management, Agriculture and Resource Management Council of Australia and New Zealand and Australia and New Zealand Environment and Conservation Council, Canberra, ACT.

Department of Environment and Climate Change, NSW. (2009). Interim Construction Noise Guideline. NSW Government, Sydney.

Department of Environment, Climate Change and Water, NSW. (2010). Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales, Sydney, NSW.

Environment Protection Authority. (2006). Assessment and Management of Odour from Stationary Sources in NSW – Technical Framework (DEC 2006a); referred to as the NSW Odour Assessment Framework

Environment Protection Authority. (2006). Assessment and Management of Odour from Stationary Sources in NSW – Technical Notes (DEC 2006b); referred to as the NSW Odour Assessment Notes.

Meat and Livestock Australia. (2012). National Beef Cattle Feedlot Environmental Code of Practice (2nd Edition). Meat and Livestock Australia.

Meat and Livestock Australia. (2012). National Guidelines for Beef Cattle Feedlots in Australia (3rd Edition). Meat and Livestock Australia.

NSW Department of Environment and Conservation. (2004). Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities. DEC, Sydney.

NSW Environment Protection Authority. (2000). NSW Industrial Noise Policy. EPA, Sydney.

NSW Government. 1979. Environmental Planning and Assessment Act 1979. NSW Government, Sydney.

Office of Environment and Heritage. Aboriginal Heritage Information Management System (AHIMS). http://www.environment.nsw.gov.au/awssapp/Login.aspx?ReturnUrl=%2fawssapp (Accessed 2017).

Office of Environment and Heritage. State Heritage Register. http://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx (Accessed 2017).

Primary Industries Standing Committee. (2004). Model Code of Practice for the Welfare of Animals: Cattle (PISC Report 85). CSIRO Publishing, Collingwood.