Scoping Study to Support SSD DGR Request

DENILIQUIN ABATTOIR

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ngh environmental

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CONTENTS

1 INTRODUCTION

This report provides the supporting information required in the request for Director General's Requirements for the proposed State Significant Development of an Abattoir at Deniliquin.

The Deniliquin Meat Exports (DME) propose to upgrade an existing abattoir and construct a rendering plant at the site.

We are requesting new DGR's for the development. This report provides information on the proposed development. Following consultation with the Department of Planning and Infrastructure a Planning Focus Meeting was not considered necessary.

2 SITE DETAILS

The proposal is located on lots 417 of DP 756325 in the Deniliquin Local Government Area. Maps showing the location of the proposal are provided below.

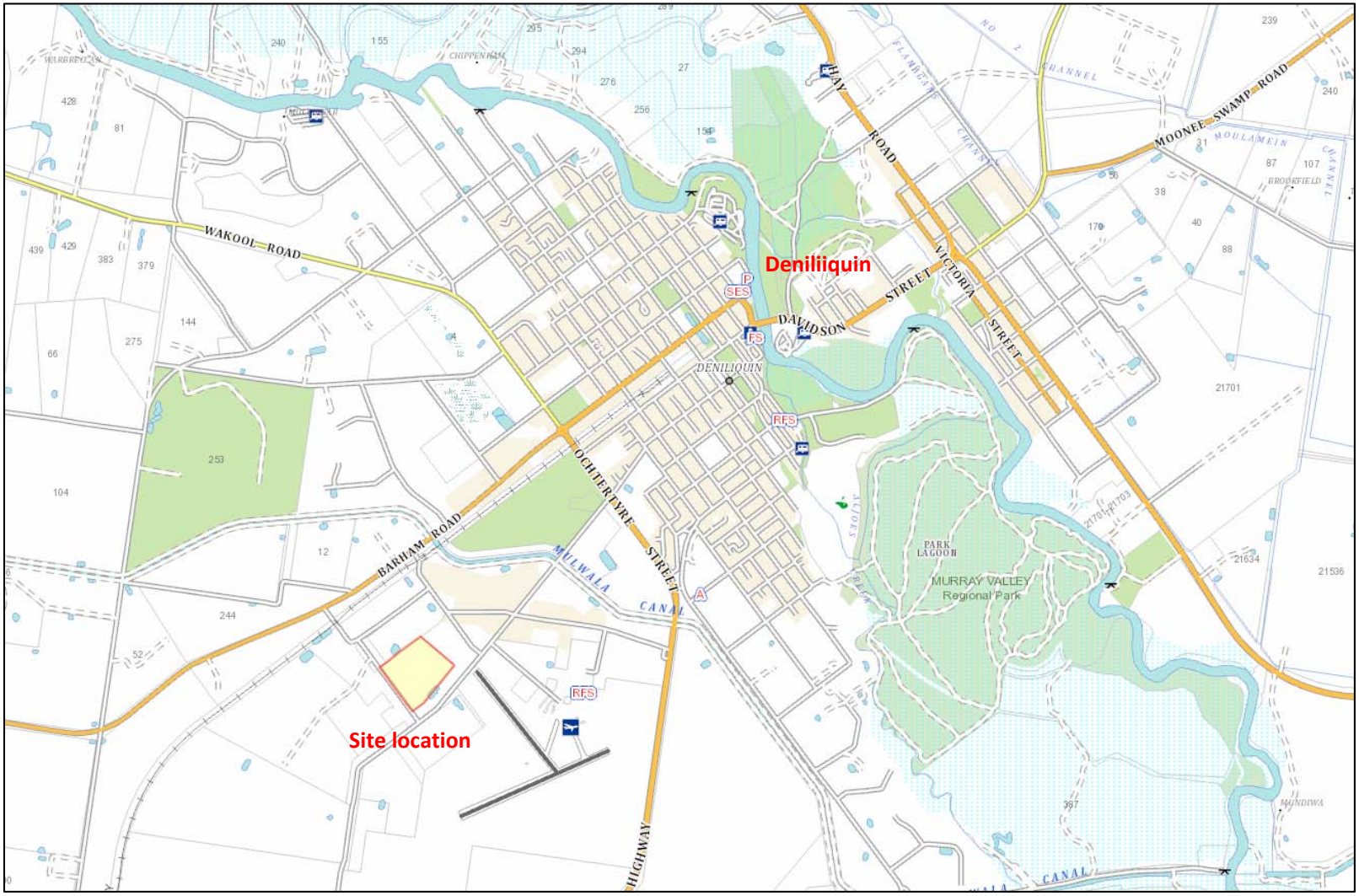


Figure 1 – Approximate location of the proposal

Figure 2-1 Aerial view of Deniliquin Abattoir site

3 DEVELOPMENT DETAILS

The proposed development is for the upgrade of an existing *abattoir*, being a type of *agricultural produce industry* with a value of more than $30M, on the subject site detailed above. The layout of the existing abattoir is provided in Appendix A.

The proposed development will be carried out in three stages:

- Stage 1 – upgrade to the existing facilities and construction of a new boning room and cold storage facility
- Stage 2 – constructing of a rendering plant
- Stage 3 – construction of a new facility to house cattle kill and bone

The proposed development involves the following works:

- Year 1 - Upgrade of an existing abattoir facilities including
    - Kill floor – upgrade facility to kill numbers of up to 10,000 per day, comprising lamb, sheep, calves and goats.
    - Boning room
    - Cold storage – holding stores as well as plate freezing and blast freezing
    - Receiving yards
    - Staff/other amenities – including onsite canteen
    - Office
    - Other buildings – construct additional storage sheds and upgrade existing buildings
- Year 2 - Construction of a rendering plant to produce meat meal and tallow

- Year 3 – Install a deboner/meat extraction process in the abattoir to achieve a higher yield
- Year 4 - Cold storage upgrade
- Years 6-10 – Install a facility to kill up to 1,500 cattle per day.

There would also be a retail and wholesale outlet on the site.

The proposed energy source for the abattoir is gas and electricity. Upgrades to gas and electricity utilities will be required for the operation of the proposal. At this stage, gas would be supplied by bottle and electricity from the grid.

Water is proposed to be sourced from Deniliquin's existing reticulated water supply. Bore water may be used in addition to this in the future. About 20% of water used at the site will be recycled for use on site.

A breakdown of the likely yearly input and output volumes is detailed below. Note, this is preliminary only and should only be used as an indicative value. The abattoir and rendering plant will require substantial quantities of input water, which results in substantial quantities of wastewater.

The plant will be rebuilt and reconfigured to initially kill up to 3,500 small stock in a signal shift, increasing to 5,000. Over time, it is expected that this would be increased to two shifts of between 7,000 and 10,000 small stock per day. It is expected that the plant will initially operate for 226 days per year.

The baseline average daily kill processing numbers (1 shift) will be as follows:

- Lambs 2,000
- Sheep 1,000
- Calves/Goats 500

DME expect that by year 5 the plant will be operating a double shift. The annual processing figures expected over the first five years are provided in Table 3-1.

DME aim to expand to kill cattle in about 6-10 years. The aim is to kill 1,500 head of cattle per day (750 per shift).

Table 3-1 Annual processing figures for the first five years of operation

Small stock Type	Year 1 (head) 1 shift	Year 2 (head) 1 shift	Year 3 (head) 1 Shift	Year 4 (head) 2 Shifts	Year 5 (head) 2 Shifts	Total First 5 Years (head)
Lambs	452,000	678,000	791,000	904,000	904,000	3,729,000
Sheep	226,000	339,000	395,000	452,000	452,000	1,864,000
Calves/Goats	113,000	169,000	198,000	226,000	226,000	932,000
Total	**791,000**	**1,186,000**	**1,384,000**	**1,582,000**	**1,582,000**	**6,525,000**
Daily Total	**3,500**	**5,250**	**6,124**	**7,000**	**7,000**	

The following quantities are for the operation of the plant after Year 4 (7,000 small stock per day). The facility to kill cattle will not be in installed by Year 4. Therefore the following data is for smallstock only.

Description	Annual Quantity
Inputs	
Livestock	1,582,000 animals (refer to Year 4 in table above)
Water	406.8 ML
Gas (includes rendering plant)	2150 litres
Electricity	8.8 GW
Outputs	
Product	27,600 tonnes
Blood (1.2 kg per animal)	1,898.4 tonnes
Tallow (4.4 kg per animal)	6,960.8 tonnes
Meat and bone meal (6 kg per animal)	9,492 tonnes
CO_2	Not yet known

The above estimates do not include the effect of the mechanical deboner that will be installed in Year 3. This reworks the bones from the boning room to extract further meat for human consumption. It is difficult to estimate the amount of meat that would be extracted due to the high variance of meat left on bones.

A simple water balance for the plant is provided in the table below. The data is based on projected water use at Year 4 and based on 226 days of operation per year.

Simple Water Balance		
Inputs	**Annual Quantity**	**Destination**
Total Input (recycled + town supply)	402.8 (63.8 + 339) ML	N/A
Outputs		
Wastewater to be recycled at the plant	63.8 ML	Onsite storage tank

Wastewater for irrigation	339 ML	Storage, aerated treatment, then disposal on land through irrigation (either on site or in agreement with an offsite land holder)

Single and double decker trucks will be used to deliver livestock. By the end of the fourth year of operation a combination of road/rail in containers and refrigerated trucks will be used to transport in excess of 26,700 tonnes of product from the plant. Estimated traffic movements are provided in the table below.

Transport Demands
Inputs
There will be about 28 trucks delivering to the site each day by Year 4: • Livestock – 18 trucks • Packaging and maintenance - 4 • Containers in (empty) – 6 When the cattle killing facility is operational, truck deliveries will increase to about 53 per day.
Outputs
There will be about 18 trucks taking material from the site per day: • Containers out – 12 • Mixed abattoir material – 4 • Meat and bone meal – 1.5 • Tallow – 0.8 When the cattle killing facility is operational, trucks taking material from the site will increase to about 30 per day.

4 PERMISSIBILITY AND STRATEGIC PLANNING

The proposal is located on Lot 417 DP756325 on Abattoir Road. The zoning is IN1 General Industry under the Deniliquin Local Environmental Plan (2013). Under this zoning, abattoirs are permitted with consent. Abattoirs are not permitted without consent and are not prohibited. Developments permitted with consent includes any development not permitted without consent and not prohibited, therefore, abattoirs in this zone are permitted with consent.

The following Environmental Planning Instruments may also apply to the proposal:

- State Environmental Planning Policy No 33—Hazardous and Offensive Development
- State Environmental Planning Policy (State and Regional Development) 2011

DME have applied to the Department of Trade & Investment Crown Lands (DTI) for unlimited access to adjoining crown lands (lot 7313 DP1143782 and Lot 477 DP704369). DME have also requested that DTI consider selling the land to DME.

5 IMPACT IDENTIFICATION

The key environmental impacts likely to require assessing include (in order of importance):

- Odour and air quality, particularly from the rendering plant. The rendering plant will be constructed within an enclosed building with a negative pressure and air will be recycled
- Surface water management, including water supply and waste water management. The plant will include wastewater capture and treatment facilities and wastewater can be re-used at the plant for yard washing. The balance of the wastewater will be used for irrigation for cropping. Specific wastewater management measures have not been developed but will be likely to include aerobic ponds, anaerobic ponds and settling ponds, with prescreens to remove solids.
- Traffic. The plant will generate increased vehicle movements.

Positive environmental impacts from the proposal include:

- The abattoir will be well located to access the supply of livestock from New South Wales, Victoria and South Australia. This will reduce travel time for livestock trucks and reduce greenhouse gas emissions from the trucks.
- Employment during both construction and operation. It is estimated that when the double shift is operational 300 employees could be working at the site. This could increase to 500 employees when the cattle facility is operational. It is expected that most of the operational employees can be sourced from the area, possibly within 100-150 km of Deniliquin. This is considered a significant employment-generating activity in the region. The plant is expected to operate for 20 years or more.
- The employment of local people and use of local services is expected to generate economic activity in Deniliquin.

Additional strategies to reduce or eliminate risks include:

1. Location of the proposal close to a major regional road route, thus reducing the impact of traffic on local and residential road networks.
2. Location of the proposal close to a rail line.
3. The location of the proposal is also such that the nearest sensitive residential receivers are about 650-700 metres from the site.

6 JUSTIFICATION

SUITABILITY OF THE SITE

There is an existing abattoir on the 16.3 ha site on industrial land outside Deniliquin. The plant was acquired by DME in 2013. The site (16.3 ha) is located in the industrial land area outside Deniliquin. The site is equidistant between Melbourne & Sydney markets on major highways, reducing transport costs. A rail spur off the main Melbourne to Sydney rail line also provides the site with strategic advantages for the logistics of both inputs and outputs of production.

The plant has not been operational for 7 years and requires upgrading to meet best practice standards to produce export quality product in a safe worker environment.

SOURCES OF SUPPLY

The Deniliquin Abattoir is ideally located for accessing supply of livestock from NSW, Victoria and South Australia. In 2011 total Australian sheep numbers were 73 million of which NSW, Victoria and South Australia account for 72.5%.

Saleyards in Deniliquin currently operate on a fortnightly basis. The reopening of the plant could result in more frequent operation of the saleyards. This presents an opportunity and advantage to the abattoir as stock can be transferred to the plant at little or no cartage costs.

Growers in the near and wider vicinity of the plant will be likely to benefit from the proposal. DME envisage having an active presence in the grower network securing supply at the farm gate with both short and long term contracts.

REGIONAL AND STATE BENEFITS

The local region is well resourced to provide the full range of construction and operational expertise required to upgrade, construct and operate the proposal. While detailed estimates are not currently available, it is expected that the proposal will inject a significant amount of money into the local region's economy annually.

During operation, about 300 employees will be required at the plant. This will increase to about 500 employees when the cattle facility is operational. Other benefits include:

- Jobs - The facility will generate jobs during construction.
- Trades – Ongoing plant maintenance will contribute to the local trades.
- Sourcing inputs – depending on weather conditions and stock availability CGI expect that at least 60% of livestock will come from farm gate being drawn from growers in the Deniliquin area.

Markets

The plant will be able to produce product for the domestic and export markets. DME estimates that 60% of the product produced at the plant would be for export markets and 40% destined for domestic markets.

DME'S EXPERIENCE

The group has been involved at different levels and locations in the meat processing business since 1994 and went on to become Australia's largest multi-species meat processor, with revenues in excess of $500 Million. The group has exported product into 60 countries including Japan, Korea, United States and five European countries in the past. The group was also a major supplier to blue chip customers including Coles and Woolworths. DME has operated six abattoirs and accredited feedlot for cattle and lamb in the past.

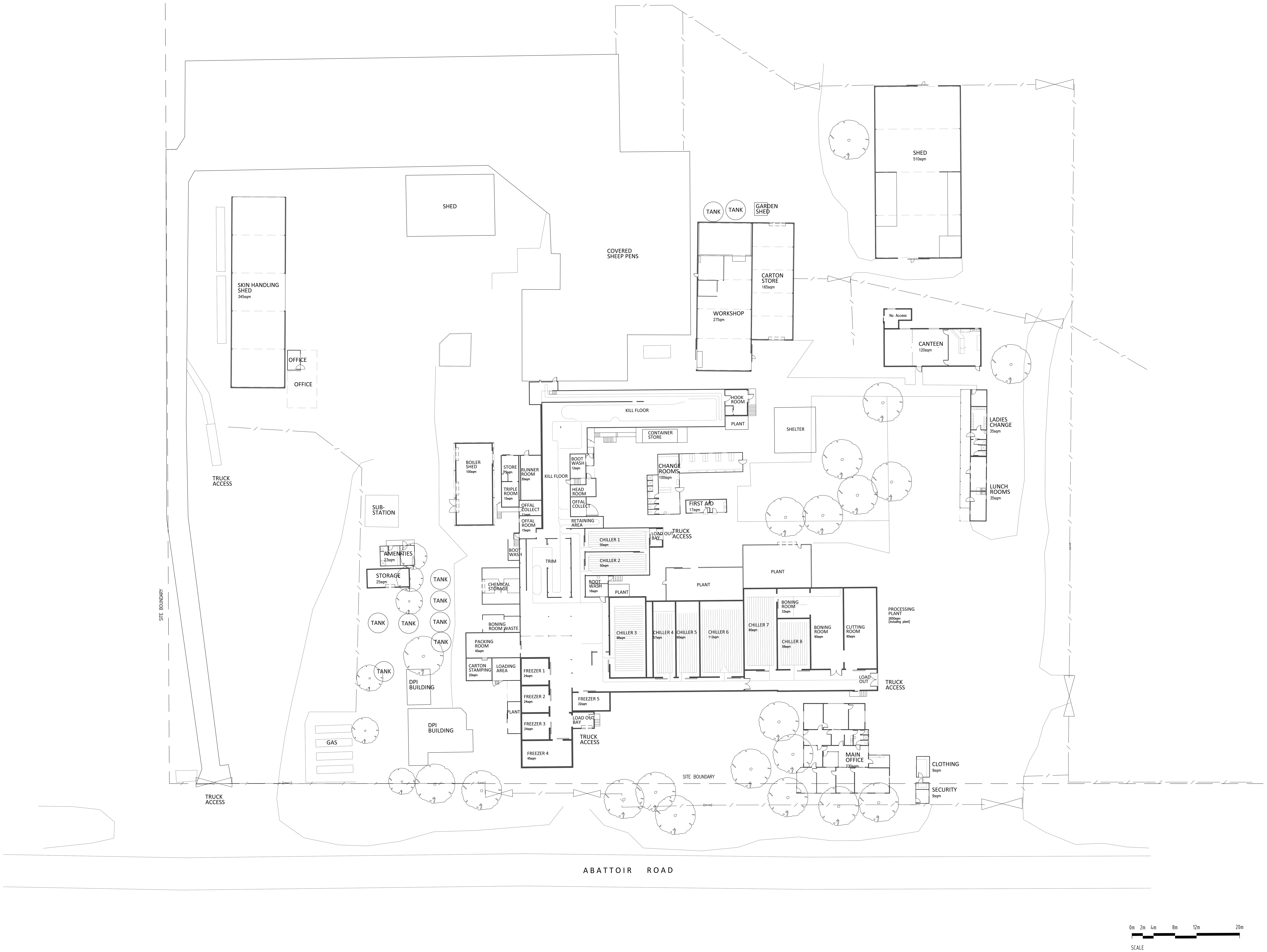
7 CONSULTATION

DME has undertaken consultation with Deniliquin Council, who fully support the proposal. No other consultation has yet been conducted.

8 CAPITAL INVESTMENT VALUE

The proposal is valued at around $30M. The threshold for abattoirs under the SRD SEPP (Schedule 1, Agricultural produce industries and food and beverage processing) is $30M.

APPENDIX A EXISTING ABATTOIR SITE LAYOUT



NOTE
All dimensions are to be checked on site. Written dimensions only to be used. Refer to all detail drawings, structural, mechanical & service drawings before commencing work. Refer any discrepancies to Resource Architecture Pty Ltd

EXISTING

NOTE:
THIS DRAWING IS AN ARCHITECTURAL MEASURED DRAWING OF THE EXISTING CONDITIONS. SITE INFORMATION IS BASED ON SURVEYORS INFORMATION. TREES SHOWN ARE INDICATIVE ONLY. ANY DISCREPANCIES TO BE BROUGHT TO THE ARCHITECTS ATTENTIONS IMMEDIATELY.

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No.	Date	Amendment description	Prepared	Verified
A	14/1/2013	RAILS ADDED, PROCESSING PLANT BUILDING & ANCILLARY BLDG SQM'S REVISED.	JO	
–	18/12/2013	ISSUE TO CLIENT	JO	

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Project: DENILQUIN ABATTOIRS
ABATTOIR ROAD
DENILIQUIN NSW 2710

Title: EXISTING CONDITIONS
SITE PLAN

File: 18/12/13
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Scale	Drawn	Verified	Date
1:250 @ A0	JO'BRIEN		14/01/2014

Project number: 401
Drawing number: EX01
Amendment: A

NOTE
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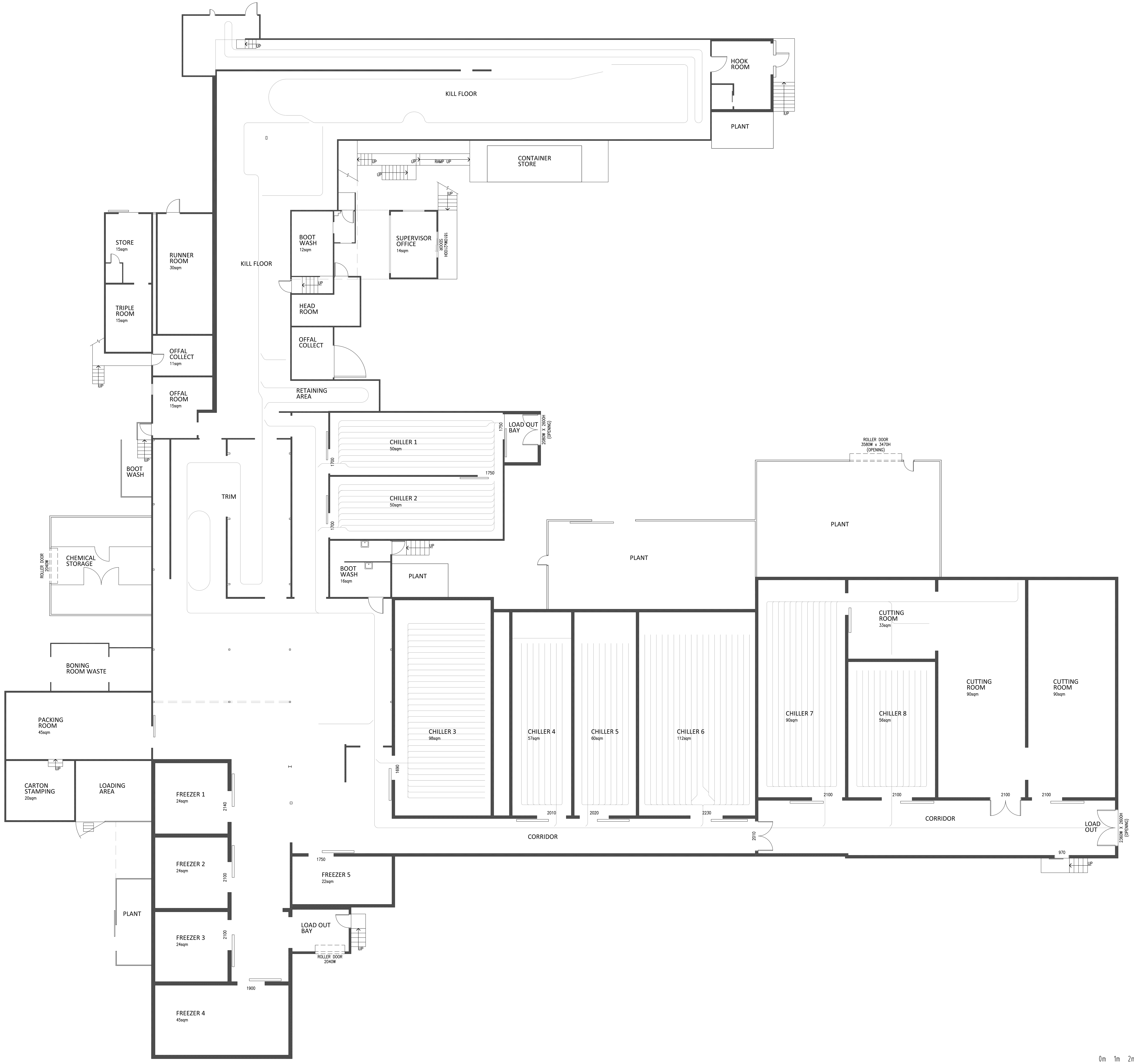

01 PROCESSING PLANT
FLOOR PLAN

0m 1m 2m 4m 6m 10m
SCALE

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Scale	Drawn	Verified	Date
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Project number: 401
Drawing number: EX02
Amendment: A