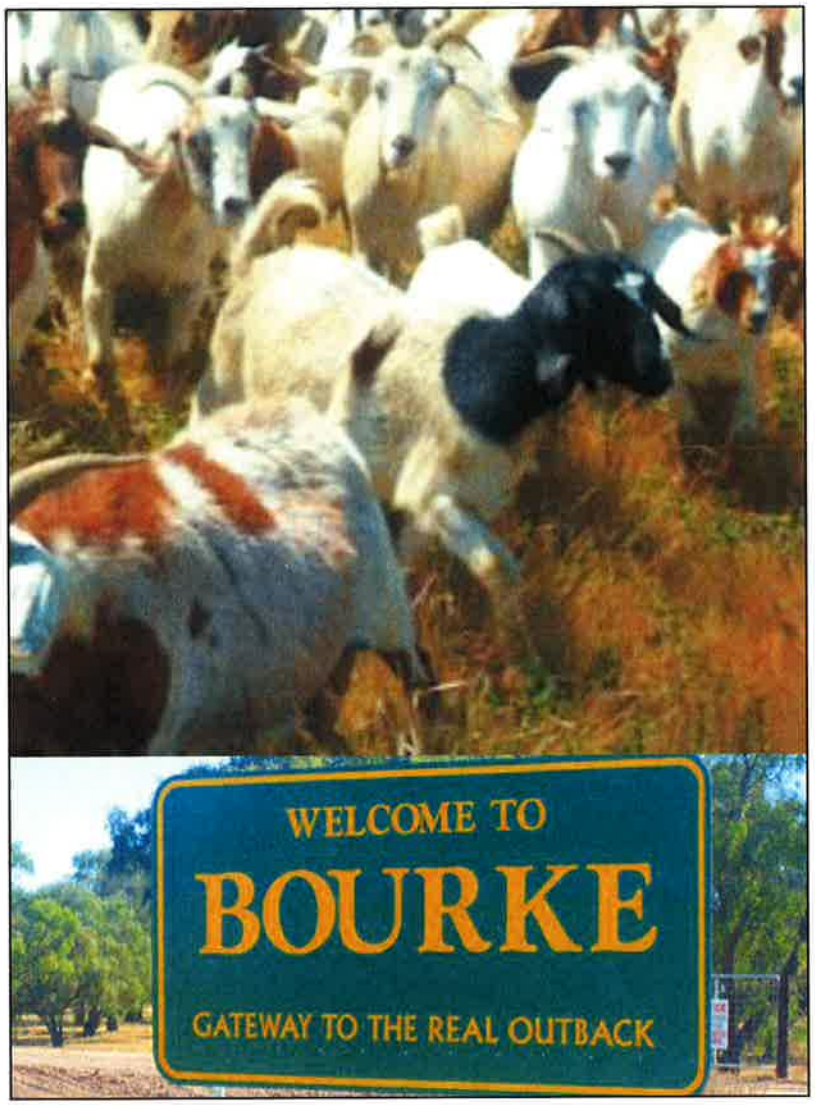
NSW GOVERNMENT | Planning & Environment

ENVIRONMENTAL ASSESSMENT REPORT
Bourke Small Stock Abattoir
(SSD 7268)



Environmental Assessment Report
Section 89H of the *Environmental Planning and Assessment Act 1979*

October 2016

ABBREVIATIONS AND DEFINITIONS

ABS	Australian Bureau of Statistics
AHD	Australian Height Datum
Applicant	CAPRA Developments Pty Limited, or its nominee
AS	Australian Standard
BAL	Basic Left Turn
BAR	Basic Right Turn
BCA	Building Code of Australia
Bund	A watertight wall designed to prevent liquid escaping or entering as a result of seepage or leaks, or to reflect noise
CEMP	Construction Environmental Management Plan
CIV	Capital Investment Value
Commission	Planning Assessment Commission
Construction	The demolition of buildings or works, carrying out of works, including earthworks, erection of buildings and other infrastructure covered by this consent
Council	Bourke Shire Council
Department	Department of Planning and Environment and its successors
Development	The Development as described in the EIS and RTS for the construction and operation of a small stock abattoir, including enabling infrastructure, with the capacity to process up to 6,000 head per day, comprising goats, sheep and lambs
DAWR	Commonwealth Department of Agriculture and Water Resources
DPI	Department of Primary Industries
EIS	Environmental Impact Statement titled "*Bourke Small Stock Abattoir*", prepared by EMM Consulting, dated 3 March 2016
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPI	Environmental Planning Instrument
GICA	Goat Industry Council of Australia
Minister	Minister for Planning
MLA	Meat and Livestock Australia
Odour Units (OU)	Units used to measure the concentration of odorous mixtures
OEH	Office of Environment and Heritage
PM_{10}	Particulate matter up to ten micrometres in size
RMS	Roads and Maritime Services
RTS	Response to Submissions titled "*Bourke Small Stock Abattoir*", prepared by EMM Consulting, dated 23 June 2016
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning and Environment, or nominee
SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2011*

Cover Photograph, Rangeland Goats in Bourke

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EXECUTIVE SUMMARY

Capra Developments Pty Ltd (the Applicant) seeks consent for the construction and operation of a small stock abattoir (the proposed development) approximately 14 kilometres (km) north of Bourke in north western New South Wales (NSW). The proposed development will have the capacity to process up to 6,000 head of livestock per day for export, comprising goats (mainly rangeland goats*), sheep and lambs.

The proposed development includes a stock receipt area and holding yards, abattoir, staff amenities and office, vehicle manoeuvring and parking areas, wastewater treatment and irrigation. Access to the proposed site would be off the Mitchell Highway and the development requires connection to the reticulated power and water networks. Meat products from the abattoir will meet Halal accreditation requirements and will be chilled or frozen for transport to export ports. No rendering of waste will take place on-site, and all waste products will be transported off-site and disposed of at licensed facilities.

Far north-west NSW and far south-west Queensland is home to an estimated 3.3 million rangeland goats. The proposed development will enable the Applicant to take advantage of the main rangeland goat collection points in the Bourke region, minimising the costs involved with live goat transportation.

Australia is currently the world's largest exporter of goat meat. With goat meat the most widely eaten red meat in the world, the proposed development will assist in meeting the immediate and projected long-term export demands.

The proposal represents a significant investment in the Bourke region, with a capital investment value (CIV) of approximately $60 million. The proposal will provide approximately 55 full time equivalent (FTE) jobs during construction and 200 FTE jobs when fully operational, along with flow on economic and social benefits to Bourke and far north-west NSW.

The proposal is classified as State significant development under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it involves development with a CIV of over $30 million for an intensive livestock agriculture operation meeting the criteria in Clause 1 of Schedule 1 in *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). Consequently, the Minister for Planning is the consent authority for the application.

The Department exhibited the development application and accompanying Environmental Impact Statement (EIS) from 11 March 2016 until 26 April 2016. Eight submissions were received, including a submission from Bourke Shire Council (Council), six from public authorities, and one letter of support from a member of the public. There were no objections.

Key issues raised in submissions included:

- community acquired Q-Fever;
- waste disposal;
- wastewater irrigation and potential groundwater contamination;
- Aboriginal cultural heritage;
- biodiversity impacts; and
- water supply.

The Department's assessment of the proposal has considered all relevant matters under Section 79C of the EP&A Act, the objects of the EP&A Act and the principles of ecologically sustainable development. The Department's assessment concluded the remote location of the proposed abattoir, the design of the development, and proposed management measures would appropriately mitigate the environmental impacts. In addition, the proposal would support the local economy and provide much needed regional employment opportunities.

Short-term dust and traffic impacts associated with construction works would be mitigated through the Department's recommended construction management conditions. The operation of the development is not expected to result in any unreasonable impact to surrounding properties or the environment. The proposal is

* goats raised on land where the indigenous vegetation is predominantly grasses, herbs and shrubs suitable for grazing and browsing, and where the land is managed as a natural ecosystem. This includes natural grasslands, shrub lands, deserts and alpine areas (MLA 2006).

expected to have minimal impact on local amenity including air quality, odour and traffic. Residual impacts can be mitigated or managed through implementation of the recommended conditions.

Importantly, the operation of the proposal is expected to result in a net reduction in the level of risk to the community associated with exposure to Q-Fever from the transportation of live goats. This is because goats originating from the Bourke region would be transported relatively shorter distances for processing at the proposed development rather than being transported to existing abattoirs further afield, including interstate.

The Department has recommended a number of conditions including measures to manage and monitor air quality and odour, operational noise, traffic, animal welfare, flooding, water demand, waste including wastewater, disease (Q-Fever), biodiversity and aboriginal heritage. The Department has also recommended conditions for on-going environmental management, including regular incident reporting and independent environmental audits.

The proposal will deliver a substantial economic benefit to the Bourke region and the State of NSW. The key environmental issues have been addressed by the EIS, the Response to Submissions and through the assessment process. The residual impacts of the proposal can be managed by implementation of the recommended conditions. The Department considers the proposal satisfies the relevant environmental performance criteria and that on this basis, it could be approved.

1. BACKGROUND

1.1. The Department's Assessment

This report details the Department of Planning and Environment's (the Department) assessment of the State significant development (SSD) 7268 for the Bourke small stock abattoir. The development involves the construction and operation of a small stock abattoir, associated buildings, access road, parking and ancillary infrastructure. The Department's assessment considers all documentation submitted by the Applicant, including the Environmental Impact Statement (EIS), Response to Submissions (RTS), and submissions received from government agencies, stakeholders and the public. The Department's assessment also considers the legislation and planning instruments relevant to the site and the development.

This report describes the proposed development, surrounding environment, relevant strategic and statutory planning issues, and the issues raised in submissions. The report evaluates the key issues associated with the development and provides recommendations for managing any impacts during construction and operation. The Department's assessment of the Bourke small stock abattoir has concluded the development should be approved, subject to conditions.

1.2. Project Background

Capra Developments Pty Ltd (the Applicant) seeks to construct and operate a small stock abattoir (the development), approximately 14 kilometres (km) north of the township of Bourke in far north-west NSW (refer to **Figure 1)**. The abattoir will have the capacity to process up to 6,000 head per day for export, comprising goats, sheep and lambs. The development also involves the construction of ancillary infrastructure to support the abattoir, including livestock holding yards for up to 11,000 animals, reticulated power, water and telecommunication services, access off the Mitchell Highway, car parking, administration office, and an on-site wastewater treatment system and irrigation.

Meat products from the abattoir will be chilled or frozen for transport. No rendering[b] will take place on-site with waste products to be transported off-site for disposal or further processing at licensed facilities lawfully capable of receiving the waste. Waste process water is proposed to be treated and irrigated on-site.

1.3. Site Description

The proposed development would be located on around 17 hectares (ha), within a 246 ha rural site located off the Mitchell Highway. The site is approximately 14 km north of the township of Bourke, within the Bourke local government area (LGA) in far north-west NSW (refer to **Figure 1** for Regional context) and is legally described as Lot 17 in DP 753546. The site is almost flat with a topographical variation of less than 1 metre (m), is within the catchment of the Darling River, located approximately 2.5 km to the east of the river. There are no drainage lines on the site and the Bourke Shire Council (Council) flood map indicates that the site is not located on flood prone land.

Historic land clearing and past agricultural activities have modified the site's vegetative cover (refer to **Figure 2**) which comprises one plant community type, namely Poplar Box - White Cypress Pine - Wilga - Ironwood Scrubby Woodland, in its shrubby woodlands and derived shrubland form.

The Mitchell Highway road reserve between North Bourke also forms part of the site as enabling infrastructure including site access, reticulated water, electricity and telecommunications are proposed in this location. The Mitchell Highway is straight and level in the vicinity of the site (see **Figure 3**).

[b] Rendering is a process that converts waste animal tissue into stable, value-added materials and can refer to any processing of animal products into more useful materials, or, more narrowly, to the rendering of whole animal fatty tissue into purified fats like lard or tallow.

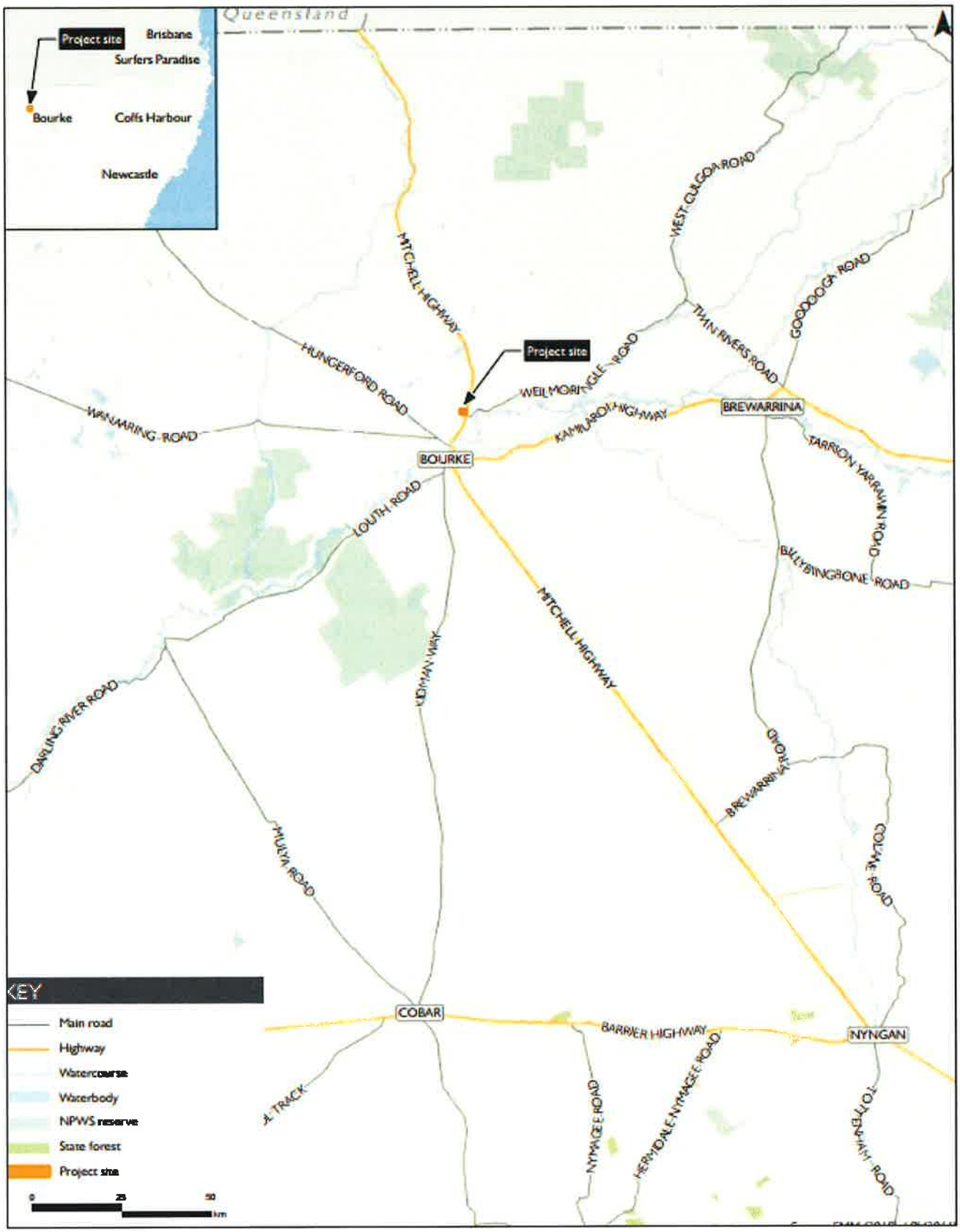

Figure 1: *The Site – Regional context*

Figure 2: *Site Viewed from Mitchell Highway*

Figure 3: *Mitchell Highway Looking South (Note: Site is to the right of image)*

The Applicant has entered into a conditional contract to purchase approximately 2,000 ha of land, known as the Artesian Block, comprising the development site (Lot 17 in DP 753546) as well as Lot 19 in DP 753546, Lot 6297 in DP 768182, Lot 2 in DP 753547, Lot 100 in DP 753547, Lot 102 in DP 753547, Lot 4 in DP 753547, and Lot 3 in DP 753547, as shown in **Figure 4**. The proposed development, including the proposed irrigation area is contained within Lot 17 in DP 753546. The Applicant indicates ownership of the allotment surrounding the site will ensure an effective long-term buffer around the proposed abattoir.

1.4. Surrounding Land Uses

There is no major development in the vicinity of the site. The majority of the surrounding land is zoned RU1 Primary Production. The one exception is the adjoining property to the south of the site which is zoned R5 Large Lot Residential (see **Figure 4**). However, no residential development exists on this lot which is part of the larger landholdings which the Applicant has entered into a contract to purchase.

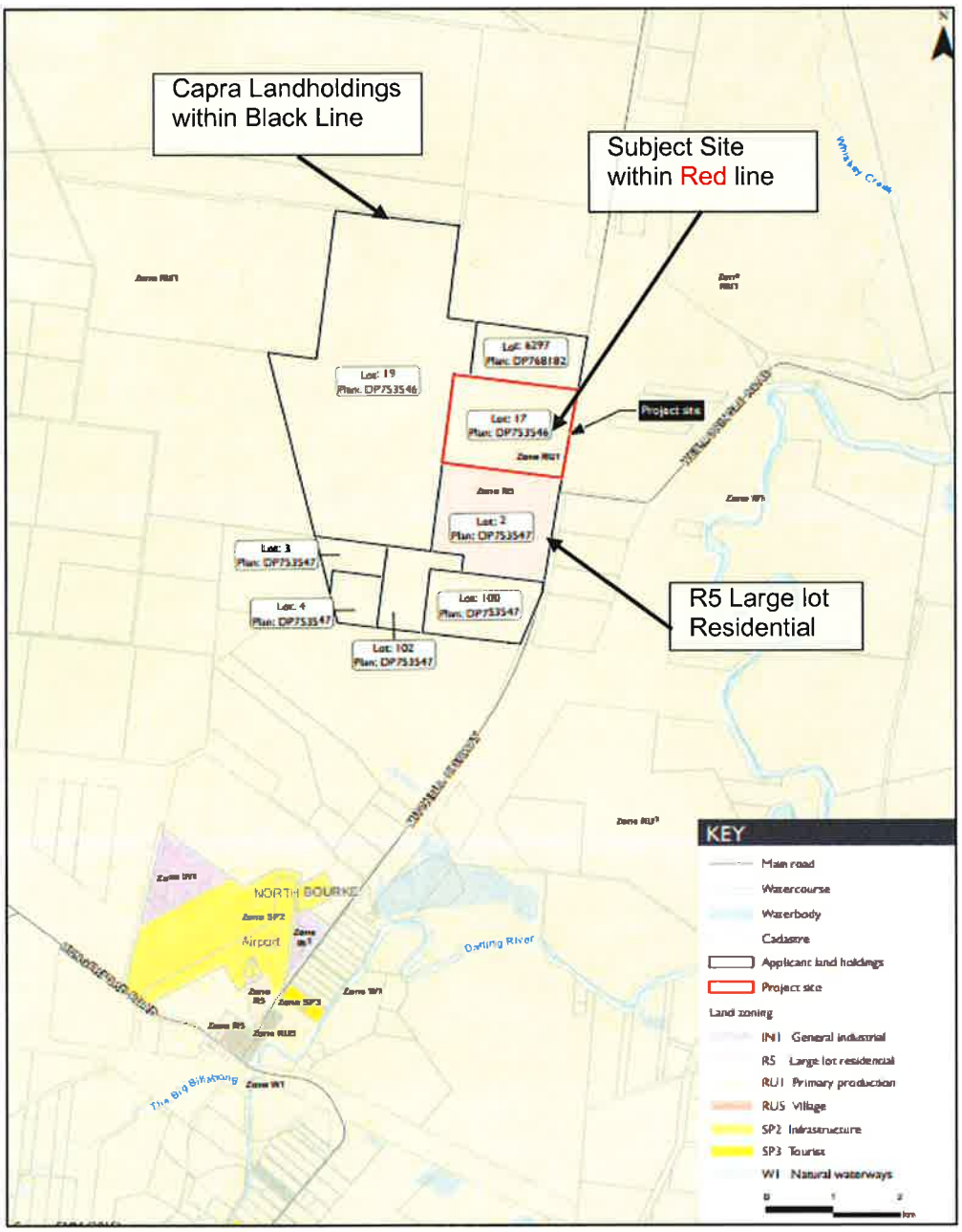

Figure 4: *Site Zoning Context*

There are no residences in the immediate vicinity of the site. The nearest sensitive receivers are two houses, located 5.5 km and 5.8 km to the south of the proposed abattoir buildings, as shown in **Figure 5.**

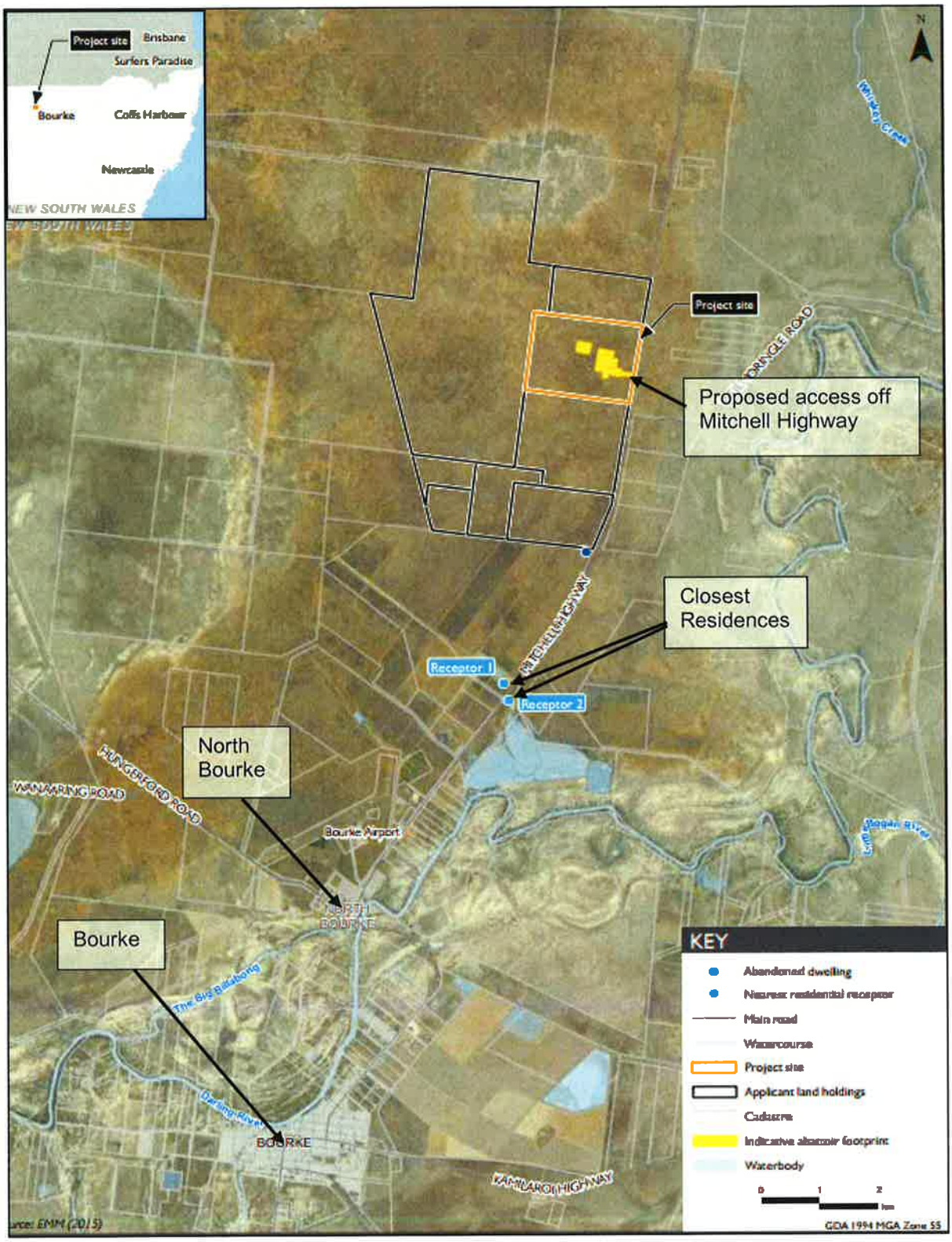

Figure 5: *Site Location and Nearby Residences*

2. PROPOSED DEVELOPMENT

2.1. Description of the Development

The Applicant is proposing to construct and operate a small stock abattoir (the development) with the capacity to process up to 6,000 head per day for export, comprising goats (mainly rangeland goats), sheep and lambs. The major components of the development are summarised in **Table 1** and shown in **Figures 6-8**, and described in full in the Environmental Impact Statement (EIS) (**Appendix D**), and in the RTS (**Appendix F**).

Table 1: Key development components

Aspect	Description
Development Summary	**Construction and operation of a small stock abattoir (including ancillary reticulated water, electricity and telecommunications infrastructure) with a capacity to process up to 6,000 head per day of livestock for export.**
Site area and development footprint	• the site is approximately 246 ha in area; and • the development footprint of the abattoir processing building, ancillary infrastructure and the wastewater treatment ponds would be approximately 17.3 ha. A wastewater irrigation area will cover approximately 38 ha, bringing the total development footprint to 55.3 ha (all located within Lot 17 in DP 753546).
Buildings, structures and processes	• two-storey animal processing building including facilities for dehairing, skinning and boning; • a ground level area of 3,000 m² for offal processing, plant room maintenance and load out facilities; • a 7,100 m² roofed stockyard building adjoining the process building; and • access gatehouse with boom gates, site office, administrative building, yard office and amenities building, power transformer shed, livestock and security fencing, staff parking for 300 vehicles, site office, skin shed, and hay shed.
Operational Road Traffic	• 264 light vehicle (i.e. staff and visitor cars) movements per day; and • 28 heavy vehicle (semi-trailers, rigid trucks and road trains) per day. • **Total**: 292 vehicle movements per day.
Road Works	Intersection of access driveway with the Mitchell Highway and internal access roads, manoeuvring areas and hard stands.
Development Timing	Construction is anticipated to take 10-12 months.
Earthworks	Internal access roads and construction pads for processing building and livestock yards, detention dams, wheel washes, ancillary buildings and ancillary infrastructure.
Power Supply	Reticulated electricity via connection to the existing overhead power line on the Mitchell Highway.
Water supply	Connection to Council's reticulated water supply in North Bourke via new underground pipework within the Mitchell Highway road reserve.
Other supporting Infrastructure	• construction of two new groundwater monitoring bores; • rainwater tanks; • primary process wastewater treatment plant and a series of four secondary treatment ponds; • treated effluent from the ponds will be reused via spray irrigation of paddocks with the development site. A range of crops will be rotated within paddocks depending on the season; and • two gas fired boilers with an installed capacity of up to 3 megawatts (MW) to generate steam for sterilisation and cleaning uses.
Daily wastewater generation	Approximately 700 kilolitres (kl).
Daily water requirements	Approximately 770 kl and up to 1 mega litre (ML).
Hours of Operation	24 hours a day, seven days a week.
Capital Investment Value	Approximately $60 million.
Employment	• 55 full time equivalent (FTE) construction jobs; and • 200 FTE operational jobs.

2.2. Proposed Operations

Livestock will be transported to the abattoir in semi-trailers, B-doubles or road trains and off-loaded into receiving yards adjoining the abattoir processing building. The livestock will then be mustered into a series of covered holding yards, during which time they will be watered. When ready for processing, the livestock will be taken upstairs to holding pens and then to the processing floor. An open holding yard adjacent to the covered stockyards will provide an overflow for the short-term containment of livestock in times of peak production, as shown in **Figure 6**.

Stock will be either sold as a whole carcass or a six-way cut of carcass. Whole carcasses will be chilled to below seven degrees Celsius (7°C) ready for transport. Six-way cut of carcass will be transferred to the cutting area, packed in cartons, palletised and refrigerated for transport. Edible offal will also be packed and chilled for transport.

2.3. Applicant's Need and Justification for the Development

The EIS identifies sound and broadly based justification for the development. There is existing strong export demand for goat meat. The proposal would be well situated in close proximity to the rangeland goat population in north-west NSW and the main goat collection depots in the vicinity of the township of Bourke.

The development will realise a number of opportunities in the goat meat export market. It will provide substantial stimulus to a region in need and with few equivalent economic opportunities.

The construction of the development will require a workforce of 55 people, requiring direct construction expenditure of $60 million. The Applicant considers the flow on effect of this expenditure and employment is in the order of:

- $127 million in direct and indirect regional business turnover; and
- 147 direct and indirect jobs.

The stimulus effects from $60 million direct expenditure and 200 full time equivalent (FTE) jobs during the operational phase would be more substantial. The Applicant estimates the annual stimulus provided to the region when the development is at full production as follows:

- $190 million in direct and indirect regional business turnover; and
- 534 full time FTE jobs.

The Applicant indicates the development will enhance the capacity of the regional economy, which in turn will help stop population decline and the related diminishing availability of services and facilities in and around Bourke (the broad economic and social impacts of the development are discussed in detail in **Section 5.8** of this report).

Finally, the development would assist in the control of a non-native animal. If left uncontrolled, goats could cause major damage to native vegetation and natural pastures and cause soil erosion. Goats also compete with native animals for habitat making them more vulnerable to predators.

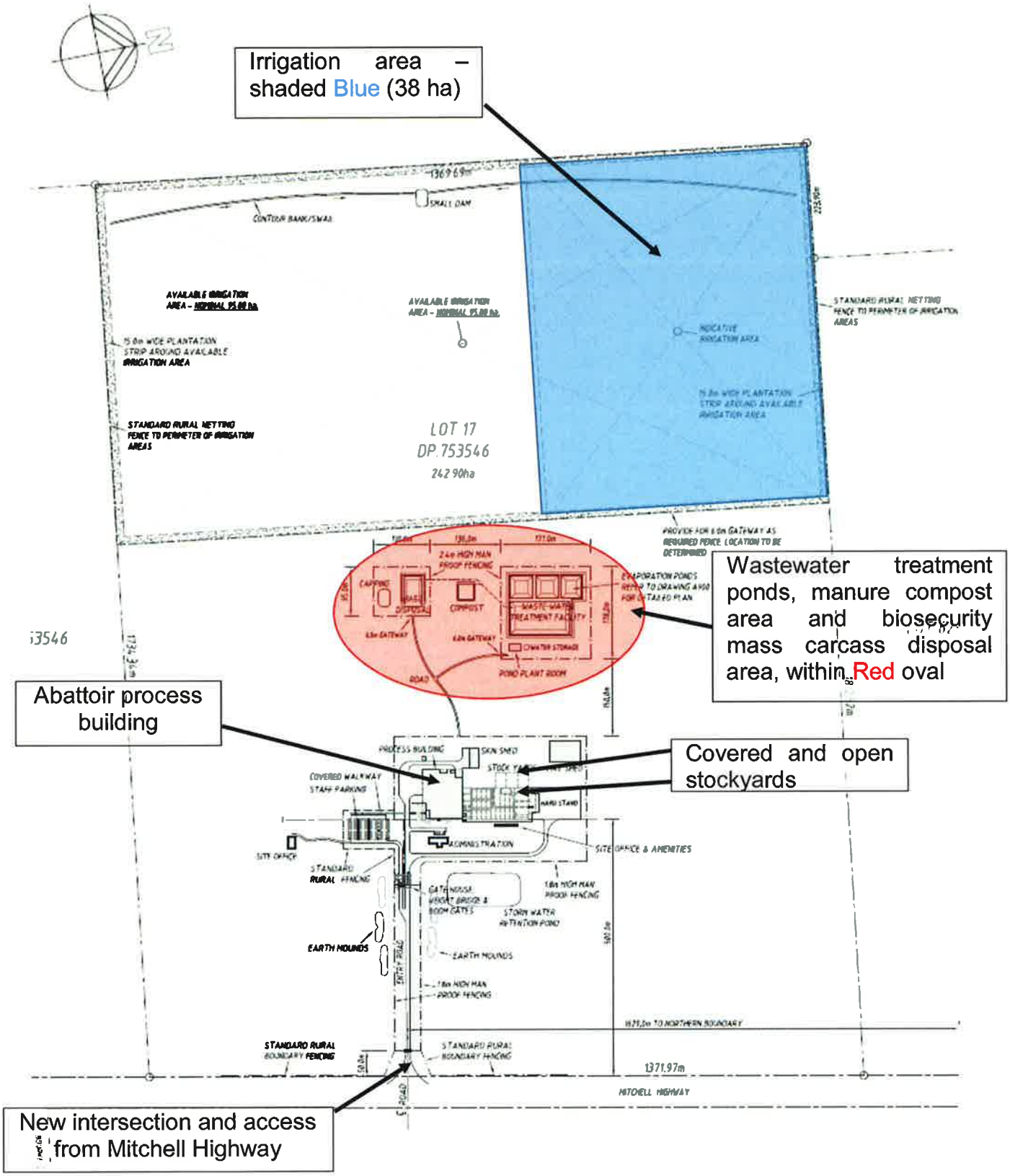

Figure 6: *Site Layout*

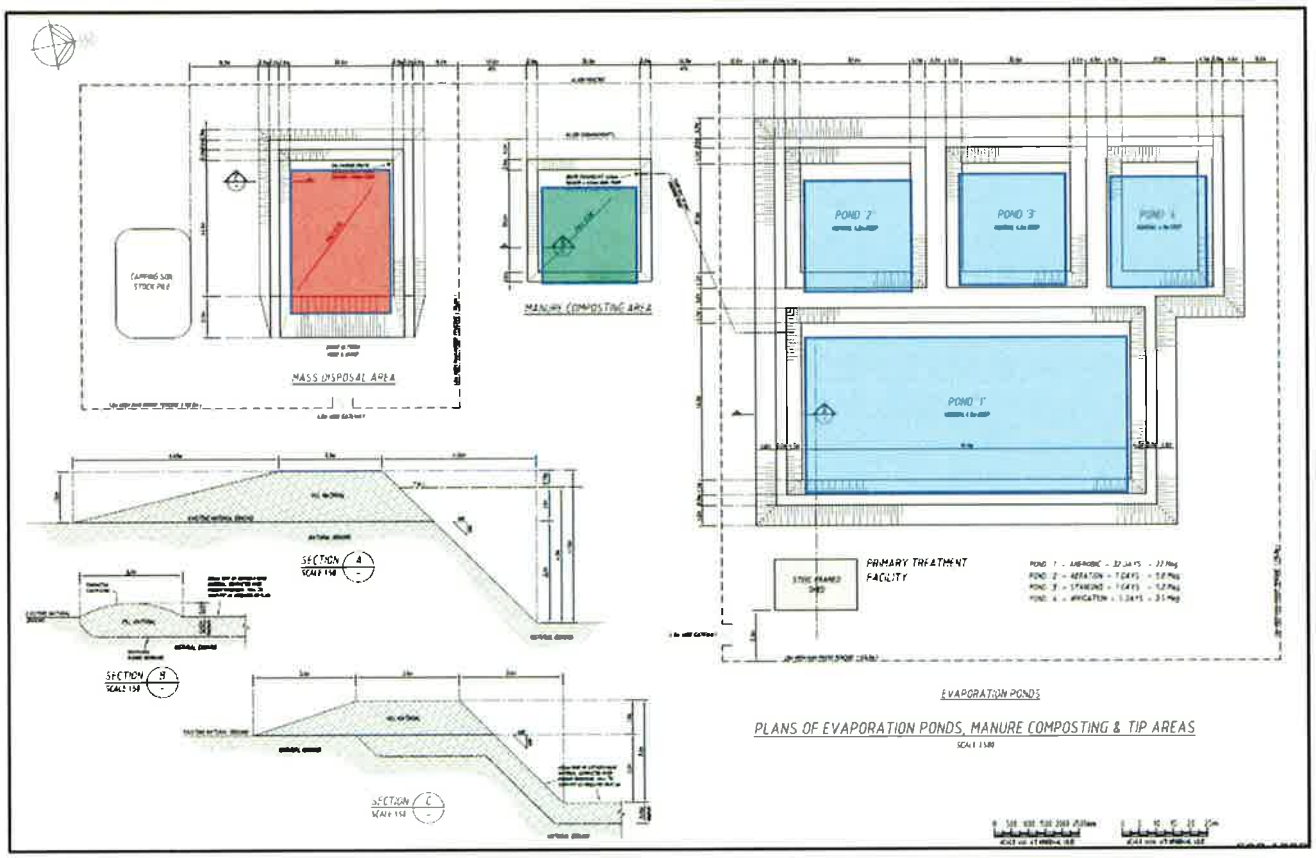

Figure 7: *Wastewater Treatment Ponds (Blue), Manure Composting Area (Green) and Biosecurity Mass Carcass Disposal Area (Red)*

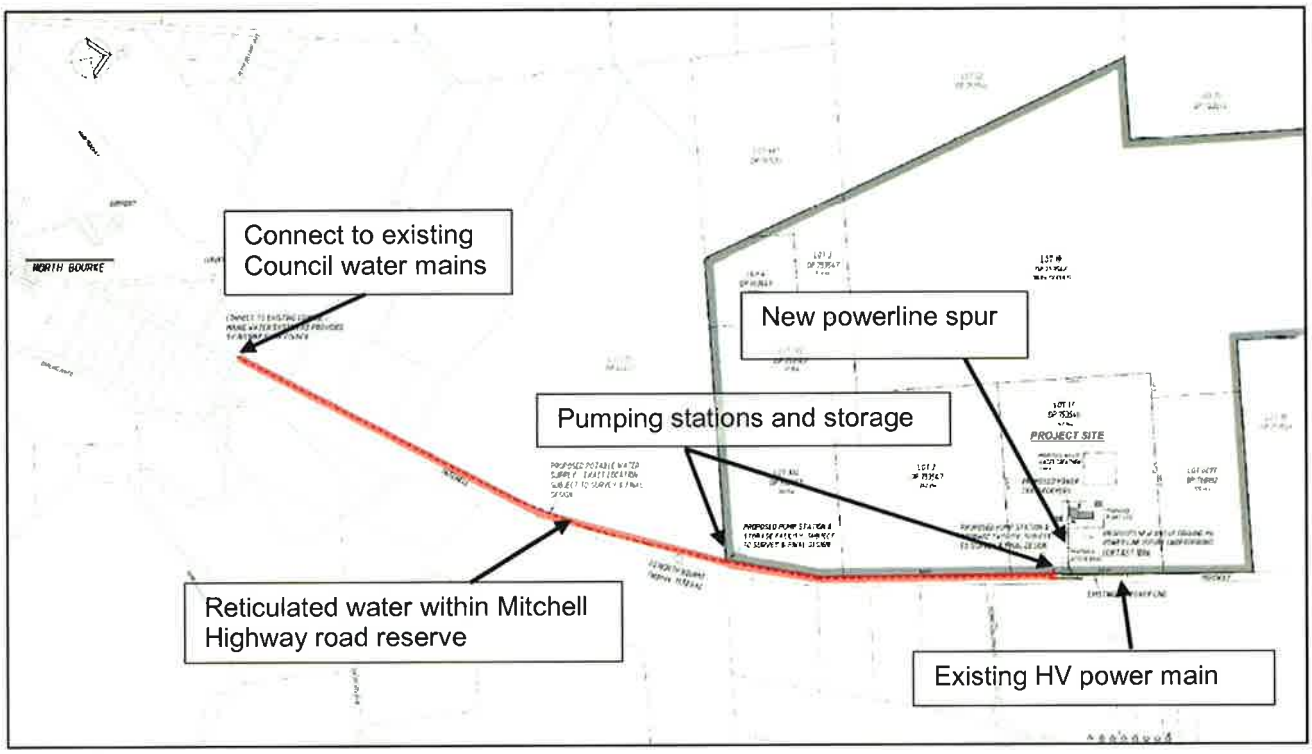

Figure 8: *Proposed reticulated electrical power and water supply*

3. STRATEGIC AND STATUTORY CONTEXT

3.1. Strategic Context

The NSW Government's main priority in *Premier's Priorities* is to restore economic growth by improving the performance of the economy to deliver jobs, opportunities and increased prosperity to the State. The proposal will assist in achieving the State employment target of 150,000 new jobs in the next four years (that is, by 2019). Once complete, the proposed development will result in capital expenditure of $60 million, the creation of 55 construction jobs, and over 200 FTE jobs, in a relatively disadvantaged region.

The development is considered to be consistent with *The Local Strategic Plan 2015-2020* (LSP) for the Local Land Services Western Region. The LSP outlines the strategies and actions that will be implemented over the next five years to achieve the vision of strong communities, resilient landscapes and competitive agriculture in the Western Region. To achieve this regional vision the LSP identifies three primary goals. Of particular relevance to the development is Goal 1: Resilient, self-reliant and prepared local communities, and Goal 2: Bio secure, profitable, productive and sustainable primary industries.

The proposed development will benefit the Bourke region as well as the broader north-west region of NSW by providing support and mechanism for landholders to manage threats, improve biodiversity and identify opportunities to implement land management practices that build productive agricultural enterprises, bio secure primary industries and resilient landscapes.

3.2. State Significant Development

The development is State significant development (SSD) pursuant to section 89C of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it involves development with a Capital Investment Value (CIV) of more than $30 million for the purposes of livestock intensive agriculture. The development has a CIV of approximately $60 million. As such, the development triggers the criteria in Clause 1 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). The Minister for Planning is the consent authority for SSD.

3.3. Permissibility

Under the *Bourke Local Environmental Plan 2012* (LEP 2012), the site is zoned RU1 Primary Production. "Rural Industries" are permissible in the zone. "Livestock processing industries", including abattoirs are a sub set of rural industries. The development is permissible with consent.

3.4. Consent Authority

On 14 September 2011, the Minister delegated the functions to determine SSD applications to the Planning Assessment Commission (the Commission) where reportable political donation applications have been made under section 147 of the EP&A Act.

Under the Ministerial Delegation, the Commission must determine the development, as a reportable political donation has been made by the Applicant.

3.5. Other Approvals

Under section 89K of the EP&A Act, other approvals may be required and must be approved in a manner that is consistent with any Part 4 consent for the SSD under the EP&A Act.

The Environment Protection Authority (EPA) advised an Environmental Protection Licence (EPL) is required under the *Protection of the Environment Operations Act 1997* (POEO Act), and that separate application must be made to the EPA after the Applicant obtains development consent.

Approval from the Roads and Maritime Services (**RMS**) under the *Roads Act 1993*, is also required for the intersection upgrade works discussed in **Section 5**.

3.6. Consideration under Section 79C of the EP&A Act

Section 79C of the EP&A Act sets out the matters to be considered by a consent authority when determining a development application. The Department's consideration of these matters is provided in **Appendix B**. In summary, the Department is satisfied the proposed development is consistent with the requirements of section 79C of the EP&A Act.

3.7. Environmental Planning Instruments

The following Environmental Planning Instruments (EPIs) were considered in the assessment of the proposed development:

- *SEPP (State and Regional Development) 2011*;
- *SEPP (Infrastructure) 2007*;
- *SEPP No. 33 – Hazardous and Offensive Development* (SEPP 33);
- *SEPP No. 55 – Remediation of Land* (SEPP 55);
- *SEPP (Rural Lands) 2008*; and
- *Bourke Local Environmental Plan 2012.*

Detailed consideration of the provisions of all EPIs that apply to the proposed development is provided in **Appendix C** of this report. The Department is satisfied the proposed development complies with the relevant provisions of these EPIs.

3.8. Public Exhibition and Notification

Under Section 89F(1) of the EP&A Act, the Secretary is required to make the development application and any accompanying information of an SSD application publicly available for at least 30 days. The application was on public exhibition from 11 March 2016 until 26 April 2016. Details of the exhibition process and notifications are provided in **Section 4.1**.

3.9. Objects of the EP&A Act

In determining a development application, the consent authority must consider whether the proposed development is consistent with the relevant objects of the EP&A Act. These objects are detailed in Section 5 of the EP&A Act, and include:

(a) to encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

(ii) the promotion and co-ordination of the orderly and economic use and development of land,

(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and

(vii) ecologically sustainable development, and

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

The Department has fully considered the objects of the EP&A Act, including the encouragement of Ecologically Sustainable Development (ESD), in its assessment of the application.

The Department considers that objects 5(a) (i), (ii), (vi) and (vii), 5(b) and 5(c) are most relevant to the merit assessment of this application. The Department has given due consideration to these objects in its assessment of the proposed development (see **Table 2**).

Table 2: Objects of the EP&A Act and Relevance to the Proposed Development

Object	***Consideration***
5(a)(i)	The development would ensure the proper management and development of suitably zoned (that is, primary production) land for the economic enhancement of the community including the provision of 200 FTE jobs within the Bourke region. The development has been designed to meet current best practice environmental standards against the relevant codes of practice for the livestock processing industry. The potential impacts of the development have been minimised by the selection of a remote site within the region which is home to a significant portion of the rangeland goat population, the site layout, design and proposed environmental control measures. The development will deliver a net social and economic benefit to the Bourke region.
5(a)(ii)	The proposed development is located on suitably zoned primary production land and would be used economically to ensure the employment of 200 FTE operational staff.

Object	*Consideration*
5(a)(vi)	The Department's assessment in **Section 5** of this report demonstrates that with the implementation of the recommended conditions of consent, the impacts of the development can be mitigated and/or managed to ensure the environment is protected. The Department's assessment of the Applicant's biodiversity assessment in **Section 5.5** of this report demonstrates biodiversity impacts can be avoided or suitably offset.
5(a)(vii)	The Department's assessment of the proposal in **Section 3.8** indicates that it is consistent with the relevant ESD principles.
5(b)	The Department has assessed the development in consultation with relevant government agencies and Council. The agencies and the Council participated in a planning focus meeting and assisted in the resolution of complex issues related to the development prior to the submission of the EIS. The agencies and the Council also added value to the assessment process through comments provided in response to the EIS and RTS.
5(c)	The application was exhibited in accordance with Section 89F(1) of the EP&A Act to provide public involvement and participation. The Department also consulted with the relevant government agencies and Council during the preparation of the EIS.

3.10. Ecologically Sustainable Development

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

(a) the precautionary principle;
(b) inter-generational equity;
(c) conservation of biological diversity and ecological integrity; and
(d) improved valuation, pricing and incentive mechanisms.

The Department's assessment of the development (see **Section 5**) is based on a conservative and rigorous assessment of the likely impacts of the proposed development.

The Department has considered the need to encourage the principles of ESD, in addition to the need for the proper management and conservation of natural resources, the orderly development of land, the need for the development as a whole, and the protection of the environment including threatened species within **Section 5** of this report.

The Department, in consultation with the Office of Environment and Heritage (OEH), has concluded that the Applicant's biodiversity assessment and proposed management measures demonstrate that biodiversity impacts of the development are minimal and can be managed and/or appropriately offset through the recommended conditions of consent.

3.11. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Under the EPBC Act, assessment and approval is required from the Commonwealth Government if a development is likely to impact on a matter of national environmental significance (MNES), as it is considered to be a 'controlled action'. The EIS for the development included a preliminary assessment of the MNES in relation to the development and concluded the development would not impact on any of these matters, and is therefore not a 'controlled action'. As such, a referral to the Commonwealth Government was not required.

4. CONSULTATION AND SUBMISSIONS

4.1. Consultation by the Department

After accepting the EIS for the application, the Department:

- made it publicly available from **Friday 11 March 2016** until **Tuesday 26 April 2016**:
  - on the Department's website;
  - at the Department's Information Centre (Bridge Street, Sydney);
  - at the Department's Western Regional Office (209 Cobra Street, Dubbo); and
  - at Bourke Shire Council (29 Mitchell Street, Bourke),
- notified landowners in the vicinity of the site about the exhibition period by letter;
- notified relevant State government authorities and Bourke Shire Council by letter; and
- advertised the exhibition in the Sydney Morning Herald, Daily Telegraph, and the Western Herald.

A total of eight submissions were received in response to the Department's exhibition, comprising seven from public authorities, and one from the general public. No objections were received.

Key issues raised in submissions included:
- operational and construction noise;
- operational odour and air quality;
- Q-Fever and the risk of community exposure from the transportation of live goats;
- water consumption and security;
- wastewater disposal, on-site irrigation and potential groundwater contamination;
- impacts on Aboriginal Cultural Heritage;
- biodiversity impacts from clearing; and
- traffic and access.

A summary of the issues raised in submissions is provided below, with a copy of each submission included in **Appendix E**.

4.1.1. Public Authorities

Bourke Shire Council (Council) provided its strong support for the proposal, and considers it would provide a significant economic boost to the local economy including long term employment and growth benefits. Council is committed to ensuring 1 ML of water would be supplied to the facility each day. In addition, Council has obtained federal funding worth $10 million for the enabling infrastructure including water supply and electricity services.

NSW Roads and Maritime Services (RMS) does not object to the development and recommended conditions to require the Applicant to:
- prepare and implement a Construction Traffic Management Plan;
- construct a new intersection on the Mitchell Highway at the point of access to the site; and
- enter into a Works Authorisation Deed (WAD) with the RMS for the proposed Mitchell Highway road works.

NSW Health Far West Local Health District (NSW Health) indicated that the Applicant's Health Risk Assessment (HRA) has addressed the potential for increased risk of community acquired Q-Fever.

The **Environment Protection Authority (EPA)** does not object to the development, however it raised concerns that on-site irrigation of process wastewater could impact on surface and groundwater. These concerns were addressed in the RTS. The potential impacts to surface and groundwater are discussed in detail in **Section 5** of this report.

In addition, the EPA requested the Applicant identify appropriate waste collection or disposal facilities that may lawfully receive animal waste from the abattoir.

The **Office of Environment and Heritage (OEH)** does not object to the proposed development and has recommended cconditions to:
- ensure the loss of biodiversity is offset in accordance with the NSW Biodiversity Offset Policy for Major Projects; and
- require a pre-clearance survey of the irrigation area, management of the native Gurri trees, and the long term management of Aboriginal artefacts.

The **NSW Department of Primary Industries (DPI)** does not object but raised concerns in relation to the security of the proposed water supply. DPI has recommended provisions be made for determining priorities between the abattoir and town water supply requirements in a worst-case scenario of inadequate supply being available to meet all demands. The DPI has recommended conditions to:
- require an Operational Management Plan to be prepared in consultation with DPI Water prior to commencement of operations; and
- require two monitoring bores to be drilled (prior to the commencement of operations) to intercept the water table beneath the site in the Upper Darling Alluvial Groundwater Source to establish the depth and quality of groundwater, and undertake an assessment of the impact of the development against the considerations of the *NSW Aquifer Interference Policy*.

Local Land Services (LLS) Western Region does not object to the proposed development, however it raised concerns in relation to the potential for disruptions to stock movements to and from the adjacent Gidgee Camp Bore travelling stock reserve and stock watering place.

4.1.2. Public Submissions

The submission from a member of the public indicated strong support for the development as it would address Bourke's declining population trend, related loss of services, closure of businesses and loss of employment opportunities.

4.2. Response to Submissions and Supplementary Information

On 28 June 2016, the Applicant submitted a Response to Submissions (**RTS**) report in response to the issues raised by public authorities during the exhibition of the development. The RTS included:

- further details and justification to support a net reduction in live goat transport movements and consequent reduction in the potential for increased risk of community acquired Q-Fever;
- further details and clarification of the on-site wastewater irrigation process, including a commitment to the implementation of an Irrigation Management Plan;
- identification of two waste facilities licenced to receive livestock processing waste;
- identification and design of an on-site mass burial pit area for the disposal of carcasses in the event of a mass mortality event;
- construction and design details of the two proposed groundwater monitoring wells to be installed prior to the commencement of operations; and
- minor design amendments to the proposed intersection with the Mitchell Highway.

The RTS was made publicly available on the Department's website and referred to the EPA, RMS, DPI and OEH to confirm it adequately addressed the issues raised. A summary of the responses is provided below:

- RMS provided no further comment;
- EPA indicated it supports the proposal subject to the inclusion of conditions relating to measures to protect surface water and groundwater from pollution, and requiring the Applicant to secure the services of an appropriately licensed waste facility capable of lawfully accepting animal waste;
- DPI provided no further comment;
- OEH indicated the Applicant has addressed all concerns; and
- DPI agreed that details on the construction of bores and the monitoring of groundwater may be provided post approval, prior to the commencement of operations.

The Department has considered the issues raised in submissions and the Applicant's RTS in its assessment of the development.

4.3. Consultation by the Applicant

To assist in the early identification of potential environmental issues and to facilitate open and transparent engagement, a planning focus meeting (PFM) was convened in Bourke on 1 October 2015. The meeting included Council, key public authorities and other relevant stakeholders. Following this meeting, the Applicant undertook extensive consultation with public authorities to ensure all issues identified at the PFM were addressed in the EIS.

The Applicant has identified the following stakeholder groups:

- Government - Council, State and Commonwealth government agencies;
- Community - local businesses, Bourke and North Bourke residents and surrounding residents, livestock depots around Bourke likely to supply the abattoir, service providers, and local media; and
- Indigenous - registered Aboriginal parties (RAPs), the local indigenous community and those organisations servicing or representing the interests of the local indigenous community.

The Applicant undertook early consultation with the Council in relation to water supply and water security for the development. Early consultation was also undertaken with RAPs, identified in the EIS. The RAPs participated in the Aboriginal cultural heritage survey documented in the EIS. Consultation with the RAPs has been ongoing since the lodgement of the development.

The Applicant's methods of engagement with identified stakeholders, and outcomes of the consultation, are described in in the EIS. The early and ongoing consultation undertaken by the Applicant has assisted in the satisfactory resolution of key planning issues relating to the proposal. Consultation has also facilitated the dissemination of information relating to the development throughout the Bourke community, allowing the planning merits of the development to be understood.

5. ASSESSMENT

The Department has considered the EIS, the issues raised in the submissions, and the Applicant's RTS in its assessment of the development. The Department considers the key assessment issues are:

- Q-Fever and the risk of community exposure;
- Odour and air quality;
- Water security;
- Aboriginal cultural heritage;
- Biodiversity;
- Wastewater irrigation; and
- Waste.

Other assessment issues including traffic, groundwater impacts, noise, social and economic and biosecurity have been addressed in **Table 4** in **Section 5.8**.

5.1. Q-Fever and the Risk of Community Exposure

Q-Fever (*Coxiella burnetii*) is caused by a highly infectious bacteria and can be transmitted from livestock (especially rangeland goats) to humans. With regards to the proposed development, the handling and processing of livestock presents a key risk of transmission of Q-fever to abattoir workers, however a lower risk of transmission has also been identified to livestock transport operators, and communities along transport routes.

The EIS for the proposed development included a Health Risk Assessment (HRA) to assess the potential for an increased risk of Q-Fever transmission to workers at the proposed facility and the broader community.

Q-Fever source and transmission

All livestock can potentially carry Q-Fever, however it is particularly prevalent in rangeland goats with around 10% of any herd infected. Therefore, the source of Q-fever at the proposed abattoir will be livestock brought into the facility (i.e. via stock transported on road trains, see **Figure 9**).

The transmission of Q-Fever is usually via airborne dust particles containing the bacteria, predominantly affecting abattoir workers. It may also be transferred through direct contact with contaminated raw livestock processing material, contaminated water, livestock faeces – even clothing worn by abattoir workers.

The Applicant has speculated that Q-fever can travel through the air in dusty drought type conditions, surviving in dust on the side of the road for up to 3 years. This poses a potential risk to communities located on livestock transportation routes, and transport workers. The Applicant considers that ticks may also be involved in transmission of the bacteria.

Figure 9: *Road Train with 850 Live Goats*

Q-Fever symptoms
The initial symptoms of Q-Fever are very similar to the flu. While most infected people make a full recovery, Q-Fever can result in life-threatening acute respiratory distress syndrome, and has also been associated with other serious debilitating illnesses and side effects. Approximately 2% of identified Q-Fever cases result in death.

Who is at risk?
Q-Fever was once considered to be an occupational health and safety issue for abattoir workers, being first identified in 1937 in Queensland abattoir workers. The risk of transmission of Q-fever to abattoir workers is well known, and a vaccination has been available since 1994. The immunisation of high risk (abattoir) workers is the primary preventative measure for airborne Q-fever. The vaccination is also available to anyone working with animals and animal products, such as farmers.

The transportation of live goats through rural townships may also expose the community to the risk of acquiring Q-Fever. In recognition of the potential threat posed to the wider community, Q-Fever is a notifiable disease throughout Australia, meaning if it is detected in a person presenting themselves to their local GP or hospital, it must be notified nationally and provided to the Commonwealth's National Notifiable Diseases Surveillance System (NNDSS).

The Applicant has identified the following two key exposure groups in its HRA:
- occupational exposure (abattoir workers, contractors, transport operators); and
- residences and communities off-site and along live goat transport routes.

On-site management of Q-Fever
The Applicant has included Safework NSW recommendations for Q-Fever controls in its HRA. The Applicant considers these measures will greatly reduce all potential transmission routes at the proposed facility, and these measures include:
- a Q-Fever vaccination program for all staff, contractors (including livestock transport contractors) and other persons directly involved with the abattoir who may be exposed to contamination and infection;
- an education program for abattoir staff on the risks associated with Q-Fever, implemented as part of staff inductions. The program would ensure staff employed in high risk tasks have appropriate skills training to assist them in identifying and controlling risks;
- design of the abattoir to minimise transmission risks, including:
    - the identification of high-risk work areas where workers are more likely to be exposed to Q-Fever;
    - the installation of appropriate ventilation and dust suppression systems in high risk areas;
    - fencing and security to prevent unauthorised access;
    - the provision of appropriate washing and changing facilities close to high risk areas;
- appropriate waste management measures including ensure all waste transported off-site is in enclosed containers; and
- wastewater treatment to ensure the removal of pathogens.

No concerns were raised in submissions with regards to the occupational exposure of staff to Q-Fever. However, to ensure appropriate controls are in place to protect abattoir staff, the Department has recommended a condition to require the Applicant to implement all available risk management measures in relation to pre-screening and vaccination, workplace design, and safe work practices as detailed in the HRA.

Off-site management of Q-Fever
The HRA recognises that communities and residences within a 5 km radius of an abattoir are the most at risk from the airborne transmission of Q-Fever. This is based on various scientific studies undertaken on outbreaks of Q-Fever.

The nearest residents to the site are identified as Receptor 1 and Receptor 2 (see **Figure 5**), approximately 5.5 km and 5.8 km from the proposed abattoir buildings respectively. The HRA notes that these residents are outside of the 5 km 'higher risk area' for the airborne transmission of Q-Fever.

The HRA considers that communities/residences situated greater than 5 km away from the abattoir are unlikely to come into direct contact with airborne Q-Fever from infected livestock, urine, faeces or animal tissues within the abattoir site. On-site procedures such as dust suppression and appropriate waste handling procedures will assist with managing airborne Q-Fever.

Communities greater than 5 km from the abattoir are considered by the Applicant to be unlikely to come into direct contact with airborne Q-Fever from infected livestock. The risk of windborne transmission of Q-Fever to

the communities of North Bourke and Bourke is considered negligible due to the significant distance of the site from these communities (14 km and 10 km, respectively).

With regards to the transmission of Q-Fever from stock contained within road trains to communities in Bourke and North Bourke along transport routes, the HRA notes hundreds of road trains carrying goats currently pass through the towns of Bourke and North Bourke each year and the proposed development would generate approximately 0.07 additional road train movements of goats per day through Bourke and approximately 0.6 additional movements through North Bourke. This equates to less than one extra truck per day. The HRA considered this increase in road train movements negligible in terms of an increased risk of Q-fever transmission to the Bourke and North Bourke communities.

Nevertheless, the Applicant has proposed the following controls to assist in the prevention of the transmission of Q-Fever along stock transport routes:

- ensuring animals are 'rested' prior to transportation (to prevent urination and defecation during transport); and
- encouraging truck drivers to travel directly to the site during the delivery of stock without stopping in Bourke and North Bourke.

The Department has included these disease management measures in the recommended conditions of consent.

In its submission on the proposed development, Western NSW Local Health District (WNSWLHD) noted it had provided comments to the Applicant during the preparation of the HRA, and considered the final HRA (as exhibited) had addressed any residual concerns regarding the potential for the community to be further exposed to Q-Fever along transportation routes as a result of the proposed development.

No other submissions raised specific concerns or recommended additional control measures to prevent the transmission of Q-fever to communities or residents closest to the proposed development.

With regards to the risk exposure of Q-Fever to communities further away, the Department understands that around 1.6 million goats are currently transported through the town of Bourke, on the way to abattoirs in Charleville (Queensland), Nyngan or Melbourne. These goats are sourced from the five major livestock depots within 150 km of Bourke.

The proposed development would be in close proximity to the rangeland goat population and existing collection depots in the vicinity of Bourke. The Applicant considers the existing live goat transportation from the Bourke region to abattoirs further afield will be reduced as a consequence of the development.

Specifically, heavy vehicles transporting livestock to Charleville would be reduced by around 458 road trains (550,000 goats) annually, and transport to Melbourne reduced by approximately 42 road trains (50,000 goats) annually. On this basis, the Applicant considers it reasonable to conclude the operation of the development will result in a net reduction in the current level of community exposure to Q-Fever from the transportation of live goats.

In addition, the Applicant noted in its RTS there are no binding contracts in relation to the supply of rangeland goats to existing abattoirs. As such, the Department agrees with the Applicant it is likely that farmers/depots would choose to send their goats to the nearest abattoir (being the proposed development), thereby reducing the risk of community acquired Q-Fever along transportation routes to abattoirs further afield.

The Department considers the operation of the development will result in a net reduction of live goat transportation movements and concludes this in turn will reduce the current level of risk of community acquired Q-Fever.

WNSWLHD has indicated the risk of community acquired Q-Fever from the proposal has been addressed by the Applicant's HRA. Based on the information provided in the EIS, RTS and submissions, the Department's assessment considers the proposed development:

- will reduce the existing risk of community acquired Q-Fever from the transportation of live goats; and
- includes appropriate measures to minimise the risk of on-site occupational exposure to Q-fever.

Subject to the implementation of the relevant risk management measures (as outlined above and in the Applicant's HRA), and the recommended conditions of consent, the Department considers the proposed development includes appropriate management measures to reduce the risk of transmission of Q-Fever.

5.2. Odour and Air Quality

The handling and processing of livestock has the potential to generate odour and air quality impacts on the local area, particularly from the handling of goats which are inherently odorous.

The EIS indicated the key odour sources from the proposed development include the abattoir itself, and the proposed wastewater treatment ponds and wastewater irrigation area.

In addition, the development has the potential to generate combustion emissions from the operation of the boilers and dust and particulate matter particularly from truck related traffic.

The nearest dwellings to the development site are Receptors 1 and 2 (see **Figure 11)**. An air quality impact assessment (AQIA), including an odour assessment, was included in the EIS to identify sources of emissions, identify potential mitigation measures and model the potential air quality impacts at the nearest sensitive receptors.

The AQIA was undertaken in accordance with the EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, 2005.*

<u>*Operation*</u>

The operational air quality parameters, namely particulate matter dust emissions and NO_x (oxides of nitrogen), are predicted to be well below relevant criteria. With regards to odour, an operational odour criterion of 6 odour units (OU) was adopted for the odour assessment and agreed to by the EPA. This was determined by considering a number of factors such background levels and public sensitivity.

The Applicant has indicated it would include a number of measures to mitigate odour from the site, including regular cleaning of stock yards, wastewater pond management, ensuring waste is transported in enclosed containers where possible, proper use of the irrigation system to avoid odours and traffic management procedures to prevent truck queuing.

The Applicant has also proposed other mitigation measures to manage air quality issues including a 15 m wide vegetative buffer zone consisting of grasses, shrubs and trees downslope of the irrigation area to slow down and capture any runoff that occurs from the irrigation area, and to further assist in minimising the risk of water pooling and spray drifting off-site.

The dispersion modelling found that odour impacts are unlikely at the nearest dwellings, with a worst-case 99th percentile odour concentration of 4.4 OU predicted, below the criterion of 6.0 OU (see **Figure 11**).

The Department notes the odour modelling results were based on worst-case scenarios including:

- a maximum emission rate of 61.3 $OU.m^3/s/goat$ in the holding pens. Based on literature reviewed by the Applicant, the actual odour emission rate is likely to be much lower;
- a maximum of 11,000 goats in the holding pens. In reality, only 7,000 goats are likely to be on-site at any time; and
- high odour emission rates from sources such as the wastewater treatment plant (and irrigation) and abattoir. The Applicant considers these odour emissions during operations are likely to be lower.

The EPA did not raise any concerns with the AQIA, and noted the Environment Protection Licence (EPL) for the proposed facility would include a condition that the development does not cause or permit the emission of any offensive odour (as defined in Section 129 of the *Protection of the Environment Operations Act 1997*). The Department has also included this requirement in the recommended conditions.

The Department has also included general dust management conditions to ensure all reasonable and feasible measures to reduce dust on-site are employed. Further, the Applicant is required to prepare and implement a Wastewater Irrigation Management Plan, which includes the requirement to maintain wastewater ponds to avoid odour generation (including ensuring crust formation on the anaerobic ponds) and controlling irrigation droplet size.

Based on the information presented in the AQIA and the conservative nature of the assessment, the Department agrees that odour emissions are unlikely to exceed performance goals, as long as appropriate workplace design and best management practices are employed within the proposed development.

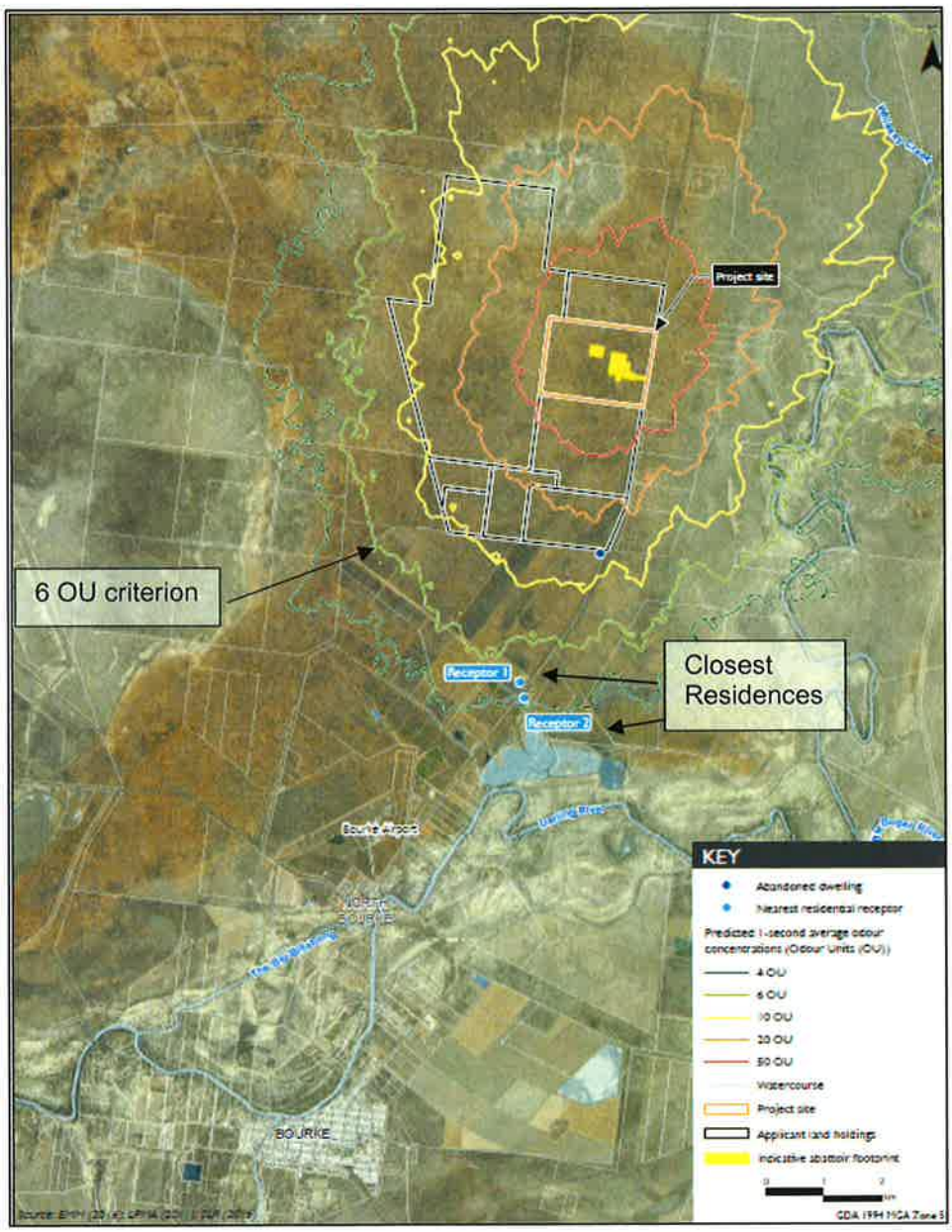

Figure 11: *Predicted ground level odour concentrations*

The Department's notes the reference in the AQIA to guidelines recommending a 500 m buffer between existing residences and proposed abattoirs. The two nearest identified sensitive receptors to the proposed facility are over 5 km from the site, and therefore well beyond the recommended 500 m buffer distance. As such the Department considers the remote location of the site and its relative removal from nearby dwellings and settlements is a key mitigating factor in the assessment of air quality and odour impacts from the proposed development.

The Department's assessment concludes air quality and odour related impacts during the operation of the development are likely to be negligible subject to the implementation of air quality and odour controls, regular reporting and auditing and the recommended conditions of consent.

5.3. Security of Water Supply

The proposed development requires a secure water supply for livestock watering, meat processing, wash down, dust suppression and staff amenities. The town of Bourke and the surrounding region has had water security issues in the past, especially in times of drought. Therefore, an adequate and secure water supply is needed to ensure the water demands of the town and the development are met.

The EIS indicated the proposed development would require around 770 kilolitres (kl) and up to 1 mega litre (ML) of water per day. This equates to around 250 to 365 ML per year, depending on the number of days the development is operational. The development would be serviced by both a raw service connection via Council's water access licence from the Darling River, and through a connection to Council's filtered reticulated water supply system from North Bourke, as shown in **Figure 8**.

The Applicant consulted with Council regarding the development's water supply requirements and confirmed there would be adequate capacity. Council undertook drought modelling which found the water requirements of both the proposed development at full operation and the water requirements of the town water could be maintained. Currently, Council holds a licence for 3,500 ML annually for its town water supply and current usage levels for the town are around 1,500 ML. In Council's submission, it has confirmed that it will supply up to 1 ML of potable water to the facility each day.

In its submission, the DPI acknowledged Council's drought modelling that showed water would be available to the development operating at full capacity during times of drought. However, recommended that provisions be made in either the Council's Drought Management Plan or in the Applicant's Operational Environmental Management Plan (OEMP) for determining priorities between the abattoir and town water supply requirements in a worst case scenario of inadequate supplies being available to meet all demands.

The Department notes the DPI's comments and understands that Council has contingencies in place (having commissioned a bore in mid-July 2016) to provide an emergency water supply to the town in the event of long-term drought conditions. Council further indicated it is in the process of establishing a second bore which is intended to provide a dedicated emergency supply for local industry, including the development. It is anticipated that this bore would be in place prior to the commencement of operations of the development.

The Applicant has committed to continuing discussions with Council in relation to water security, and will develop the details within the OEMP relating to water security in consultation with Council, including addressing water supply priorities between the town and development, which the Department supports. The Department recommends the Applicant prepare a Water Management Plan as part of the OEMP to detail how water use will be managed across the site, including contingency measures in the event of inadequate water supply being available to meet all water demands. The Department's assessment concludes that with the imposition of this condition, coupled with the Council's emergency bores, the development will have access to adequate water supply.

5.4. Aboriginal Cultural Heritage

The proposed development has the potential to impact on Aboriginal cultural sites as the site would have been occupied intermittently by Aboriginal groups over significant periods of time.

The site is located 3.5 km from the Darling River which contains several significant Aboriginal site complexes. OEH Aboriginal Heritage Information Management System (AHIMS) records indicate the proposed development site is located on the outer fringe of such a complex, away from culturally sensitive landforms associated with the river and higher density artefact scatters.

Aboriginal consultation and site surveys

An Aboriginal Cultural Heritage Assessment (ACHA) of the site was undertaken as part of the EIS. The ACHA was undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH, 2010a) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (OEH, 2010b).

During the preparation of the EIS, the Applicant consulted with the following five organisations, who had registered their interest in the project, as registered Aboriginal parties (RAPs):

- Muda Aboriginal Corporation;
- Bourke Aboriginal Health Service (BAHS);
- Murdi Paaki Regional Enterprise Corporation;
- Bourke Aboriginal Community Working Party (BACWP); and
- Murrawarri Traditional Council State.

The RAPs were sent information on the proposed development and the proposed survey assessment method. No comments were received in relation to the proposed survey method. Each RAP was also invited to provide an Aboriginal site officer to participate in the one day site survey on 12 January 2016. An Aboriginal site officer,

from Murdi Paaki Regional Enterprise Corporation, participated in the survey and an Aboriginal representative from BACWP provided a cultural perspective on the site to the survey team.

Representatives of RAPs (including the BACWP and Murrawarri) also visited the site on 4 February 2016. The Murrawarri subsequently made a number of recommendations for the management of identified sites. These recommendations were included in the management and mitigation measures identified in the EIS.

The field survey identified 25 Aboriginal sites within the study area (see **Figure 12**) of varied size from 1 m² to 6,000 m². These sites comprised surface stone artefacts (see **Figure 13**). The ACHA found that subsurface deposits were of 'low potential' given the highly eroded soil conditions in the study area. Twenty-one of these Aboriginal sites were assessed as having low archaeological significance and four were assessed as having moderate significance. No sites were assessed as having high significance.

Eighteen Aboriginal sites will be impacted to some degree by the proposed development. All of the identified artefacts proposed to be disturbed will be salvaged in consultation with the RAPs by surface artefact collection and detailed recording. The remaining seven identified sites will be avoided.

The results of the field survey confirm the study area contains a continuous scatter of stone artefacts across the surface of the landscape. This indicates that the area experienced repeated occupation over an extended period of time. The availability of raw material for creating flaked stone tools supports these conclusions. While numerous artefacts were found, surface artefact densities do not appear to be indicative of subsurface artefact deposits, as the nature of the soil is highly eroded.

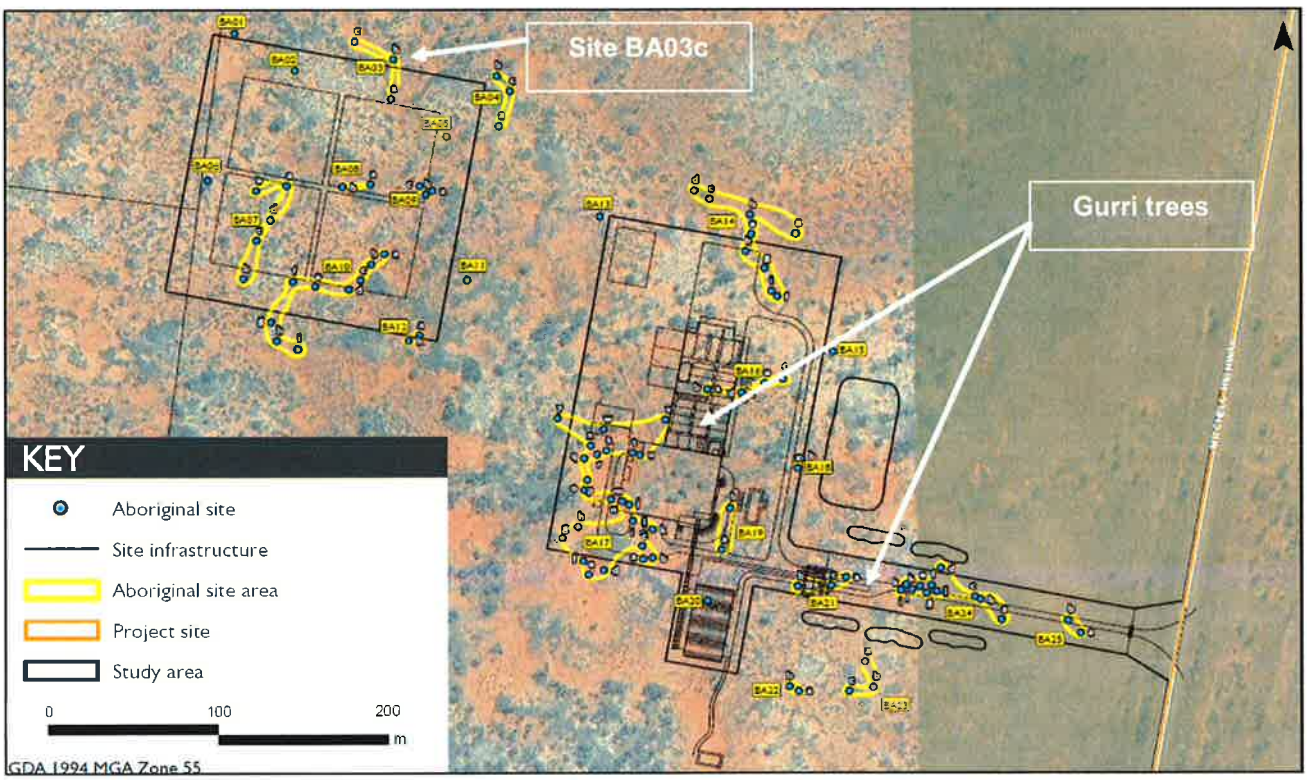

Figure 12: *Location of Aboriginal Sites*

In its submission on the proposed development, OEH raised no concerns with the ACHA, however it expressed the need for a clear long-term management plan for the artefacts found on the site. The Applicant has committed to establishing a 'keeping place' (designated secure area) in its proposed on-site offices to store all Aboriginal stone artefacts. This keeping place will contain:

- all relevant reports and records in hard copy and digital form; and
- artefacts and materials which would be held in a locked cabinet (including some objects on display and the remainder in storage).

The Department considers the impact on Aboriginal cultural heritage to be low to moderate. The long-term management of artefacts would assist in mitigating any impacts.

Figure 13: *A selection of stone artefacts found on the site – BA03C*

Irrigation area

The proposed irrigation area (see **Figure 17**) was not included in the Aboriginal cultural survey because initially, no ground disturbance activities were proposed in this part of the site. The opportunity to beneficially re-use treated wastewater effluent to irrigate crops was identified following completion of the survey.

Vegetation clearing and ploughing of the irrigation area is required to support crop cultivation. These activities also have the potential to impact on archaeological artefacts. The Applicant sent a letter to the RAPs on 18 February 2016 outlining the additional ground disturbance, the potential impacts to unknown Aboriginal objects in the irrigation area and appropriate management recommendations consistent with those presented in the ACHA. The RAPs raised no issues regarding the additional ground disturbance and proposed management recommendations including pre-clearance survey works.

The OEH submission indicates support for the ACHA recommendation for pre-clearance survey work in the proposed irrigation area. OEH also accepts the findings of the archaeology survey and subsequent site prediction estimate that the irrigation areas is likely to contain a low density and frequency of artefact material similar to the material recorded within the proposed development footprint. The OEH has recommended a pre-clearance survey of the irrigation area prior to any clearing of vegetation in this part of the site.

The Applicant has committed to:

- a pre-clearance survey of the irrigation area;
- recording and collection of all stone artefacts using the same methodology for stone artefacts in the remainder of the study area as outlined in ACHA;
- avoidance of Aboriginal sites in the irrigation area - if Aboriginal objects (other than stone artefacts), or sites are identified during the pre-clearance survey of the irrigation area the object or site will:
  - be left in-situ and archaeologically recorded, including taking GPS coordinates;
  - be demarcated and actively managed through fencing and avoidance; and
  - not be subject to vegetation clearance or ploughing.

While avoidance is the primary management measure, if impacts to particular sites cannot be avoided, alternative management measures proportionate to the significance of the site will be developed in consultation with RAPs. The OEH has indicated this approach is acceptable given the surveyed disturbance area has relatively scattered archaeological surface remains and the unlikelihood of significant subsurface archaeological deposits within the proposed irrigation area.

Gurri Trees

There are two Gurri trees (also known as wild orange trees – *Capparis mitchellii)* on the site. The trees are a traditional food source for the local Aboriginal people (see **Figure 14**). One tree is located on the original proposed alignment of the internal access road, while a second tree is located within the footprint of the proposed stock holding yards (see **Figure 12**).

Research and consultation with the Aboriginal community was undertaken to determine whether any socio-cultural heritage value relates specifically to the study area regardless of archaeological evidence. Comments from the Murrawarri and the BACWP identified the two Gurri trees within the study area as items of socio-cultural significance. The trees are not culturally modified (scar trees) and are therefore not strictly classified as 'Aboriginal objects'. However, the trees are culturally significant because they are a traditional food source.

The RTS indicates that the Gurri tree located on the original alignment of the access road will be avoided by relocating the access road. This tree will be managed and protected. However, the second Gurri tree located within the construction footprint is required to be removed.

Figure 14: *Gurri Tree and edible fruit*

The OEH has indicated the removal of the Gurri tree is acceptable subject to a minimum of 12 compensation Gurri trees being planted at a location which provides access to the Aboriginal community for educational and cultural usage. The Applicant will be required to consult with the RAPs to identify options for a preferred re-planting site.

The Department acknowledges that over-time, there has likely been a reduction in the presence of Gurri trees in the local and regional area. While the Department accepts the loss of one of the two Gurri trees on the site, it considers this impact would be adequately compensated for by the requirement for at least 12 replacement Gurri trees be planted in accessible locations. A condition to this effect has been recommended.

The Department considers the ACHA and survey methodology adequately addresses the investigation of the site's Aboriginal cultural heritage values, and that the consultation conducted was consistent with consultation requirements outlined by the OEH. The Department agrees with the OEH appraisal that the proposed irrigation areas is likely to contain a low density and frequency of artefact material similar to the material recorded within the proposed development footprint, and supports the OEH recommendation for a pre-clearance survey of the irrigation area prior to any clearing of vegetation in this part of the site. The Department agrees with the recommendation of the OEH that the Applicant provide a clear long-term management plan for the artefacts found on the site.

The Department has recommended conditions requiring the Applicant to prepare an Aboriginal Cultural Heritage Management Plan (ACHMP) for the site. The Plan would include matters such as the long-term management of artefacts already identified and those within the irrigation area. It would also describe the management actions for the remnant Gurri trees located on the site, and the planting and maintenance requirements for 12 Gurri trees. The Department's assessment concludes the Applicant's commitments and recommended conditions of consent will ensure unavoidable impacts to Aboriginal heritage are appropriately offset and managed.

5.5. Biodiversity

The proposed development has the potential to impact on the biodiversity values of the site as it will require the clearing of approximately 55.3 ha of native vegetation.

A Biodiversity Assessment Report (BAR) and Biodiversity Offset Strategy (BOS) prepared in accordance with the *Framework for Biodiversity Assessment: NSW Offsets Policy for Major Projects* (FBA) was included in the EIS. The BAR provided an assessment of the likely impacts on biodiversity including accurate predictions of vegetation clearing, potential impacts on any threatened species or populations, and a detailed description of the measures to avoid, minimise, mitigate and offset biodiversity impacts.

The BAR identified one plant community type (PCT‡) on the site, namely PCT98 Poplar Box - White Cypress Pine – Wilga - Ironwood Scrubby Woodland, in two vegetation zones on the site (see **Figures 15 and 16**). The BAR considered threatened species, populations and endangered ecological communities (EECs) of potential relevance to the study area.

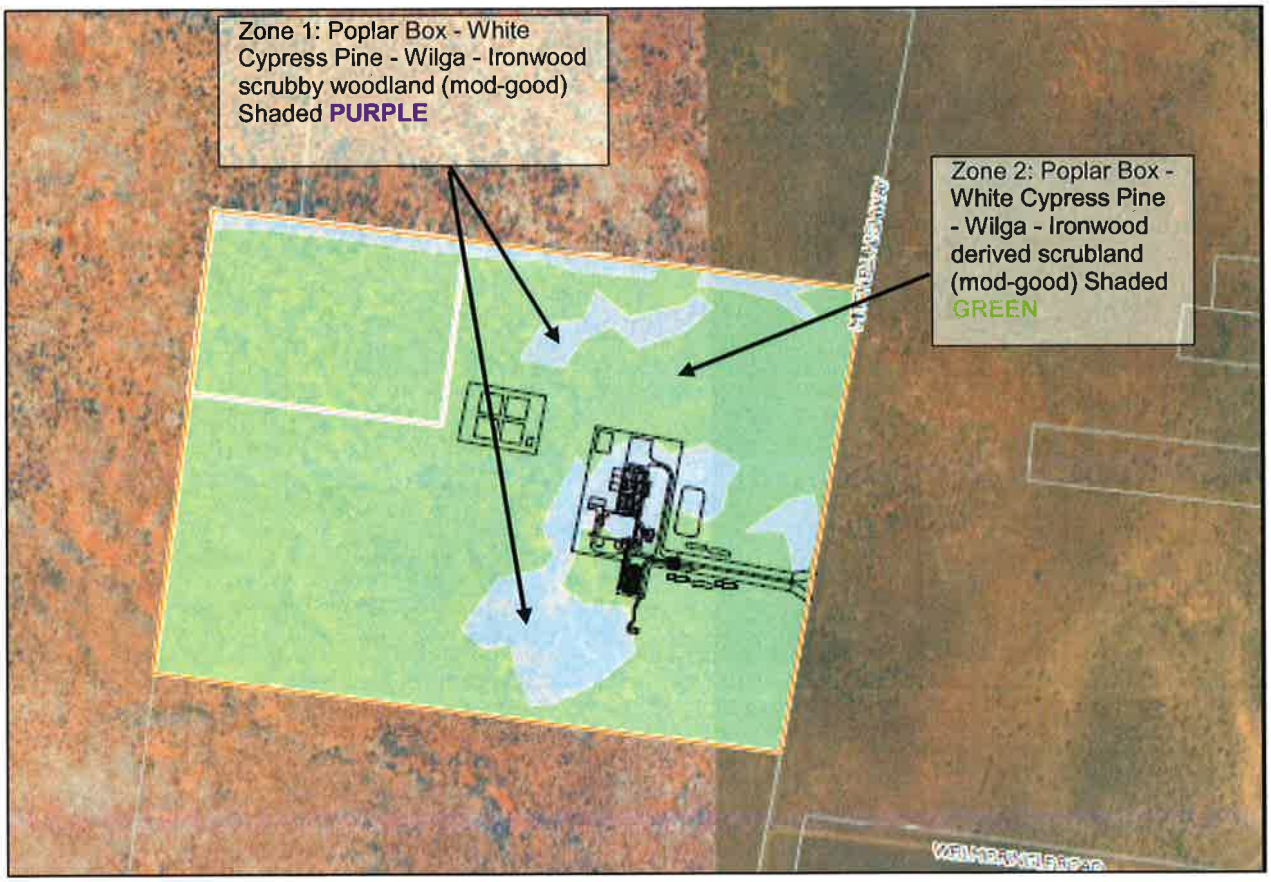

Figure 15: *Vegetation Communities on the site*

The BAR identified the following direct impacts:

- clearing of approximately 9.6 ha of PCT98 in its shrubby woodland form and 45.7 ha of PCT98 in its derived shrubland form (a total of 55.3 ha);
- loss of hollow-bearing trees which provide potential roosting habitat for identified threatened species; and
- minor loss of potential hunting/foraging habitat for identified threatened species.

In addition, the development may have the following indirect impacts:

- increased noise levels may deter fauna from using retained habitat in the area;
- an increase in fauna strike, particularly for kangaroos and wallabies, as result of increased traffic on the Mitchell Highway; and
- attraction of wetland birds to the wastewater treatment ponds.

‡ The NSW plant community type (PCT) classification was developed in 2011 to establish an unambiguous master community-level classification for use in vegetation mapping programs, BioMetric-based regulatory decisions, and as a standard typology for other planning and data gathering programs. More information can be found at http://www.environment.nsw.gov.au/research/Visclassification.htm

Figure 16: *Scrubby Woodland (left) and Derived Scrubland (right)*

The Applicant's measures to avoid, minimise and mitigate the loss in biodiversity include:

- a site selection process involving the selection of a site subject to agricultural land use and containing non-pristine vegetation;
- moving the initial abattoir footprint location north to avoid good condition shrubby woodland; and
- placing the ancillary facilities (that is, pathways, carpark, water treatment ponds, cropping and irrigation area) in lower vegetative condition areas, containing derived shrubland.

The unavoidable removal of 55.3 ha of native vegetation represents a minor impact at the project site scale (77.5% of native vegetation on the site will be retained) and a negligible loss of 0.01% of the PCT at the IBRA[§] subregional scale. However, both the scrubby woodland and the derived shrubland contain potential habitat for threatened species, and offsetting is therefore required.

The Applicant used the FBA Bio-Banking Credit Calculator which determined 2,068 ecosystem credits would be required to offset the impacts of the proposed development. The OEH agree with the calculation of 2,068 ecosystem credits and also agree with the Applicant's proposal to finalise the BOS within 12 months of obtaining development consent. This requirement is addressed by recommended conditions of development consent.

The BAR states that offset surveys will be completed in the project site and the surrounding allotments, (which the Applicant has entered into a contract arrangement to purchase) to inform accurate offset calculations and select a preferred offset site/s.

In its submission, the OEH has identified that a Property Vegetation Plan (PVP) currently applies to these identified areas within the development site. As the FBA requires offsetting to be in addition to any other legal obligations that apply to the land, the OEH noted that any offsets proposed within these areas may not meet principle four of the FBA, *'offsets must be additional to other legal requirements'.*

The Applicant has since liaised with the Local Land Services (LLS) Western Region. The RTS noted that LLS are currently de-registering the PVP. Notwithstanding, the recommended conditions of consent require the Applicant to:

[§] Interim Biogeographic Regionalisation for Australia (IBRA). IBRA was developed in 1993-94 and is endorsed by all levels of government as a key tool for identifying land for conservation under Australia's Strategy for the National Reserve System 2009-2030. More information can be found at https://www.environment.gov.au/land/nrs/science/ibra

- purchase 2,068 ecosystem credits in accordance with the FBA and the NSW Biodiversity Offsets Policy for Major Projects (OEH 2014); and
- ensure any proposed management activities are undertaken in addition to other obligations for conservation that are attached to the land such as actions being carried out under the current PVP.

The Department has included these requirements in the recommended conditions of consent.

The Applicant has undertaken measures to avoid, minimise and mitigate the loss of biodiversity related to the development. An offset to compensate for the unavoidable losses of 55.3 ha of native vegetation has been calculated in accordance with the FBA. Subject to conditions of consent requiring 2,068 ecosystem credits to be secured under a Bio-Banking Agreement in accordance with the *NSW Biodiversity Offset Policy for Major Projects*, within 12 months of obtaining development consent, the Department's assessment concludes the loss of biodiversity values on the site will be adequately compensated.

5.6. Wastewater Irrigation

At full operational capacity, the abattoir will produce approximately 700 kl of wastewater per day, and the proposed development includes the irrigation of wastewater on-site. The irrigation of wastewater has the potential to impact on soils, plants and public health if not undertaken in accordance with the appropriate guidelines. In addition, on-site irrigation has the potential to impact on groundwater resources as a consequence of permeation of wastewater from treatment ponds, on-site, irrigation, and mass animal burial on-site (following a mass mortality event).

The EIS included a detailed effluent management strategy, which included estimates on the likely volume and quality of wastewater generated, treatment methodology and an Irrigation Management Plan (IMP).

The proposed treatment process for wastewater comprises a primary treatment plant and a series of four secondary treatment ponds, and on-site irrigation of treated effluent. The treatment plant will be located next to the wastewater treatment ponds as indicated in **Figure 17**, and has been designed to handle a peak instantaneous flow rate of up to 100 kl/hour. The process will include coarse screening, dissolved air flotation (DAF), and the use of settlement and aerobic and anaerobic treatment ponds.

The Applicant considers the design of the treatment ponds would ensure the required detention period is achieved. After primary treatment, effluent will enter the anaerobic pond for 32 days, after which it will overflow into the aeration pond for seven days. From here, the effluent will flow to the standing pond and then into the irrigation pond, which will be emptied via irrigation onto the adjacent 38 ha irrigation area. The irrigation area would be bunded to prevent clean runoff entering the site and ongoing monitoring is proposed for soil, surface water and groundwater to manage potential impacts.

The 38 ha irrigation area will be divided into two areas; one for summer cropping and one for winter cropping. Although the root zone is not saline, the sub-soil is known to be saline so salt sensitive crops are proposed to be grown (such as sorghum and millet in the warmer months, and wheat, barley and oats in winter).

Despite the Applicant's initial groundwater investigations indicating there is no groundwater at depths of up to 6 m, the Applicant proposes to manage the risk of wastewater permeation and groundwater contamination via the following measures:

- appropriate lining of treatment ponds to prevent the permeation of wastewater;
- the regular removal of sludge from treatment ponds;
- cropping within the irrigation area and landscape planting down gradient from the irrigation area to absorb wastewater nutrients; and
- a monitoring and testing program involving the sinking of two bores (one up-gradient and one down-gradient from the irrigation area) to establish groundwater baseline data and monitor any changes in groundwater quality over time.

The Applicant has acknowledged there are some site limitations that will require the need for mitigation measures to minimise impacts to soil and groundwater caused by irrigation. These measure are likely to include crop rotation, irrigation scheduling and the application of gypsum or lime to condition the soil or adjust soil PH.

In its submission, DPI Water stated it generally supports the proposed wastewater treatment and irrigation process. The EPA, however raised concerns in relation to the uncertainty of effluent characteristics and the soil suitability for irrigation.

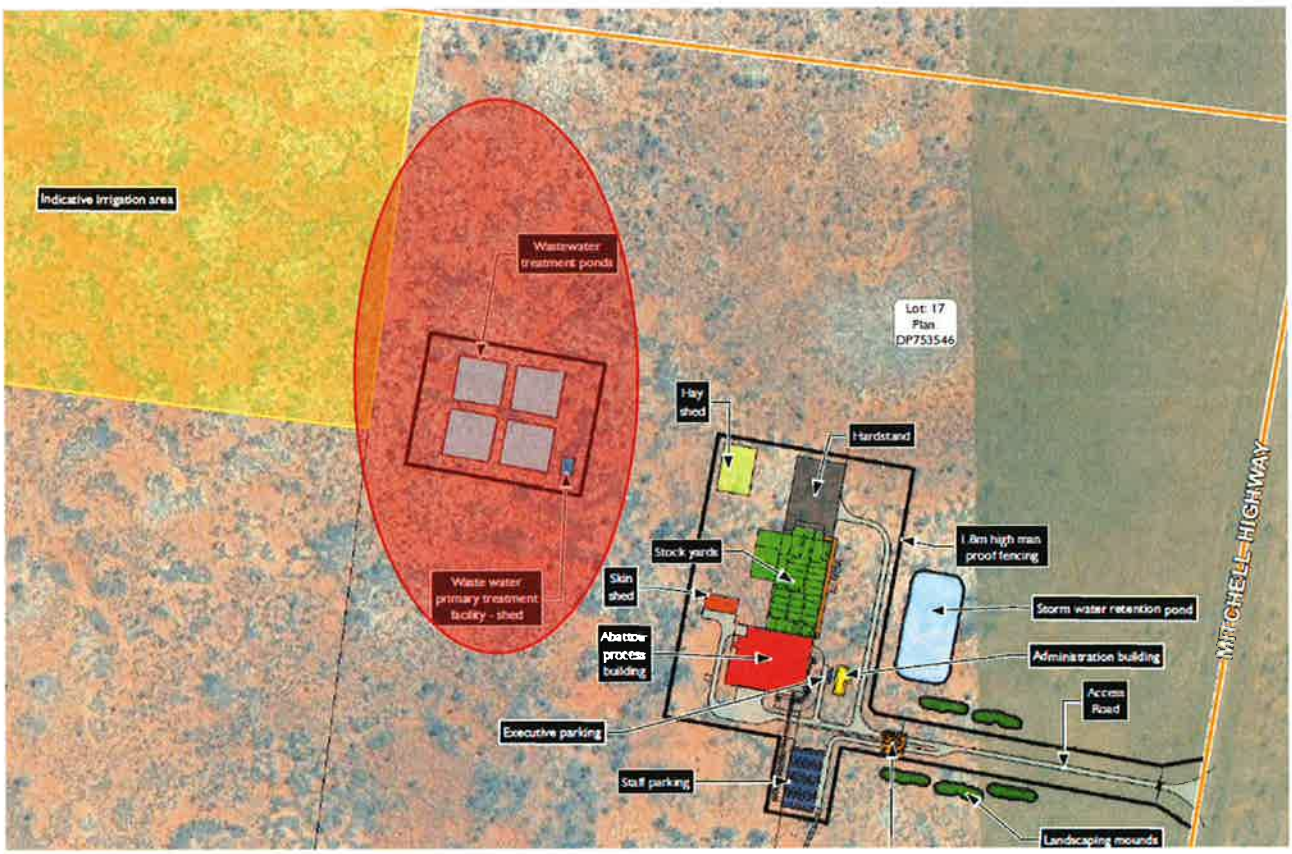

Figure 17: *The Wastewater Treatment Ponds (within Red Oval) and 38 ha Irrigation Area (Yellow Rectangle)*

While the EPA considers the design of the proposed wastewater and irrigation system design is reasonable, it has advised that the Applicant is required to provide additional information on the management controls available to demonstrate ongoing compliance with soil and water quality objectives. This information would be required before the issue of an EPL for the operation of the facility. As such, the Applicant has agreed to provide the following information (as identified by the EPA) in an updated Wastewater and Irrigation Management Plan (WWMP) prior to the commencement of operation:

- controls to minimise manure being flushed from stockyards to effluent treatment systems;
- details on pond specifications such as liners and leak detection systems;
- measures to prevent sludge build up;
- evidence that wet weather effluent storage capacity is adequate;
- a more detailed review of soil conditions to better understand site limitations (including salinity, sodicity, low permeability and low phosphorus sorption capacity);
- clearly defined management actions that are to be implemented when approaching or exceeding agreed sustainability trigger values; and
- an ongoing soil and water monitoring program for irrigation water (volume and quality), soils, and groundwater based on risk factors.

While the EPA has advised the proposed wastewater and irrigation system design is suitable, the Department acknowledges there is some uncertainty over the quality and volume of effluent and the nature of the receiving environment. Consequently, the Department has carefully considered the comments from the EPA and DPI on the proposed wastewater treatment system and expected impacts.

In discussions with the Department, the EPA has confirmed it is confident there are management actions available to the Applicant to ensure no impacts to soil or groundwater occur from the irrigation of wastewater. As such, the Department supports the EPA's recommendations and has included these in the recommended conditions of approval.

DPI considers there is only a minor risk of impact to groundwater as a result of the proposed development because the effluent treatment ponds and effluent irrigation area would overlie less productive groundwater which only occurs sporadically under the proposed site.

In the event that the irrigation area larger than 38 ha is required, the Applicant's RTS indicates an additional 95.8 ha of land would be available for irrigation (see the Applicant's landholdings in **Figure 4**). The Department notes however, that this option would be subject to further assessment (i.e. via a modification to the development consent, if the development is approved).

The Department considers that the provision of an updated WWMP would ensure the risk of groundwater contamination from the proposed wastewater treatment processes including on-site irrigation is low. Conditions have also been recommended to require the installation of bunding, bores and groundwater monitoring.

The EPA has indicated the RTS generally addressed its concerns with wastewater irrigation, however noted a number of specific items to be included in an updated WWMP, including monitoring of the wastewater treatment system, and identification of specific contingency measures to ensure water quality objectives are met.

Specific conditions have therefore been recommended to require the Applicant to:
- prepare and implement an updated WWMP in consultation with the EPA;
- prepare a Water Management Plan in consultation with Council, EPA and DPI detailing surface and groundwater monitoring and management; and
- install two monitoring bores prior to the commencement of operations; one up-gradient and one down-gradient from the irrigation area.

The Department's assessment concludes that the proposed on-site treatment and disposal of wastewater effluent via irrigation is feasible as suitable contingencies are available to the Applicant should soil and wastewater monitoring identify any issues of concern. This includes the use of additional land to irrigate if needed. The environmental concerns in relation to the impact of on-site irrigation on groundwater can be appropriately mitigated through the implementation of bores and groundwater monitoring, and through the preparation and implementation of an updated WWMP.

5.7. Waste

The operation of the development will generate significant quantities of waste. The EIS provided an assessment of quantities and classification of all waste streams generated on-site, including details on waste storage, handling and disposal, and measures that would be implemented to ensure the development is consistent with the aims, objectives and guidance in the *NSW Waste Avoidance and Resource Recovery Strategy 2014* (Waste Strategy).

Table 3 provides details on the indicative volumes and types of waste generated on an annual basis and how it will be managed.

The specific waste streams generated and methods of management are as follows:
- **General daily waste** will be placed into enclosed skips and removed from the site by a licensed contractor on a regular basis for disposal to landfill;
- **Manure** from the undercover stockyards will be collected and stockpiled on-site for reuse;
- **Raw meat waste products** will be collected by a licensed contractor for transport to an off-site licensed facility;
- **Dead on arrival** stock will be stored in the on-site chillers and collected by a licensed contractor (along with the raw meat waste products) for transport to an off-site licensed facility;
- **Skins** will be collected, stored on-site in a skin shed, and transported to an off-site skin processor in Blayney; and
- **Empty chemical containers** will be removed by a chemical supply company engaged to provide a chemical delivery and pickup service direct to the site.

Table 3: Volumes of Waste by Type Per Annum

Waste stream	*Annual quantity*	*Destination*	*Comment*
Nonedible waste	3,300 t	Licensed facility off-site	Offal, bone, blood, fat and trimmings
Hair	500 t	Licensed facility off-site	Approx. 2 t per day produced
Dead animals	150 t	Licensed facility off-site	Assume 0.5% loss rate (dead on arrival)

Waste stream	***Annual quantity***	***Destination***	***Comment***
Skins	375,000 skins	Skin processor in Blayney	25% animals sold with skin off
Manure	75 t	Dried and spread on-site	0.05 kg per head
Paunch	750 t	Licensed facility off-site	0.5 kg per head
Blood	4.5 ML	Licensed facility off-site	Removed from site by tanker
Wastewater	175 t	Irrigation on-site	On-site treatment and irrigation, refer to **Section 5.6**.
Wastewater solids	750 t	Licensed facility off-site	Sludge removed by truck

As noted above, livestock processing waste such as heads, horns, hair, dead animals, paunch (undigested food content) and blood would be disposed of off-site at a suitably licensed waste facility, however, no specific facility/ies were identified. In its submission, Council indicated its waste collection facility is unable to accept livestock processing waste. Subsequent communication with Council indicates the waste facility is unlikely to be upgraded prior to the commencement of operations of the abattoir.

To address this issue, the Department requested the Applicant identify a suitably licensed waste collection facility capable of accepting the livestock processing waste. In its RTS, the Applicant identified the following waste facilities were interested in and have the capability to accept the waste:

- **AJ Bush & Sons (Manufactures) Pty Ltd** render plant in Riverstone, NSW operates under Environment Protection Licence (EPL) 1100 for the activity of rendering or fat extraction, licensed to process more than 4,000 t per year; and
- **Cowra Meat Processors Pty Ltd** operate an abattoir and rendering plant in Cowra, NSW. It holds EPL 564 for the slaughter or processing of animals, and for rendering or fat extraction of greater than 4,000 t per year.

The Applicant states it cannot provide a final location as this is dependent on contractual arrangements that can only be finalised following any development consent.

In its response to the RTS, the EPA indicated that while transport to a licensed facility for rendering appears to be an acceptable option, the Applicant must confirm these facilities can lawfully receive the relevant waste. This is because many licenced facilities are not permitted to receive waste from off-site. Secondly, in accepting the waste, the facilities may exceed their storage or processing capacities under their development consent. Further, under Clause 71 of the *Protection of the Environment Operations (Waste) Regulation 2014* (POEO Waste Regulation) (the 'proximity principle'), waste cannot be disposed of unless it is to a licenced facility that is within 150 km of the origin of the waste or if not within 150 km, must be the closest or second closest to the origin of the waste.

In the event that a suitably licensed waste collection facility cannot be secured, the EPA has indicated the Applicant should develop contingency plans, such as on-site composting and sustainable land application of livestock processing waste or construction of an on-site burial pit. The Department notes the approval of on-site disposal of livestock processing waste has not been sought as part of the proposed development. Any future request for on-site disposal will need to be the subject of a separate application for consideration.

The Department's assessment has determined that the AJ Bush & Sons Riverstone facility is approximately 722 km from the site, and the Cowra Meat Processes facility is approximately 539 km away. While both facilities are more than 150 km from the site, either facility could still satisfy Clause 71(2)(b) of the POEO Waste Regulation as they may be the closest or second closest facility to the development that can lawfully be used for the disposal of the waste. It is not known whether either facility has a restriction on its development consent as to how much waste can be stored or processed.

Whilst it is preferable to know where the waste will be disposed of up front, ultimately, this is a matter for the Applicant. The Department accepts it will be possible to dispose of the waste, whether it is to a licenced facility or some other solution and this information can be provided prior to the commencement of operation. Accordingly, a condition has been recommended requiring the Applicant to provide documentary evidence confirming it has secured a suitably licensed waste collection facility capable of lawfully receiving the relevant waste with consideration to the POEO Act, Clause 71 of the POEO Waste Regulation and current development

consents of receiver facilities, prior to the commencement of operations. The EPA has viewed the draft condition and is satisfied that it addresses the concerns identified above.

The Department has also recommended the Applicant prepare a Waste Management Plan to detail how the waste will be handled, stored and disposed of in accordance with the relevant POEO Act and Regulations.

Subject to the inclusion of the above conditions, the Department's assessment concludes that waste generated by the proposed abattoir can be adequately managed.

5.8. Other Issues

The Department's assessment of other issues relating to the development is provided in **Table 4** below.

Table 4: Assessment of Other Issues

Consideration	Recommended Conditions
Traffic and Transport	
• The EIS included a Traffic Impact Assessment (TIA) of the construction and operational traffic impacts of the proposed development. • Access is proposed to be via a newly constructed intersection off the Mitchell Highway. • The TIA indicated the Mitchell Highway has sufficient capacity to handle the anticipated construction and operational traffic volumes due to current low background traffic volumes. Heavy vehicles account for approximately 29% of existing traffic volume. • A detailed construction traffic assessment was not undertaken, however, the TIA stated heavy vehicles numbers generated by the development would not be noticeable on the Mitchell Highway due to existing heavy vehicle traffic. Nonetheless, the Applicant has committed to preparing a Construction Traffic Management Plan (CEMP) to ensure heavy vehicles are adequately managed. The Department has included this requirement in the conditions of consent. • Access to the site during construction would be via the Mitchell Highway with the Applicant to provide further details of the site access arrangements in the CEMP. The Department has included a condition for the Applicant to provide details of access arrangements in the CEMP. • During operation, the development would generate 264 light vehicle movements and 28 heavy vehicle movements per day. • The assessment found traffic operations, level of service and traffic safety for the future local and regional traffic using the Mitchell Highway route would remain within acceptable levels. • The Applicant proposed a single access into the project site with rural basic left and basic right turn treatments. • The RMS raised no objection to the development but provided a number of recommendations relating to site access design and a requirement for a works authorisation deed to be executed between the Applicant and RMS for works on the Mitchell Highway. • The Applicant has agreed to these recommendations and the Department has included these requirements in the conditions of consent. • The LLS also raised concerns about the risk of collision with stock and disruption to stock movements due to increased traffic along the Mitchell Highway. • The Department considers the risk of collision and disruption to stock routes is unlikely as the increase in traffic volumes would be minor (7% increase). • The Department further notes the number of existing livestock movements travelling through Bourke and North Bourke (to other abattoirs) is anticipated to decrease following the commencement of operation (refer to detailed discussion in **Section 5.1**). • The Department's assessment concludes the traffic and transport impacts associated with the development would be adequately managed.	Require the Applicant to: • prepare a Construction Traffic Management to ensure that construction traffic impacts are appropriately managed; • ensure the private vehicular access road connection to the Mitchell Highway is constructed in accordance with *Austroads Guide to Road Design*; and • enter into a works authorisation deed with the RMS.

Consideration	Recommended Conditions
Noise	
• The EIS included a Noise Impact Assessment to assess the construction and operational noise impacts of the proposed development. • The nearest sensitive receiver is located 5.5 km south of the development. • The key noise sources during construction would be from mobile plant and equipment and heavy vehicles. • The EIS indicated construction noise emissions from the site are predicted to be 35 dB(A), which meets the noise management levels of 40 dB(A) during standard construction hours and 35 dB(A) for construction works outside standard construction hours. • The Applicant proposes to undertake works during standard construction hours, however, the Department acknowledges some work could be undertaken outside of standard construction hours, as it likely to be inaudible at the nearest sensitive receivers. • The EPA and Council did not raise any issues. • The Department considers the risk of off-site impacts would be low, given the nearest sensitive receiver is located more than 5.5 km to the south of the proposed development. • To ensure construction noise is managed, the Department has recommended the Applicant implement reasonable and feasible noise mitigation measures as part of the CEMP for the development. • The key operational noise sources from the development would be from livestock, heavy vehicle and operation of plant and equipment. • The site is proposed to operate 24 hours/day, seven days/week. • The EIS adopted project specific noise criteria of 35 dB(A) for all proposed periods of operation. • The assessment found noise emissions at the closest sensitive receiver is predicted to be 33 dB(A), which meets the project specific noise criteria without the inclusion of additional noise mitigation. • The EPA did not raise any concerns with the noise assessment and recommended operational noise limits of 35 dB(A) (at all periods) be included in the conditions of consent. • The Department concurs with the EPA and has included these limits in the conditions of consent. The Department's assessment concludes operational noise impacts from the development would be negligible and would not result in any unreasonable noise impacts on the amenity of nearby dwellings.	Require the Applicant to: • implement reasonable and feasible noise mitigation measures during construction and operation; and • comply with the operational noise limits recommended by the EPA.
Hazards	
• The EIS identified the types and quantities of dangerous goods to be stored and handled on-site. A screening test of these materials, including ammonia, chlorine and Liquefied Petroleum Gas (LPG), was undertaken and the Applicant concluded the facility was not potentially hazardous. • Therefore, a preliminary hazards analysis (PHA) in accordance with SEPP 33 was not prepared by the Applicant. • While the Department does not consider the development to be potentially hazardous based on the materials listed in the EIS, the quantities of chlorine and LPG to be stored at the site are just below the threshold quantities listed in the Department's Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (Applying SEPP 33). • The EIS stated the proposed quantity of ammonia to be stored at the site would be between 4.5-5 tonnes (t). If the quantity of ammonia to be stored is equal or more than 5 tonnes, the facility will be considered as potentially hazardous under SEPP 33 and as such, a PHA would be required. • To ensure the development is consistent with the provisions of SEPP 33, a condition of approval has been recommended to ensure the quantity of ammonia to be stored/handled on-site is below 5 t at all times.	Require the Applicant to: • ensure the quantities of dangerous goods stored and handled at the site are below the threshold quantities listed in Applying SEPP 33 at all times.

Consideration	Recommended Conditions
• While the quantity of ammonia proposed to be stored is close to the SEPP 33 threshold, the Department considers the off-site risk to the public and nearby development is minimal because: o most of the land surrounding the site is zoned rural. From a land use safety perspective, this is considered as an industrial land use; o only Lot 2 DP 753547 (adjacent to the project site) is zoned R5 Large Lot Residential. The Department notes there is no residential development on this lot and the Applicant has entered into a conditional contract to purchase this lot; o the nearest existing residential land use is 5.5 km away; and o the site is isolated and is removed from the closest urban settlements at North Bourke and Bourke (10 km and 12 km, respectively). • The Department's assessment concludes the proposal would not present an unreasonable off-site risk to the public.	
Mass Mortality, Livestock Disposal and Biosecurity	
• Disease outbreak and mass mortality are operational risks of intensive livestock processing. • To prevent disease outbreak, the Applicant has committed to a number of operational hygiene and biosecurity measures including strict animal inspection regimes both at the source and upon arrival, and adopting standards set by the NSW Food Authority and the Commonwealth Department of Agriculture. • The Applicant's preferred option for disposal of carcasses in situations where there is a mass mortality event, is on-site mass burial (burial pit) within the site or surrounding land holdings. • The EPA and DPI sought clarification from the Applicant regarding the proposed management of the burial pit to prevent the pollution of groundwater and surface water. • In its RTS, the Applicant identified an area within the site to construct the burial pit, which it confirmed would be lined and bunded to ensure there is no potential for groundwater contamination. • The Applicant also confirmed it would notify the EPA and DPI in the event of an outbreak and it would ensure strict quarantine controls and standard operating procedures are implemented in line with industry best practice. • The EPA and DPI were satisfied with this approach. The Department considers that given the isolation of the site and the Applicant's commitments, the risks associated with biosecurity disease outbreak and mass carcass disposal would be appropriately mitigated. • However, to ensure this risk is minimised, the Department has recommended the Applicant prepare an Emergency Disposal and Biosecurity Protocol in consultation with EPA, DPI and Council detailing the proposed mass mortality procedures. • The Department's assessment concludes the risk of disease outbreak and mass mortality would be minimal, subject to conditions.	Require the Applicant to: • prepare an Emergency Disposal and Biosecurity Protocol in consultation with Council, EPA and DPI.
Economic and Social Impacts	
• The development would have a positive economic and social impact in the Bourke region. The capital investment of the development (being $60 million) together with direct and indirect job creation will stimulate the local economy. • Currently, there is unmet demand in existing and emerging export markets for goat meat as currently 75% of the rangeland goat population are in NSW. • Goats are currently being processed in abattoirs in Charleville (south east Queensland), Nyngan and Victoria, and shipped to export markets via Port of Brisbane and Port of Melbourne, rather than NSW based ports as there is currently no purpose-built goat abattoir in NSW.	No conditions are required.

Consideration	Recommended Conditions
• Due to its location and close proximity to the main Bourke goat collection depots, the development is expected to have a comparative advantage in terms of transport costs over existing abattoirs currently receiving goats from the Bourke region. • The development would create 55 full-time equivalent (FTE) jobs during construction, 200 FTE jobs during operation. The annual economic stimulus provided to the region when the development is fully operational is estimated to be $150 million with 534 FTE jobs. • The Department considers the development would enhance the capacity of the regional economy, which in turn would address regional population decline. In addition, the construction and operational jobs created by the development would lead to further direct and indirect employment opportunities. • The Department also considers the impact on demand for housing and community services as a result of the development would be minimal, given there is enough housing stock and existing capacity in most community services sectors in Bourke. • The Department's assessment concludes that overall, the development would have a positive social and economic impact on the NSW regional economy.	
Construction Air Quality	
• The development has the potential to generate dust emissions during earthworks and construction of infrastructure. • The EIS includes an Air Quality Impact Assessment (AQIA) for the development and undertook a risk based assessment to assess dust impacts. • The qualitative screening assessment found the risk of air quality impacts due to fugitive dust emissions was negligible, given the distance between the project site and the nearest sensitive receptors (located approximately 5.5 km and 5.8 km from the proposed abattoir buildings, respectively). • The Applicant has committed to a implementing a number of best practice dust management measures in its Construction Environmental Management Plan (CEMP) including minimising the use of material stockpiles, installing erosion and sediment control structures and ensuring heavy vehicles have their loads covered. • The EPA and Council did not raise any concerns. • The Department's assessment concludes dust emissions can be adequately managed via the Applicant's commitments, which are to be incorporated into the CEMP.	Require the Applicant to: • implement best practice dust management measures in the CEMP; and • ensure the development is operating within standard construction hours.
Surface Water and Stormwater Management	
• There are no drainage lines, creeks or rivers on the site. • During construction activities, the Applicant has proposed to implement erosion and sedimentation controls in accordance with the guideline, "Managing Urban Stormwater: Soils and Construction (Landcom 2004)". • During operation, stormwater would be collected from abattoir roof buildings and sealed roads, and directed to a stormwater retention pond with a capacity of 2.8 ML. The Applicant proposes to use this water to irrigate the landscaping along the access road and around buildings. • Council did not raise any concerns. • The EPA has recommended bunding of the wastewater treatment pond area, mass burial area and manure stockpiling area to prevent the inflow of clean water to these areas. • The Department's assessment concludes that surface water would be managed appropriately with these controls in place and has included the requirement to prepare and implement a Water Management Plan and implement adequate bunding in the recommended conditions of approval.	Require the Applicant to: • prepare a Water Management Plan to implement the Applicant's commitments; and • bund the irrigation area, four process wastewater treatment ponds, mass-burial area and the manure stockpiling area shall to prevent clean stormwater run-off from entering these areas.

6. CONCLUSION

The Department has assessed the merits of the development having regard to the objects of the EP&A Act and the principles of ecologically sustainable development.

The proposed development will provide much needed employment in the Bourke region and provide flow on benefits to the wider State economy. The proposal represents a direct investment of approximately $60 million while supporting the regions rangeland goat livestock industry and supply chains. The indirect and direct job creation and economic stimulus provided by the development will assist in providing significant social and economic stimulus to the Bourke region.

Council is extremely supportive of the proposal and is committed to ensuring available water supply for the facility. Council has been successful in obtaining $10 million in federal funding for the provision of enabling infrastructure.

The proposed development site is ideally located, being close to the natural source of rangeland goats and collection points in western NSW and positioned away from sensitive receivers. Consequently, the operation of the development will result in a net reduction of live goat transportation movements and, in turn, this will reduce the current level of risk of community acquired Q-Fever. In addition, the proposal would assist in controlling a feral animal which competes with native animals for food and habitat.

The Department has recommended a number of conditions including measures to manage and monitor disease, air quality and odour, wastewater, processing waste and aboriginal heritage. The Department has also recommended conditions for on-going environmental management, including regular incident reporting and independent environmental audits.

The Department considers the location and design of the proposed development and the proposed management and mitigation measures would appropriately mitigate the environmental impacts of the development. The operation of the development would have minimal impact on the natural environment, local community and the regional road network.

Overall, the Department concludes that the proposed development would appropriately manage risks associated with the processing of goats, sheep and lambs, in line with current best practice. With the implementation of the recommended conditions of consent, the impacts of the development can be mitigated and/or managed to ensure an acceptable level of environmental performance.

Consequently, the Department considers that on this basis it could be approved.

7. RECOMMENDATION

It is recommended that the Planning Assessment Commission:

- **consider** the findings and recommendations of this report;
- **approve** the development application under Section 89H of the EP&A Act; and
- **sign** the attached instrument of consent at **Appendix A** (**Tag A**).

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