NSW GOVERNMENT

Rangers Valley Cattle Feedlot Modification 2

State Significant Development Modification Assessment

(DA 261-8-2002-i MOD 2)

November 2019

Cover photo

Rangers Valley Cattle Station (Source: Rangers Valley Cattle Station Pty Ltd)

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Glossary

Abbreviation	Definition
AHD	Australian Height Datum
BCA	Building Code of Australia
CIV	Capital Investment Value
CIP	Community Involvement Plan
Consent	Development Consent
Council	Glen Innes Severn Council
Department	Department of Planning, Industry and Environment
DPI	Department of Primary industries
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
LEP	Local Environmental Plan
Minister	Minister for Planning and Public Spaces
OEH	Office of Environment and Heritage
RMS	Roads and Maritime Services
RtS	Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning, Industry and Environment
SEPP	State Environmental Planning Policy
SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2011*
SSD	State Significant Development

Contents

1. Introduction

This report assesses a modification application prepared by EnviroAg Australia Pty Ltd on behalf of Rangers Valley Cattle Station Pty Ltd (the Applicant) to modify the Rangers Valley Cattle Feedlot at 1304 Rangers Valley Road, Glen Innes. The modification application seeks to modify the pen configuration, amend wastewater and manure utilisation areas, new emergency wet weather manure storage area and amended traffic movement hours. The application has been lodged pursuant to section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 Background

The Applicant owns and operates a beef cattle feedlot (Rangers Valley Feedlot) at the Rangers Valley Cattle Station, 1304 Rangers Valley Road, Glen Innes in the Glen Innes Severn local government area (LGA). The site is approximately 4,856 hectares (ha) in size and located approximately 28 kilometres (km) north of Glen Innes in the central New England Tablelands (see **Figure 1**).

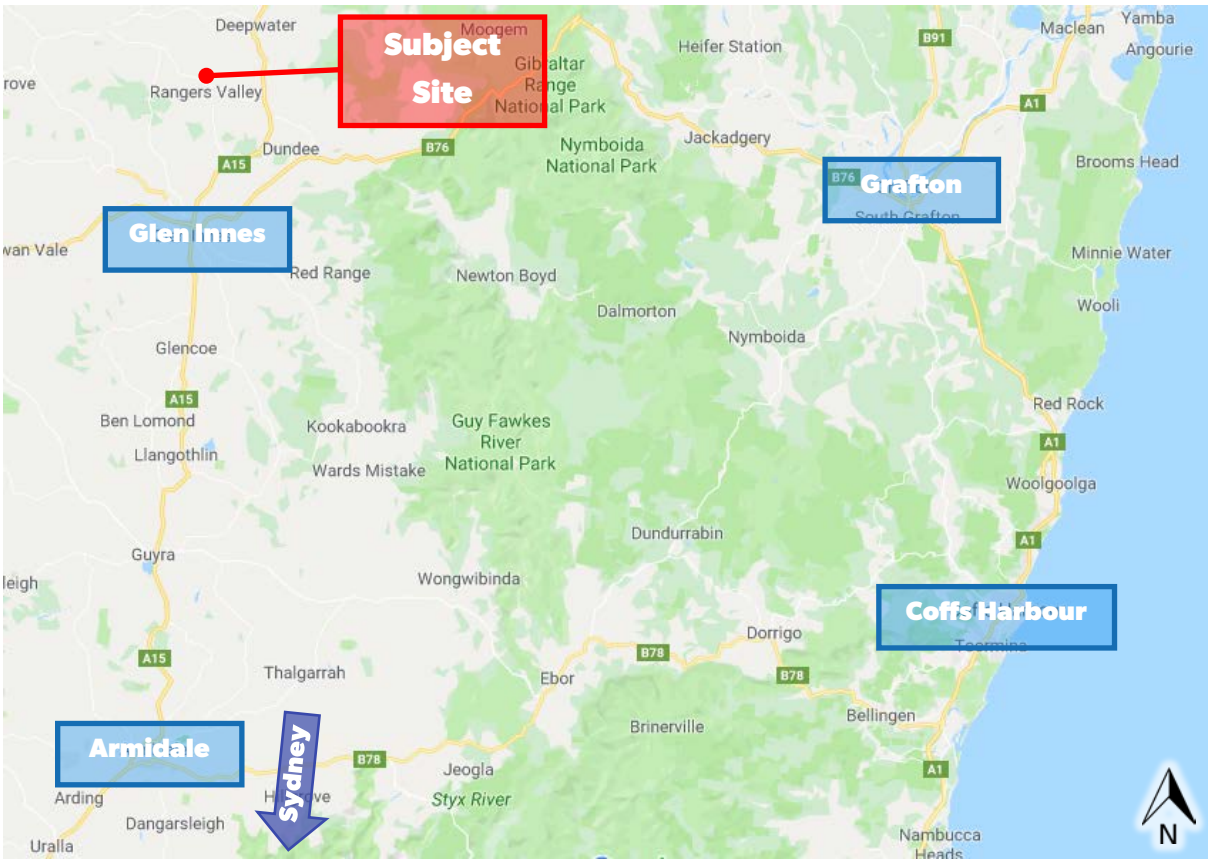

Figure 1 | Site Location

The Rangers Valley Feedlot has been operating since 1977 and was purchased by Japanese corporation Marubeni Corporation in 1988. The operation has a staged approval allowing a maximum capacity of 40,000 head of cattle in Stage 1 and a Stage 2 maximum capacity of 50,000 head of cattle.

The operation has undergone financial constraints due to the Global Financial Crisis in 2009 which has stifled the development of the feedlot expansion and restricted the operation to a capacity of 32,000 head of cattle.

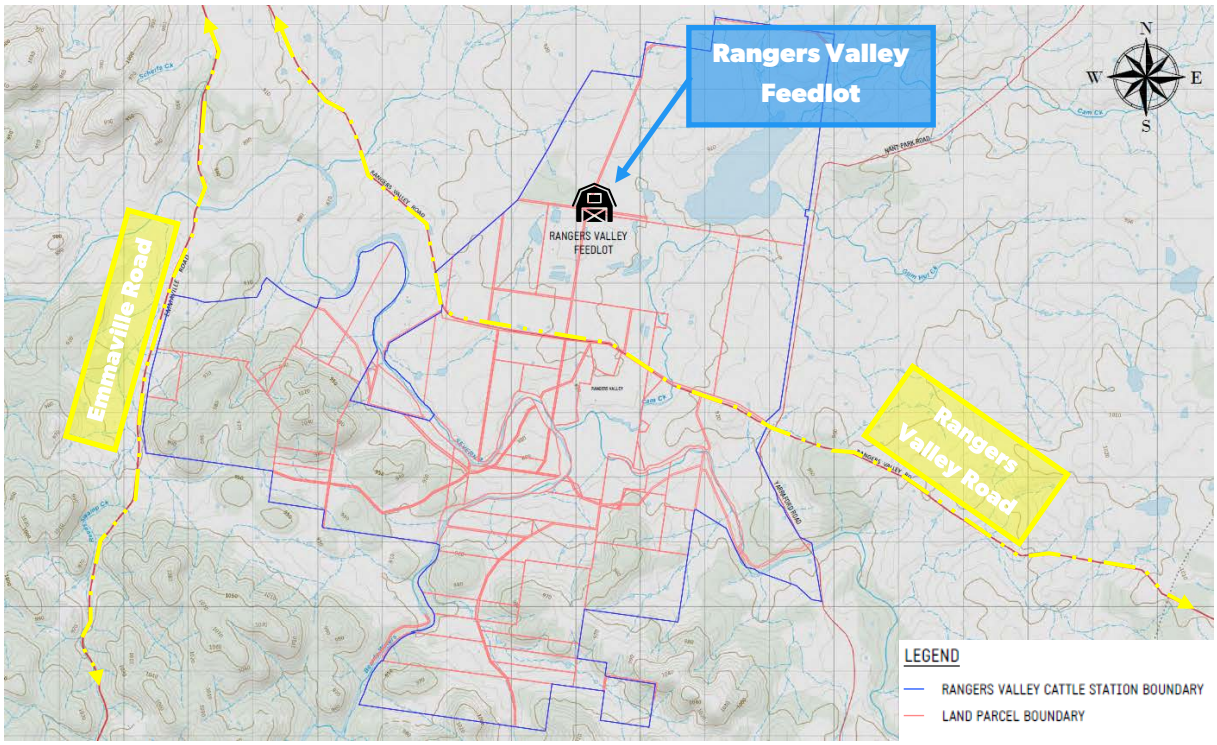

Figure 2 | Locality Plan

1.2 Approval History

On 7 January 2004, the then Minister for Infrastructure and Planning granted development consent for the Rangers Valley Feedlot Expansion (DA 261-8-2002-i) for the staged expansion of the existing feedlot from 24,000 to 50,000 head of cattle including modifications to waste management systems, changes to haul road, administration buildings, expansion of the feed mill and addition of new pens under the former section 80 of the EP&A Act. The staging of the feedlot expansion included the following:

- Stage 1, being the expansion from 24,000 to 40,000 head of cattle
- Stage 2, being the expansion from 40,000 to 50,000 head of cattle (subject to meeting certain odour performance measures).

On 4 December 2009, the Director Mining and Industry, as delegate of the then Minister for Planning modified the development consent under the former Section 96 of the EP&A Act to amend the conditions of consent to be consistent with the Environment Protection Licence (EPL).

1.3 Existing Site Operations

The primary operation of the site includes the intensive animal farming of beef cattle using a feedlot system consisting of pens for domestic and international beef supply. Additional operations of the site include the utilisation of manure and wastewater to paddocks and pasture land for the continued growth

of vegetation cover and crops such as corn and soybean for cattle feed supply. The site currently operates with a capacity of approximately 32,000 head of cattle within a total pen area of 46.19 ha.

The expansion of the Rangers Valley Feedlot was proposed to be constructed across six stages in order to effectively manage the growth and development of the site towards 40,000 head of cattle by Stage 4 and 50,000 head of cattle by Stage 6.

2. Proposed Modification

The Applicant has lodged a modification application under section 4.55(1A) of the EP&A Act to reconfigure the pen layout, amend wastewater and manure utilisation areas, create a new emergency wet weather manure storage area and amended traffic movement hours. The modification is described in full in the Environmental Assessment (EA) included in **Appendix B**. The approved layout is shown in **Figure 3** below.

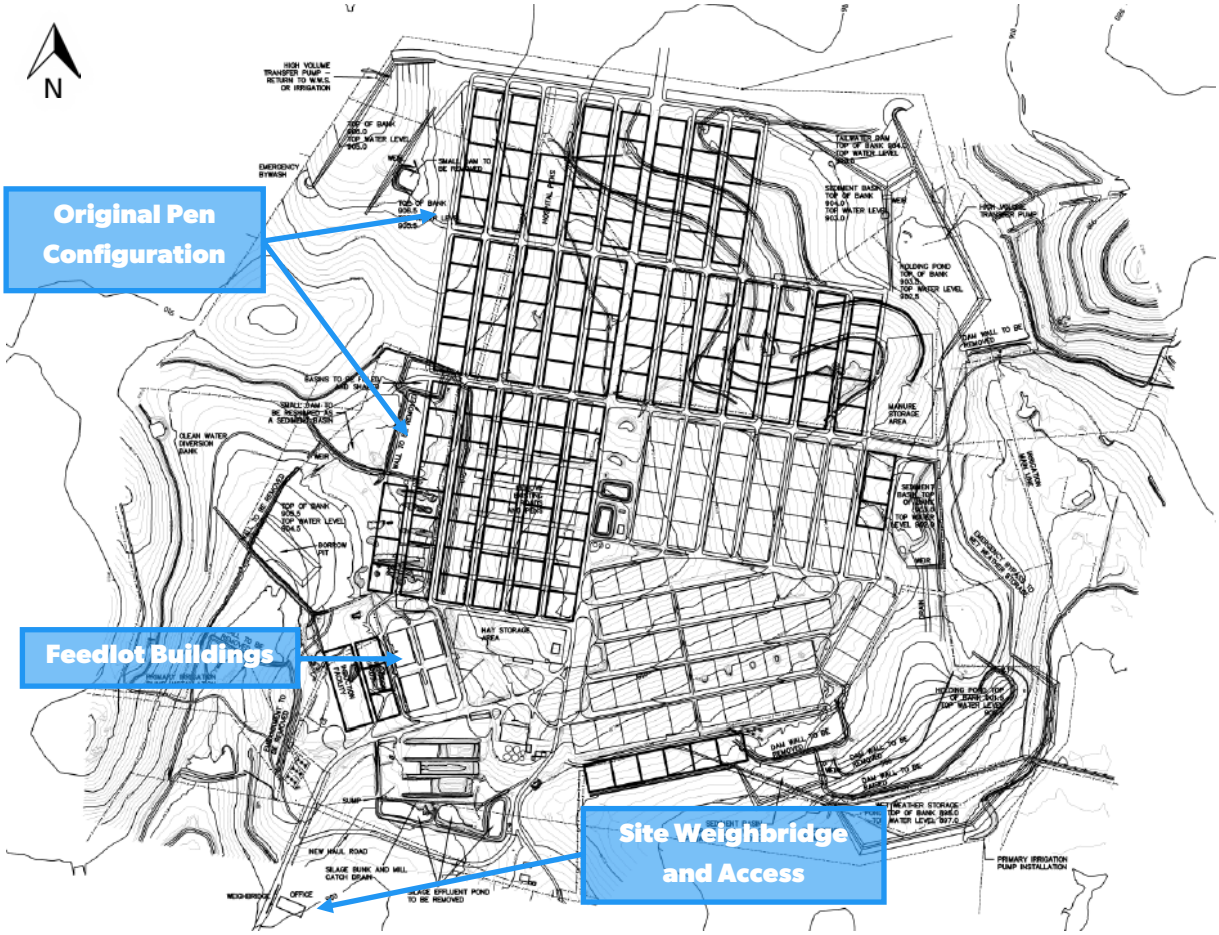

Figure 3 | Original Feedlot Expansion Design

The modification is sought due to changes in the development program being the inclusion of the new 'Stage 3A' which responds to business needs for the feedlot facility, improvements in feedlot design and management, and the improvement in facility management and operations. Furthermore, the reconfiguration of pen layout seeks to improve the drainage and operation of the site to meet best industry practices.

The proposed modification is identified in **Figures 4**, **5** and **6** below and includes the following:

- changes to the feedlot layout, including:

- reduction in individual pen size and the number of stock housed per pen
- relocation of northern pens to north-western side of the feedlot
- south-western pens reconfigured to be orientated north-south to improve drainage
- removal of sediment basin and holding pond in the north-west of the site
- consolidation of north-western and south-western catchments.
- minor reposition of pens to be clear of sedimentation and wastewater ponds.

- reduction in feedlot foot print due to layout reconfiguration, including:
  - reduction in production pen area by 26,550 square metres (m^2)
  - reduction in drain area by 39,357 m^2
  - reduction in sediment pond area by 44,382 m^2
  - reduction in holding ponds area by 189,308 m^2
  - reduction in the overall feedlot footprint of approximately 378,817 m^2
- additional effluent and manure land application to approximately 253.16 hectares of grazing land
- installation of three (3) emergency wet weather storage pits for liquid manure
- amend vehicle delivery hours of the operation from between 7:00am and 10:00pm to 5:00am and 10:00pm to improve the operational efficiencies of the site.

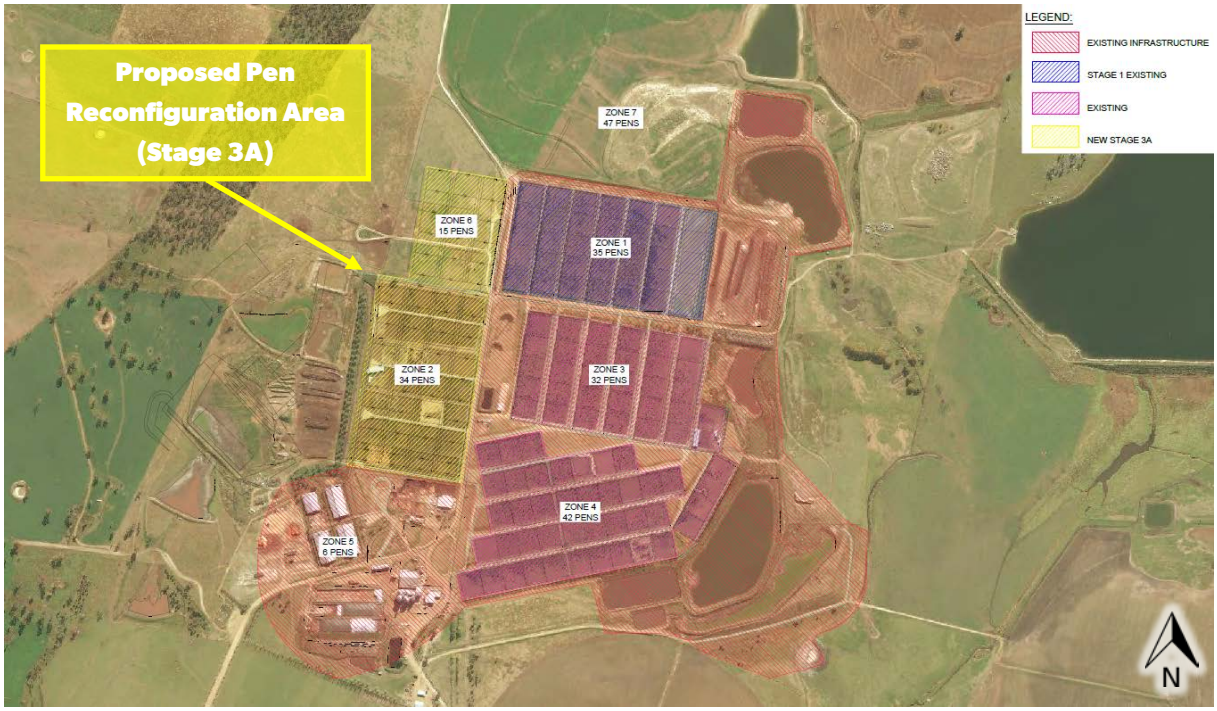

Figure 4 | Proposed Feedlot Layout Modification

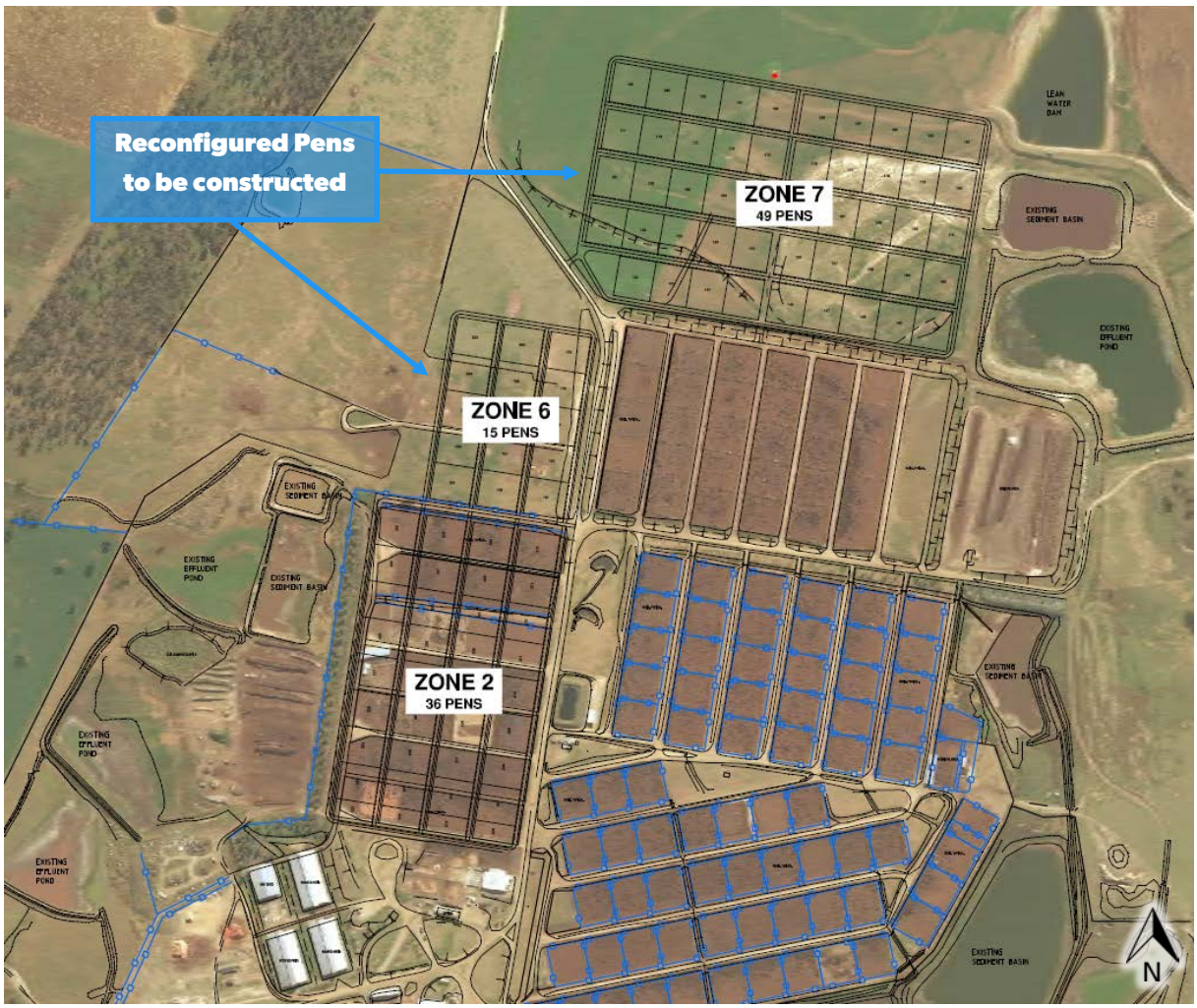

Figure 5 | Proposed Pen Configuration

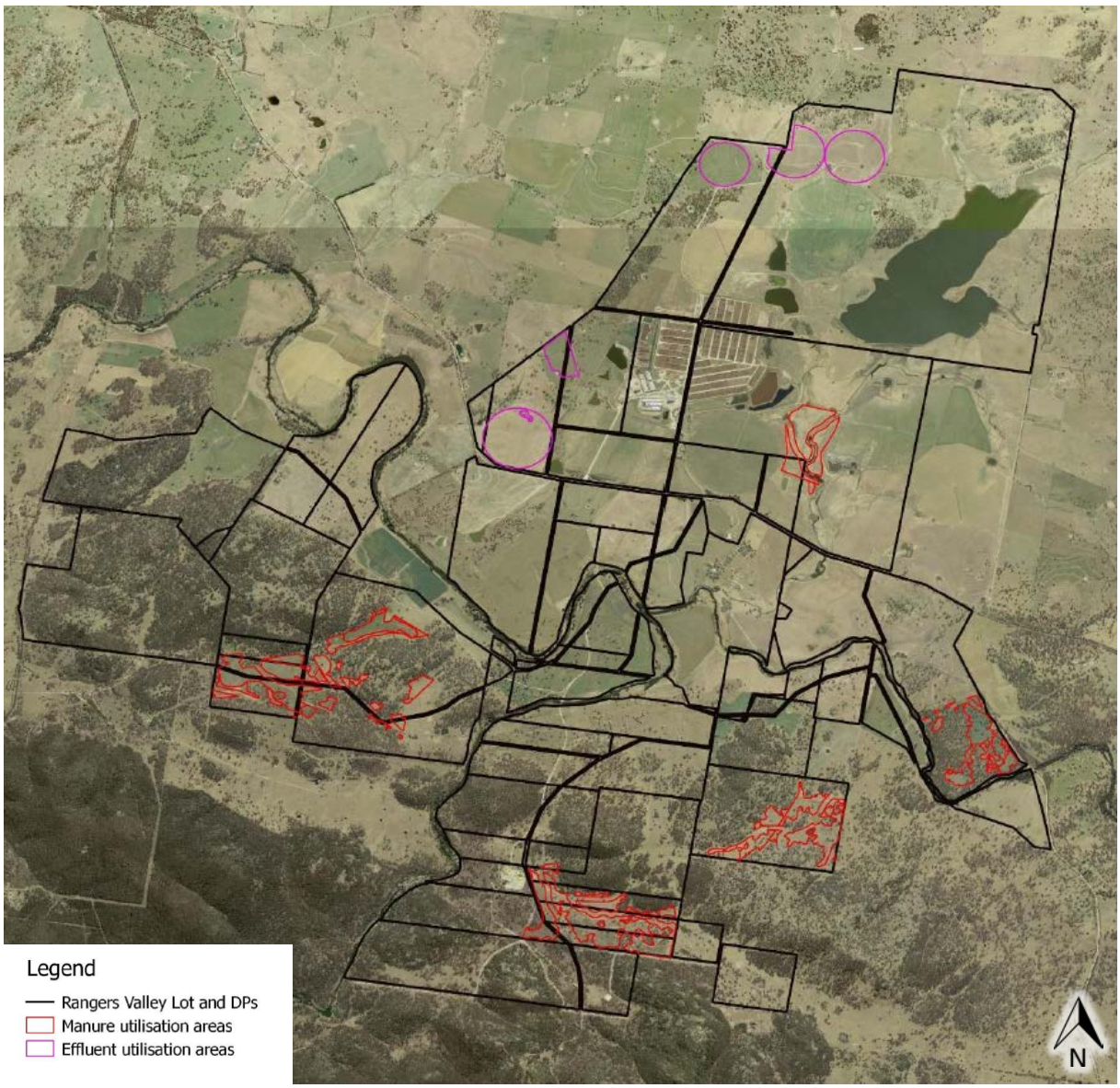

Figure 6 | Proposed Manure and Effluent Utilisation Areas

3. Strategic Context

3.1 New England North West Regional Plan 2036

The New England North West Regional Plan 2036 (NENWRP) produced by the NSW Government, sets out land use planning priorities and strategies for the New England and North West region of NSW. The NENWRP sets goals and strategic directions to achieve the goals for the growth of the regional area. Goal 1 of the NENWRP is for the region to become a strong and dynamic regional economy, particularly the promotion of agricultural production. The NENWRP identifies cattle and calves as the number one agricultural commodity in the region as it contributes to 32% of gross agricultural value ($679 million from 2014-2015) and is NSW's highest value producer region for livestock meat (see **Figure 7**).

The proposed modifications to the Rangers Valley Feedlot are considered to be consistent with Directions 1, 2 and 3 of the NENWRP as the development contributes to the expansion of agribusiness and food processing sectors, allows for the continuation of agricultural productivity, and enhances the productivity of agricultural land.

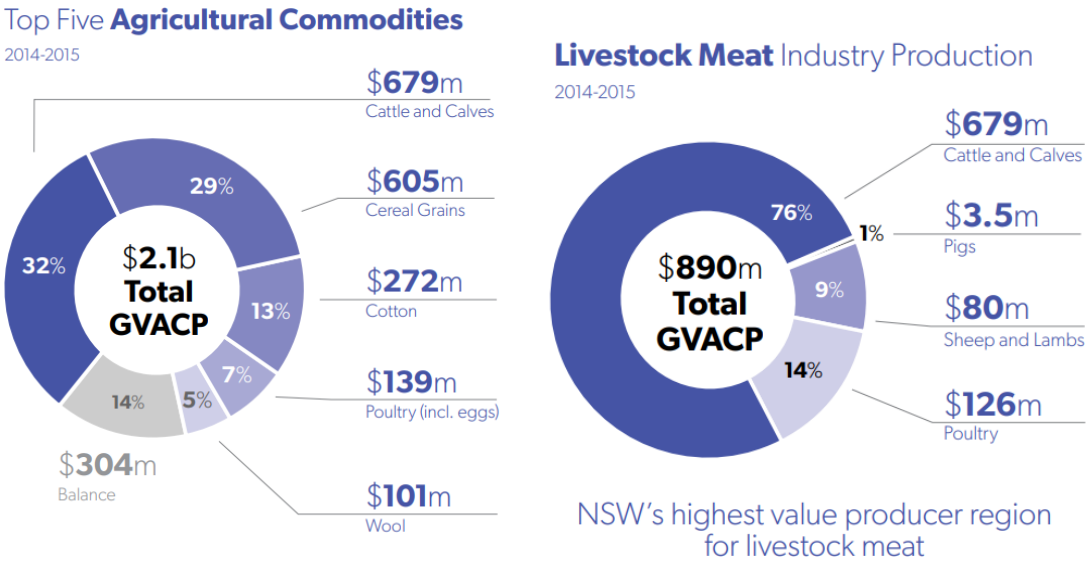

Figure 7 | Gross Value of Agricultural Commodities Produced in the New England North West Region

4. Statutory Context

4.1 Scope of Modifications

The Department has reviewed the scope of the modification application and considers that the application can be characterised as a modification involving minimal environmental impacts as the proposal:

- would not increase the operational capacity of the approved development
- the overall layout of the Rangers Valley Cattle Feedlot Expansion will remain consistent with the original approval
- any potential environmental impacts would be minimal and appropriately managed through the existing or modified conditions of consent.

Therefore, the Department is satisfied the proposed modification is within the scope of section 4.55(1A) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the application should be assessed and determined under section 4.55(1A) of the EP&A Act rather than requiring a new development application to be lodged.

4.2 Consent Authority

The Minister for Planning and Public Spaces is the consent authority for the application under section 4.5(a) of the EP&A Act. However, under the Minister's delegation dated 11 October 2017, the Director, Industry Assessments, may determine the application under delegation as:

- the relevant local council (Glen Innes Severn Council) has not made an objection and
- a political disclosure statement has not been made and
- there are no public submissions in the nature of objections.

5. Engagement

5.1 Department's Engagement

Clause 117(3B) of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) specifies that the notification requirements of the EP&A Regulation do not apply to State significant development. Accordingly, the application was not notified or advertised. However, it was made publicly available on the Department's website from the 10 August 2018 and was referred to Glen Innes Severn Council (Council), the Environment Protection Authority (EPA), the then Department of Primary Industries (DPI), Water NSW, the then Office of Environment and Heritage (OEH), the Rural Fire Service (RFS) and Roads and Maritime Services (RMS).

Council did not make a submission on the modification application.

EPA did not object to the modification but provided comment on effluent application, flood irrigation and air temperature data. The EPA also noted they are satisfied that odour sources will not be increased as a result of the modification and can be managed through existing conditions and the EPL.

DPI provided responses from three (3) separate divisions being the Department of Industry – Crown Lands, Department of Industry – Lands and Water and the Department of Primary Industries – NSW Agriculture (DoI). Crown Lands commented that there will be no impact on Crown Land subject to an existing road closure application being finalised. Lands and Water required the Applicant to update surface water and groundwater monitoring to address additional effluent irrigation areas. DoI recommended the modification be undertaken in accordance with national guidelines for cattle feedlots and codes of practice for animal welfare.

OEH did not object but requested the Applicant provide a Biodiversity Development Assessment Report (BDAR) prepared by an accredited assessor to assess the proposed manure application's impact on biodiversity. The OEH also raised concerns the EA had not adequately considered Aboriginal cultural heritage values in its assessment.

Water NSW did not make a submission on the modification.

RFS did not object to the modification and provided no comments.

RMS did not object but required the Applicant to provide an updated Traffic Impact Assessment (TIA) and raised concern regarding road pavement failure and night time heavy vehicle turning movements.

5.2 Key Issues

Biodiversity – the key issue raised in the submissions was the potential impact on biodiversity the proposed additional manure application to land may have. In particular, OEH identified the manure application is proposed to be undertaken on areas of land with vegetation that form part of an Endangered Ecological Community. Therefore, a BDAR is required to be submitted to determine the

modification's impacts on biodiversity. The EPA additionally stated it does not support the application of manure on timbered areas.

Flood Irrigation – the EPA raised concerns the proposed flood irrigation method of effluent application may create concentrations of nutrients and/or sodium across the soil profile.

Traffic Impacts – the RMS identified that an updated TIA would be required to assess the impacts of the modification and in particular the current performance and required treatments of the New England Highway/Rangers Valley Road intersection.

5.3 Response to Submissions

The Applicant provided a Response to Submissions (RTS) report prepared by RDC Engineers Pty Ltd on 21 June 2019 (**Appendix D**) which included a BDAR prepared by AREA Environmental Consultants & Communications, a Aboriginal Heritage Assessment Review (AHAR) prepared by Artefact and Aspect, Revised North-West/South-West Catchment Design and Modelling prepared by EnviroAg Australia Pty Ltd and a TIA prepared by RDC Engineers Pty Ltd to address the comments raised in the submissions. In addition, the RTS noted the proposed flood irrigation method for effluent utilisation was made in error and has been removed from the modification proposal.

The RTS was provided to key agencies to consider whether it adequately addressed the issues raised in the submissions. In addition, although Council did not provide a submission on the modification, the RTS was provided to Council for its reference. A summary of the agencies' responses is provided below:

- **OEH** (now the Biodiversity & Conservation Division) reviewed the RTS and accompanying documentation and advised the BDAR required amendments to be made regarding the assessment of biodiversity criteria. OEH staff contacted the author of the BDAR directly to communicate the amendments required.
- **EPA** reviewed the RTS and advised the Department the modification application could be supported. In addition, the EPA provided recommended conditions relating to surface water and groundwater protection measures.
- **DPI** reviewed the RTS and requested details on the existing and proposed dams on the property, a site water balance monitoring program and a schedule of water access shares from the Glen Innes *Water Source in the Water Sharing Plan for the NSW Border Rivers Unregulated and Alluvial Water Sources 2012*. In addition, DPI provided post-approval recommendations for a surface and groundwater monitoring program.
- **RMS** reviewed the RTS and provided no further comment.
- **Council** provided no comment.

On 16 August 2019, the Applicant provided a response to the comments made by DPI requesting additional information. The response was forwarded to DPI who referred the matter to the EPA for its consideration due to changes in the machinery of government. The EPA advised the Department the original response to the RTS provided by the EPA stands and that the modification application could be supported subject to conditions.

6. Assessment

The Department has considered the EA, the issues raised in the submissions, the Applicant's RTS and the original EIS and assessment report. The Department considers the key assessment issues are biodiversity, soils, water quality impacts and site hydrology.

A number of other issues have also been considered in the Department's assessment. These issues are considered to be minor and are addressed in **Table 1** in **Section 6.4**.

6.1 Biodiversity Impacts

The modification includes the increase in manure and effluent applied to paddocked land to improve the growth of ground cover. In total, the subject modification relates to eleven new paddocks, seven of which have been identified for manure utilisation and four paddocks for effluent utilisation. The seven paddocks identified for manure utilisation are known as Rixons, Black Paddock, Four Mile, Perkins 3, Perkins 4, Top Sugarloaf and Middle swamp which have a total area of 158.3 ha and are identified in **Figure 8**. The four paddocks proposed for effluent utilisation are identified as Crouches, Show, Old 2 and Old 3 which have a total area of 94.86 ha and are identified in **Figure 9**.

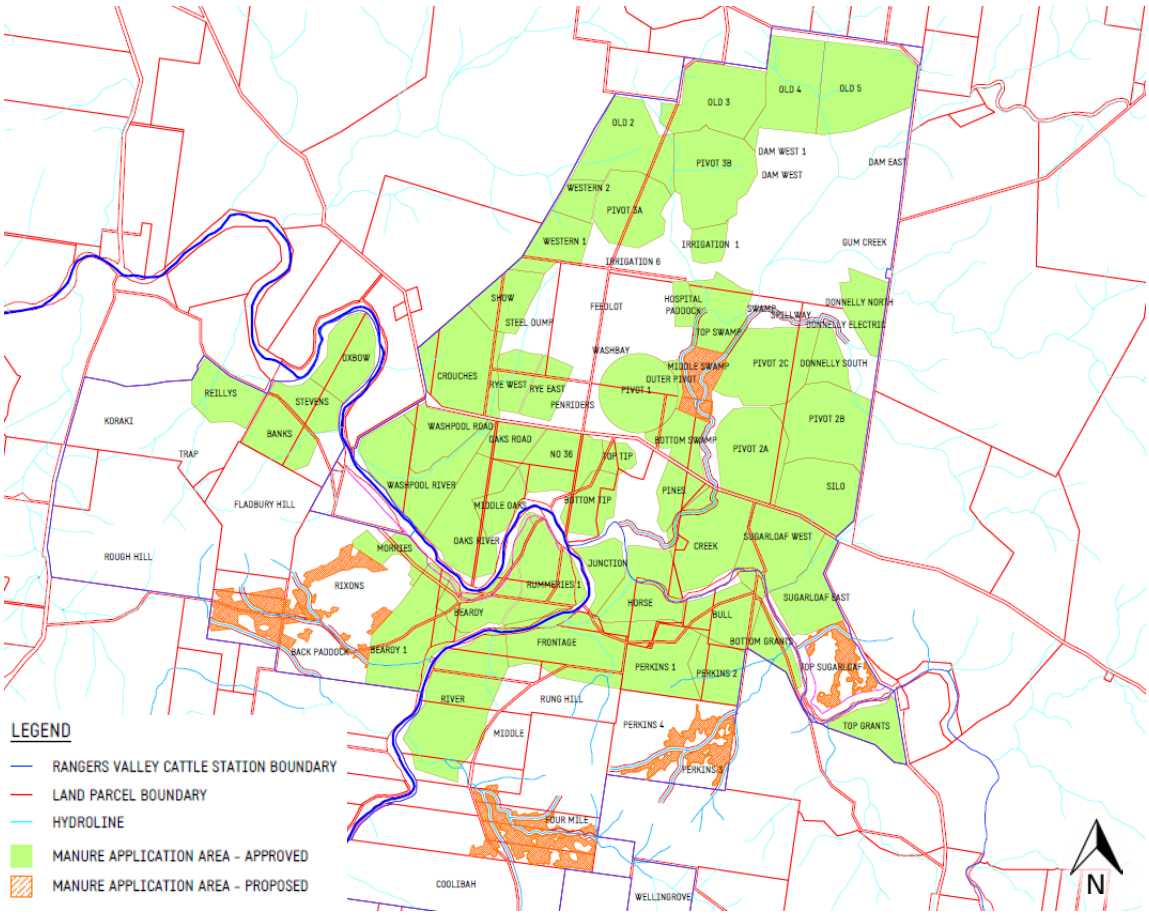

Figure 8 | Manure Utilisation Areas

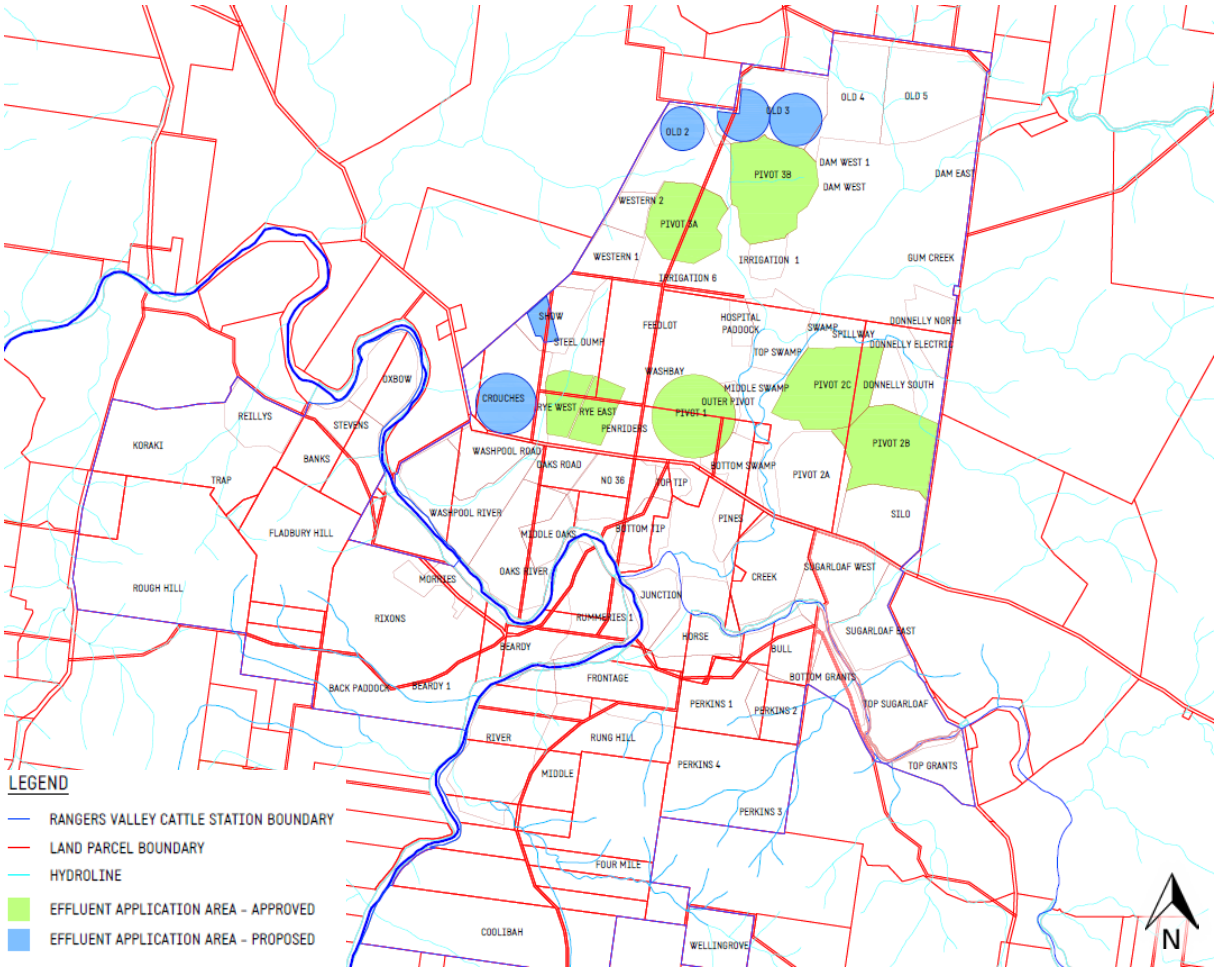

Figure 9 | Effluent Utilisation Areas

Approximately 25.03 ha of vegetation coverage, five living trees and two dead remnant paddock trees are proposed to be removed to facilitate the utilisation of effluent on the paddocks. The proposed area of effluent application is identified as consisting of both native and non-native vegetation.

Issues Raised in Submissions

The former OEH required the Applicant to produce and submit a BDAR prepared by an accredited biodiversity assessor to determine the potential impacts on biodiversity the additional manure and effluent application areas may have on native vegetation and potentially Endangered Ecological Communities.

The Applicant submitted a BDAR prepared by AREA Environmental Consultants & Communication Pty Ltd in accordance with the Biodiversity Assessment Method (BAM) (OEH 2017) and the *Biodiversity Conservation Act 2017* (BC Act). The BDAR notes the proposal area is generally comprised of grassed, grazed or cropped land with minor tree coverage which was selected to avoid impacts on significant vegetation. The BDAR identifies native and non-native vegetation is located within the proposed effluent utilisation areas, particularly White Box Yellow Box Blakely's Red Gum Woodland being an Endangered Ecological Community under the Commonwealth's *Environmental Protection and Biodiversity*

Conservation Act 1999 (EPBC Act). The White Box Yellow Box Blakely's Red Gum Woodland is a Plant Community Type (PCT) identified by the NSW Plant Community Type Control Panel as PCT510. Furthermore, the BDAR noted the removal of PCT510 could have a potentially Serious and Irreversible Impact (SAII).

In addition to the PCT510, the BDAR identified nine threated species that inhabit the site's locality and have the potential to exist within the proposed effluent utilisation areas. Of the nine threatened species identified, two species were additionally identified as potential SAII species being the Regent Honeyeater and the Eastern Cave Bat.

Vegetation Impacts

The BDAR included a field survey of the proposed utilisation areas in accordance with the survey methodology of the BAM. The BDAR mapped the native vegetation cover of the site into four separate zones (see **Figure 10**) based on the quality of ground cover. The zones were classified as follows:

- Zone 1 (86.99 ha) – Areas with more than 50% native ground cover
    - No tree removal required
- Zone 2 (95.75 ha) – Areas with between 0 – 50% native ground cover
    - Removal of 24.44 ha of native vegetation required for effluent utilisation
- Zone 3 – Areas with 0% native ground cover
    - Removal of five living paddock trees and two dead paddock trees for effluent utilisation
- Zone 4 (0.59 ha) – Area with no native ground cover
    - Removal of 0.59 hectares of vegetation.

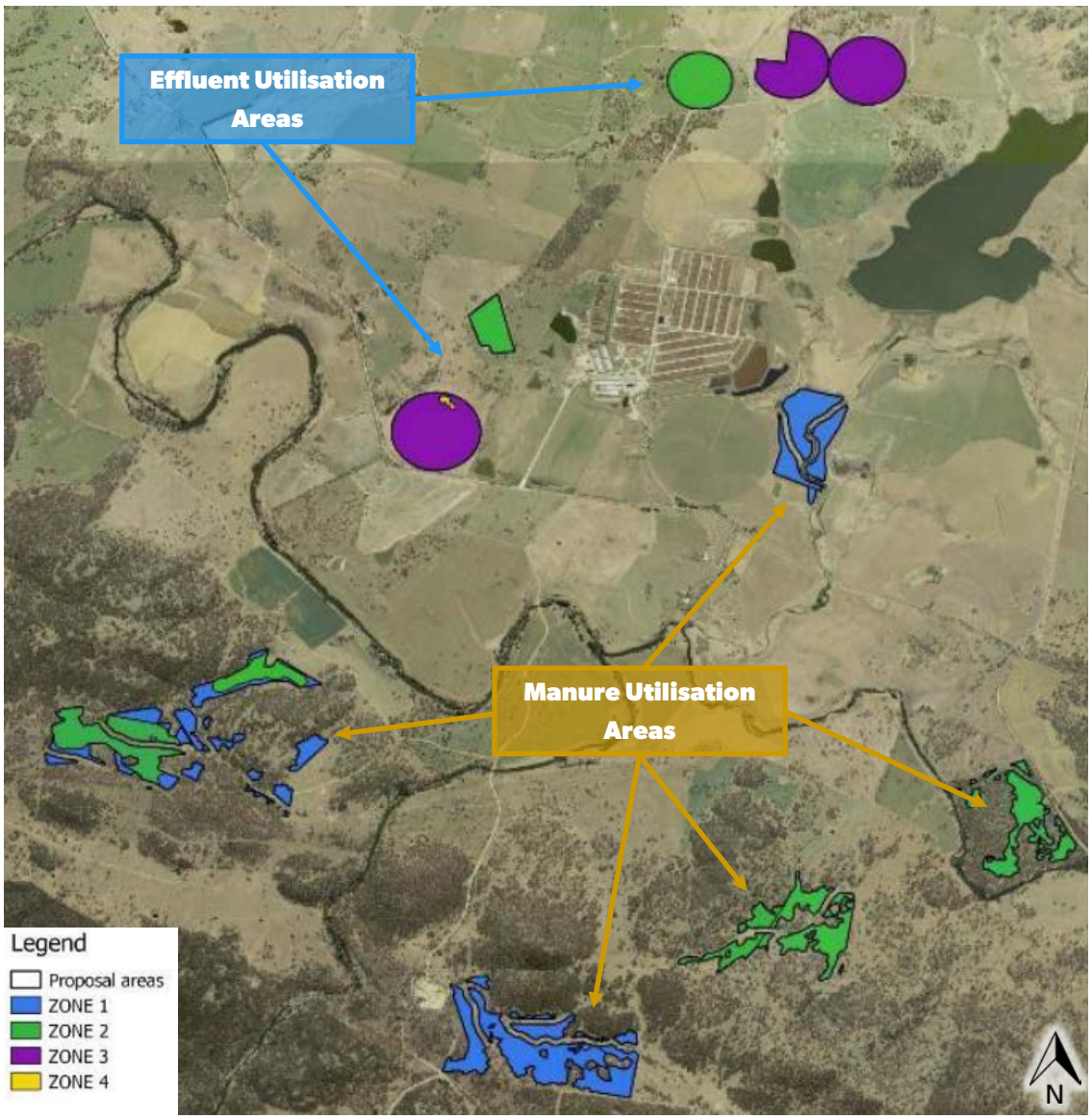

Figure 10 | Vegetation Zones

Assessment in accordance with the BAM indicated the vegetation integrity of Zone 1 requires biodiversity credit offsetting due to the strong structural condition of the vegetation coverage however no vegetation is required to be removed in Zone 1 for effluent or manure utilisation. Zone 3 and Zone 4 currently consist of cropped corn and soybeans with no evident native vegetation. The vegetation of Zone 2 was identified as having low integrity. The BDAR stipulated that given the size and type of the proposal, the impact would be minor and is therefore not considered to be SAII. The BAM calculated that only one biodiversity offset credit applied to the removal of vegetation however, seven credits applied to the removal of paddock trees.

Species Impacts

The BDAR included a threatened species assessment focusing on threatened species with the potential to inhabit PCT510 vegetated areas. Field assessments were undertaken to identify the presence of threatened species using recording devices within the development site in which three threatened microbat species were recorded including the Eastern Bent-winged Bat, the Yellow-bellied sheath-tailed

Bat and the Eastern Cave Bat. The BDAR additionally identified four other threatened species with the potential to occur within the development site. These species include the Glossy Black-Cockatoo, the White-bellied Sea-Eagle, the Little Eagle and the Pale-headed Snake.

The BDAR noted the direct impacts of the development on biodiversity include the removal of potential habitat for threatened fauna and loss of food resources in addition to indirect impacts such as the fragmentation of habitat corridors. The BDAR stipulated the proposed tree removal would reduce the availability of perching and sheltering resources for fauna while the removal vegetation for effluent utilisation would reduce the availability of nectar resources. However, the assessment found the surrounding forested areas present sufficient sources of habitat and food resource opportunities for fauna along with retaining habitat linkages due to the extent of existing forested areas.

The BDAR identified the Eastern Cave Bat is a cavernous dwelling species that utilises rock forms as habitats. The BDAR additionally noted the proposed vegetation removal areas are highly fragmented and are located amongst cropped paddocks and is unlikely to increase the rate of decline for the Regent Honeyeater species. The removal of vegetation is considered in the BDAR to have a negligible impact on the Eastern Cave Bat's habitat and the Regent Honeyeater species, therefore not constituting SAII.

The BDAR provided the offsetting of biodiversity ecosystem credits using the Biodiversity Assessment Method Calculator (BAMC). The BAMC identified the removal of PCT510 vegetation will require the offsetting of one ecosystem credit, the removal of seven paddock trees requiring seven ecosystem credits and a total of 19 species credits required to offset impacts to threatened species with potential habitat on the site.

Department's Position

The Biodiversity & Conservation Division (BCD) reviewed the BDAR provided by the Applicant and concluded biodiversity concerns raised in the submission have been adequately addressed. The Department has reviewed the BDAR and considered the technical expertise of BCD in its assessment. The Department considers the BDAR adequately demonstrates the modification's negligible impact on the site's biodiversity profile, particularly the modification's minimal impacts on the status of threatened species identified within the modification area. The Department additionally notes the site will retain sufficient habitat linkages between the surrounding forested areas as a result of the modification. The Department has also considered the mitigation measures provided in the BDAR, including site personnel inductions, timing of vegetation clearing, salvaging and relocating cleared trees and erosions and sediment controls, are recommended to be implemented by the Applicant to avoid and minimise impacts to biodiversity by the Development.

The Department's assessment concludes the proposed vegetation removal for the increase in effluent and manure utilisation areas will have a negligible impact on biodiversity and potential impacts can be further mitigated or avoided by implementing the mitigation measures outlined within the BDAR submitted in support of the application. Furthermore, a total of 8 ecosystem credits and 19 species credits are required to be purchased by the Applicant to offset the potential impacts of the modification on the site's biodiversity. The Department recommends modifying the development consent to include

conditions requiring the purchase of biodiversity credits and the implementation of biodiversity mitigation measures.

6.2 Soil and Water Quality Impacts

The modification includes the increase in manure and effluent application to an additional eleven paddocks within the site, seven of which have been identified for manure utilisation and four paddocks for effluent utilisation. The modification also includes the removal of effluent utilisation areas that are no longer suitable for effluent application. The additional manure utilisation areas have been selected to more evenly disperse the utilisation of manure on-site by reducing the concentrations of manure applied to paddocks. The increase in effluent and manure utilisation may have impacts on the balance of nutrients in the site's soil profile which could adversely impact the land's capacity to sustain vegetation growth. Furthermore, high levels in concentration of soil nutrients such as Nitrogen (N) and Phosphorus (P) may contaminate site water runoff and impact on the water quality of the Severn River and internal natural drainage.

Effluent Utilisation

The EA states the site will implement effluent captured from the controlled drainage area (CDA) for the irrigation of land surrounding the feedlot. The irrigation methods identified to be employed include lateral movement and centre pivot irrigators with low pressure overhead spray irrigation. Effluent will be applied to 5 additional paddock areas consisting of a total size of 173.7 ha with approximately 139 ML of effluent applied per year. The EA contained a Hydrological Assessment (HA) prepared by EnviroAg Australia Pty Ltd to assess the hydrological performance of the modified feedlot layout.

The HA provided an assessment of the proposed paddock's land capability to ensure the utilisation of effluent would not negatively impact on the soil profile's nutrient levels. The HA identified the soils are capable of yielding plant growth through irrigated agriculture. However, the HA additionally noted that due to the high clay content of the soil profile and low annual rainfall, the soil is prone to high salinity which may impact the soil profile if effluent irrigation is not managed sufficiently. The HA recommends the frequent application of effluent through moderate irrigation and maintaining constant plant growth to maximise the holding capacity of nutrients.

Manure Utilisation

The HA additionally indicates the current rate of manure application being 20 tonnes per hectare once every three years on average does not provide the soil profile with a sufficient nutrient balance subsequent to the harvesting of crops and water runoff. The HA identifies the nutrient budget of the soil profile will reflect a reduction of 405 kilograms (kg) per ha of Nitrogen (N) and a loss of 420 kg per ha of Potassium (K) due to harvest and site runoff. Furthermore, the additional manure utilisation areas will allow for manure to be spread out across the site to decrease the concentrations of manure and potentially reduce risks of groundwater and surface water contamination. The HA recommends the frequent application of manure to the site in conjunction with frequent monitoring until sufficient nutrients are evident in the soil profile for agricultural use.

Issues Raised in Submissions

The EPA and DPI provided comments on the modification in relation to effluent and manure utilisation on the site. The EPA stated its support for the effluent irrigation methods proposed in the EA and notes the effluent applied to the land is not anticipated to exceed the capacity to effectively utilise the effluent. DPI advised in its submission that no issues have been identified with the modification and recommends the development continue to operate in accordance with the national guidelines for beef cattle feedlots in Australia.

The Applicant noted the comments provided in the submissions made by the EPA and DPI in its RTS. Furthermore, the RTS provided effluent buffer distances of 50 m from the Severn River, Beardy Waters and public spaces, and 25 m from internal drainage lines that are serviced by terminal ponds and road infrastructure to mitigate impacts on water quality and disturbance to public areas in response to comments made in the submissions.

The EPA reviewed the RTS including the proposed buffer distances and advised the modification could be supported subject to conditions restricting the application of effluent to 100 m from the Severn and Beard River, 25 m from internal drainage lines serviced by terminal ponds, 50 m from public roads and 50 m from public space, restricting effluent irrigation methods to spray, pivot or drip and to update the soil monitoring program to incorporate the new manure and effluent application areas.

Department's Position

The Department notes the proposed effluent buffer distances are not applicable to existing effluent utilisation areas as the site infrastructure is already established and the Applicant has not sought an amendment to these areas, therefore effluent buffer distances are only to apply to additional utilisation areas proposed as part of this modification.

Although the additional manure application areas have been identified as having a nutrient deficit in the soil profile, the Department considers the recommendations of the submitted HA to frequently apply manure in conjunction with regular soil monitoring will effectively manage the nutrient balance of the soil profile and support continued crop and vegetation growth. Furthermore, the Department considers the HA provided with the EA adequately demonstrates the new effluent areas have sufficient capacity to accommodate the effective utilisation of effluent.

The Department acknowledges the application of effluent and manure to land provides the effective re-use and management of wastewater and cattle waste to sustain the vegetation growth and quality of the site's paddocks and pastures. The Department considers the additional manure utilisation areas will reduce the concentrations of manure on paddocked land across the site and reduce the potential for groundwater contamination. Additionally, the Department notes the low rainfall conditions of the site's locality and the shortage of water access in regional NSW.

The Department notes no concerns were raised in the submissions relating to effluent and manure application and that the modification is supported by the EPA and DPI subject to conditions and compliance with national feedlot guidelines. To strengthen the existing development consent, the

Department considers the Operational Environmental Management Plan (OEMP) should be updated to include management measures and practices of manure and effluent application to land to mitigate impacts on water quality.

The Department is satisfied effluent and manure application can be managed appropriately and the continued buffering of utilisation areas will mitigate potential contamination impacts on water quality and public amenity. The Department recommends the development consent be modified to reference the updated effluent and manure utilisation area plans and to update the OEMP to include manure and effluent utilisation management measures.

6.3 Site Hydrology

The Applicant seeks to modify the layout design of the feedlot pen footprint to incorporate improved drainage technologies into the feedlot design and the increase in manure and effluent utilisation areas across the site. The amendments to the pen layout of the feedlot seek to improve the management of water runoff and drainage, along with improving the general environmental performance of the site in respect to hydrology.

The proposed changes to pen configuration may result in impacts to surface and ground water quality of the site and the overall hydrology of the locality unless adequately managed. The proposed changes to pen configuration are identified as follows:

- relocation of proposed northern most pens to the north-western area of the feedlot to maintain existing center pivot irrigation area
- south-western pens to be orientated north to south to improve drainage
- removal of north-western sediment basin and holding pond and the consolidation of the north-western and south-western catchments (see **Figure 11**).

The proposed modification will result in a reduction of catchment area from the existing 2,215,100 m^2 to 1,918,642 m^2 being a reduction of 296,458 m^2 in total catchment area.

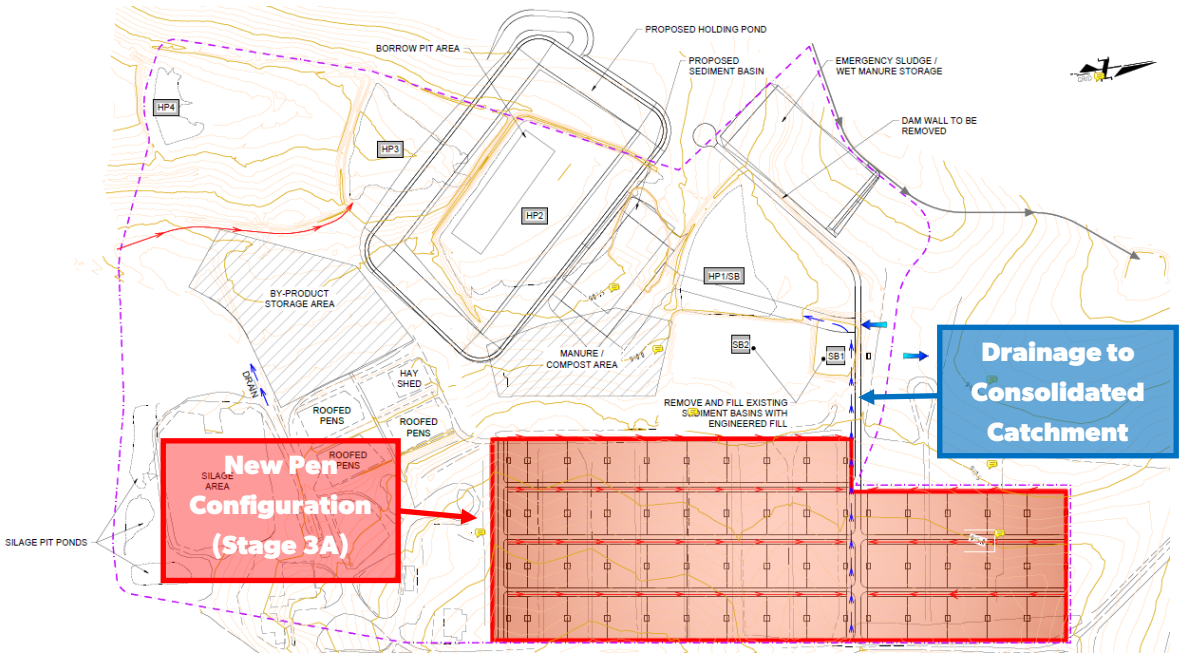

Figure 11 | Consolidated North-West and South-West Catchment

The feedlot's stormwater and liquid runoff will be implemented within a controlled drainage area (CDA) which is designed to divert uncontaminated stormwater to holding ponds for water re-use and intercept water contaminated by manure to sediment basins for manure and effluent utilisation across the site. The new configuration of pens has been designed to reduce runoff traversing through adjoining pens. The runoff will be intercepted by drains located underneath each pen to prevent the runoff from contaminated waters. The liquid runoff is subsequently drained to sub-catchments featuring separate holding ponds.

The HA submitted alongside the EA utilised data recorded from the Feedlot Simulation Model (FSIM) of the original Feedlot design to determine the performance of the revised feedlot catchment, holding pond and effluent areas. The HA found the proposed amendments to the CDA were adequately sized to capture storm and wastewater, particular the sediment and holding pond designs would result in a rate of 1 spill per 20 years.

Issues Raised in Submissions

The EPA and DPI Lands and Water provided a submission on the modification application. Although no objections were made on the modification, comments were made regarding the site's proposed water quality.

The EPA noted in its submission the proposed changes to the sediment basins and holding ponds within the CDA are consistent with the current industry design and performance standards. The EPA also noted that emergency wet weather manure storage area runoff would be captured within the CDA system. DPI Lands and Water advised the Department they had no objections to the modification however, recommended the surface water and groundwater monitoring program be updated to address new effluent irrigation areas. In addition, DPI Lands and Water highlighted the modification of sediment

basins and holding ponds are consistent with Clause 3 of Schedule 1 of the *Water Management (General) Regulation 2018*.

The Department notes that no submission was received by Council on the modification application.

The Applicant provided an RTS prepared by RDC Engineers Pty Ltd to address the comments made by EPA and DPI Lands and Water regarding surface and groundwater. The RTS reaffirmed the proposed changes to the CDA's sediment basins and holding ponds will be constructed in accordance with industry guidelines and performance standards. In particular, the RTS has revised the holding ponds within the south-west catchment area to increase the capacity to 117.23 mega litres (ML) to ensure organic matter overtopping is no greater than once in a 10-year event. Furthermore, the RTS noted the Emergency Wet Weather Manure Storage area will be located within the CDA to capture any liquid runoff.

The EPA reviewed the RTS document and provided no further comments from its original submission in relation to the site's CDA and surface water run-off. DPI Lands and Water provided recommended conditions requesting annual water balance and water storage requirements be outlined in annual reporting.

Department's Position

The Department has reviewed the pen layout and CDA reconfiguration in conjunction with the original EIS and assessment undertaken for the original SSD application. The Department notes the revised FSIM for the modification of holding ponds and the catchment area of the CDA indicates the capacity of the holding ponds and sediment basins are of an acceptable level. Furthermore, the Department notes the drainage design of the area outlined in the HA and RTS demonstrates the peak flow rate of the CDA can accommodate a rainfall event of 1 in 20-year ARI (average recurrence interval).

In addition, the Department considers the proposed modification will reduce the overall footprint of the development and improve the site's operational efficiency regarding the management of water and utilisation of wastewater on site. The Department's assessment concludes the modification to the pen configuration and the CDA to have a negligible impact on the site's water quality and that the existing conditions of the development consent and the conditions of the EPL are acceptable for managing the modifications to the CDA. The Department recommends conditions of the development consent be modified to reflect the numerical changes to the CDA and the insertion of revised drainage and catchment plans.

6.4 Other Issues

Table 1 | Summary of other issues raised

Issue	Findings	Recommended Condition
Noise	• The modification proposes to increase the vehicle delivery hours of the operation from between 7:00am	• Amend conditions 3.37 and 3.38 to reflect increased heavy vehicle access

	and 10:00pm to 5:00am and 10:00pm to improve the operational efficiencies of the site. • The original assessment restricted the development to the hours of between 7:00am and 10:00pm to reduce impacts of the development on the noise amenity of the area. • The EA elaborates that heavy vehicle deliveries currently arrive at varying times during the restricted access period due to truck scheduling. The vehicles are forced to wait at the entry of the site until 7:00am to unload deliveries. • The proposed additional two hours for delivery in the morning would enable the site to handle and facilitate overnight deliveries more efficiently without impacting on the site's daily operations. Furthermore, improved processing of delivery trucks would allow trucks to exit the site prior to school zone restrictions. • The EA notes that no additional heavy vehicle movements are proposed as part of the modification. • The Department notes that Council did not provide a submission on the modification. • The Department has considered the assessment of road traffic noise impacts undertaken in the original EIS and the Department's original assessment report. The assessment noted the traffic noise criteria during the night time period of 10:00pm – 7:00am is 50 dB(A)$L_{Aeq,1hr}$. The Department considers this criterion will continue to be achieved for vehicle movements to the site as no additional vehicle movements are proposed with this modification. • The Department notes that any unloading activities undertaken between 5:00am and 7:00am are not to exceed the operational noise limit of 35 dB(A)$L_{Aeq,15min}$. • The Department has also considered the development's compliance history and notes that no significant noise complaints have been made against the development. • The Department has considered the modification against the original EIS and is satisfied the development will continue to achieve the road traffic noise criteria as no additional vehicle movements are proposed. • The Department recommends amending conditions 3.37 and 3.38 of the consent to reflect the changes in truck access restrictions.	period of 5:00am to 10:00pm.
Traffic Impacts	• The modification includes the increase of heavy vehicle access to the site from 7:00am – 10:00pm to 5:00am – 10:00pm. The increase in heavy vehicle access hours may have impacts on the local and regional traffic network. • The EA discusses the modification to heavy vehicle access restrictions is proposed to improve the operational efficiencies of the development. The EA	• N/A

	notes that currently heavy vehicle deliveries arrive at varying times during the restriction period due to the difficulties in logistics associated with rural deliveries and are unable to access the site until 7:00am. • The EA argues the increase in access time to 5:00am will enable staff to process deliveries with reduced disruption to the feedlot's daily operations. In addition, it would allow heavy vehicles to exit the site earlier with reduced impacts on the local road network during morning peak hours. • The EA notes the proposed increased heavy vehicle site access hour does not include an increase in heavy vehicle movements or general traffic volume. • RMS provided a submission on the modification requesting signage be installed on the New England Highway for both directions approaching the junction of New England Highway and Rangers Valley Road to warn motorists of night time heavy vehicle turning movements. • The Applicant provided an RTS and Traffic Impact Assessment (TIA) prepared by RDC Engineers Pty Ltd as an update of the original TIA considered as part of the original EIS. The TIA confirmed heavy vehicle turning movement signage design in accordance with the Australian Standard (AS1742.2). • RMS reviewed the RTS and TIA and advised the Department its comments had been sufficiently addressed. • The Department notes Council provided no submission on modification and provided no comments on the RTS and TIA. • The Department has reviewed the RTS and TIA and considers the implementation of safety signage to the intersection of Rangers Valley Road and the New England Highway as an acceptable management measure for night-time movements, thereby reducing heaving vehicle traffic impacts on the local road network. • Furthermore, the Department understands the logistical challenges of rural operations and that expediting the processing of deliveries would reduce the impacts of heavy vehicles exiting the site on the local road network during peak morning times. • The Department's assessment concludes the increase in the heavy vehicle access period will not result in any addition heavy vehicle movements and have a minimal impact on the local road network as vehicle numbers remain the same. • The Department recommends a condition be inserted into the consent requiring the implementation of heavy vehicle turning movements in accordance with AS1742.2.	
Air Quality	• The modification includes the reconfiguration of pen areas and the use of an emergency wet weather	• N/A

	manure storage area which may impact the existing odour management of the site. • The EA notes the modification will include the net reduction of odour footprint due to changes to cattle pen areas, sediment basins and the implementation of an emergency wet weather manure storage area. • The EPA provided a submission on the modification and noted the existing odour mitigation measures and the EPL conditions were acceptable in managing odour generated from the site's operations. • The Applicant provided an RTS which further expanded upon EPA's comments by outlining the odour mitigation measures adopted such as frequent pen cleaning, pen slope design for rapid drying surfaces and the placement of treatment ponds. • The EPA reviewed the RTS and advised the Department the project could be supported. In addition, the Department notes that no submission was received from Council. • The Department has considered the reduced footprint due to the modification and acknowledged it is predicted to be less than originally assessed in the EIS of the original approval. • The Department considers the existing odour mitigation measures and the conditions of the EPL are satisfactory in managing the odour impacts of the development.	
Heritage	• The EA notes the modification does not include any changes which warrant the assessment of Aboriginal cultural heritage and refers to the original archaeological assessment undertaken in the EIS. • OEH provided a submission on the modification noting that although they accepted the findings of the aboriginal cultural heritage in the original EIS, taphonomic processes may have altered the archaeological signature of the development site since 2001 and requested an updated Aboriginal Cultural Heritage Assessment Report (ACHAR). • The Applicant provided an ACHAR prepared by Artefact and Aspect as part of the RTS in accordance with the requirements of the Northern Tablelands Local Land Services (LLS). In addition, a field work site assessment was undertaken on 14 November 2018 to inform the findings of the ACHAR. • The ACHAR concluded that no items of Aboriginal cultural heritage were identified on the site during the field assessment of the site. • OEH provided no further comment on the modification regarding Aboriginal cultural heritage. • The Department has reviewed the ACHAR and considered the development's potential to impact on items of Aboriginal cultural heritage as minimal.	• N/A

- The Department's assessment concludes the modification will have a minimal impact on Aboriginal cultural heritage. The Department is satisfied the existing development consent and mitigation measures adequately address Aboriginal cultural heritage impacts.

7. Evaluation

The Department has assessed the proposed modification in accordance with the relevant requirements of the EP&A Act. On balance, the Department considers the proposed modification is appropriate on the basis that:

- the increased manure and effluent utilisation will have a negligible impact on biodiversity values
- the wastewater management practices employed by the Applicant would continue to be effective in managing nutrients in the soil
- the pen re-configuration will improve drainage performance of the site
- it would result in minimal environmental impacts beyond those generated by the approved development
- no objections were made on the modification and no submission was made by Council
- it is consistent with the strategic direction set out for the region in the Regional Plan.

Overall, the Department is satisfied the impacts arising from the proposed modification can be appropriately managed through the Applicant's proposed mitigation measures, existing conditions of consent and the Department's recommended modifying conditions. The Department is satisfied the modification should be approved, subject to the implementation of conditions.

8. Recommendation

It is recommended the Director, Industry Assessments, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report; and
- **determines** the application to modify the consent for the Rangers Valley Feedlot (DA 261-8-2002-i) falls within the scope of section 4.55(1A) of the EP&A Act.
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant approval to the application;
- **modify** the consent DA 261-8-2002-i
- **signs** the attached modification instrument (Appendix E).

Recommended by:

28/11/19

Shaun Williams
Planning Officer
Industry Assessments

Recommended by:

28/11/19

Joanna Bakopanos
Team Leader
Industry Assessments

9. Determination

The recommendation is: **Adopted by:**

Chris Ritchie
Director
Industry Assessments

29/11/19

Appendices

Appendix A – List of Documents

- Rangers Valley Feedlot Expansion – Environmental Impact Statement, Volumes One to Three, Dated August 2002, Prepared by E.A. Systems Pty Ltd.
- Assessment Report – Proposal by Rangers Valley Cattle Station Pty Ltd to expand and operate a cattle feedlot at Rangers Valley, Glen Innes, NSW, Prepared by Department of Infrastructure, Planning and Natural Resources, Dated November 2003.
- New England North West Regional Plan 2036 (NENWRP).

Appendix B – Environmental Assessment

A copy of the Environmental Assessment received by the Department can be found on the Department's website, at the following link:

https://www.planningportal.nsw.gov.au/major-projects/project/12581

Appendix C – Submissions

A copy of the Submissions received by the Department can be found on the Department's website, at the following link:

https://www.planningportal.nsw.gov.au/major-projects/project/12581

Appendix D – Response to Submissions Report

A copy of the Applicant's Response to Submissions report can be found on the Department's website, at the following link:

https://www.planningportal.nsw.gov.au/major-projects/project/12581

Appendix E – Notice of Modification

A copy of the Modification Instrument can be found on the Department's website, at the following link:

https://www.planningportal.nsw.gov.au/major-projects/project/12581