Government of **Western Australia**
Department of **Environment Regulation**

Your ref L8426/2010/2
Our ref DEC14749
Enquiries Nanette Schapel
Phone 08 9333 7486
Fax 08 9333 7550
Email nanette.schapel@der.wa.gov.au

ATTENTIION: Mr Dave Saunders
Support Services Manager
Western Australian Meat Industry Authority
PO Box 1434
MIDLAND DC, WA 6936

Dear Mr Saunders

***ENVIRONMENTAL PROTECTION ACT 1986*: LICENCE GRANTED**
Premises: The Livestock Centre
Address: Lot 5 on Plan 49665 Muchea East Road,MUCHEA, WA 6501
Licence Number: L8426/2010/2

A licence under the *Environmental Protection Act 1986* (the Act) has been granted for the above premises. The Department of Environment Regulation will advertise the issuing of this licence in the public notices section of *The West Australian* newspaper.

The licence includes attached conditions. Under section 58(1) of the Act, it is an offence to contravene a condition of a licence. This offence carries a penalty of up to $125,000 and a daily penalty of up to $25,000.

In accordance with section 102(1)(c) of the Act, you have 21 days to appeal the conditions of the licence. Under section 102(3)(a) of the Act, any other person may also appeal the conditions of the licence. To lodge an appeal contact the Office of the Appeals Convenor on 6467 5190 or by email at admin@appealsconvenor.wa.gov.au.

Where a licence is issued for more than one year it requires payment of an annual fee and will cease to have effect if the fee is unpaid. It is the occupier's responsibility to lodge a fee application and pay the annual fee in sufficient time to avoid incurring a late payment fee and for processing to be completed before the licence anniversary date.

If you have any queries regarding the above information, please contact Nanette Schapel on 9333 7486.

Yours sincerely

Ed Schuller
Officer delegated under section 20
of the *Environmental Protection Act 1986*

24 April 2015

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Government of **Western Australia**
Department of **Environment Regulation**

LICENCE FOR PRESCRIBED PREMISES
Environmental Protection Act 1986

LICENCE NUMBER: L8426/2010/2` **FILE NUMBER:** DEC14749

LICENSEE AND OCCUPIER OF PREMISES
Western Australian Meat Industry Authority
15 Spring Park Road
MIDLAND, WA 6936

ABN: 16 961 190 339

NAME AND LOCATION OF PREMISES
The Livestock Centre
Lot 5 on Plan 49665 Muchea East Road
MUCHEA, WESTERN AUSTRALIA 6501

PRESCRIBED PREMISES CATEGORY
Schedule 1 of the *Environmental Protection Regulations 1987*

CATEGORY	DESCRIPTION	CAPACITY
55	Livestock saleyard or holding pen: premises on which live animals are held pending their sale, shipment or slaughter	10,000 animals or more per year

CONDITIONS OF LICENCE
Subject to the conditions of licence set out in the attached pages.

Officer delegated under Section 20
of the *Environmental Protection Act 1986*

ISSUE DATE Friday, 24 April 2015
COMMENCEMENT DATE: Thursday, 30 April 2015
EXPIRY DATE: Wednesday, 29 April 2020

DEFINITIONS

In these conditions of licence, unless inconsistent with the text or subject matter:

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means:

Manager Licensing (Greater Swan)
Department of Environment Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850
Telephone: (08) 9333 7510
Facsimile: (08) 9333 7550
Email: grswanbooragoon@der.wa.gov.au;

'hardstand' means a surface with a permeability of 10-9 metres/second or less;

'premises' means The Livestock Centre located at Lot 5 on Plan 49665 Muchea East Road, Muchea (as depicted on Attachment 2).

CONDITIONS

ODOUR CONTROL

1. The licensee shall ensure odour emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises.

WASTEWATER CONTROL

2. The Licensee shall only process, store or treat liquid waste at the premises that is generated at the premises.

3. The Licensee shall not discharge wastewater into the environment.

4. The licensee shall, within 24 hours, notify the CEO if wastewater has been discharged to the environment.

5. The licensee shall at all times store:
   (i) manure; and
   (ii) wastewater treatment plant cleanings;
   on a Hardstand that drains wastewater and stormwater to the wastewater treatment pond.

MANAGEMENT OF DECEASED ANIMALS

6. The licensee shall not bury deceased animals on the premises.

RECORDING OF COMPLAINTS

7. The licensee shall maintain a register of complaints received regarding emissions from the premises. For each such complaint the following information shall be recorded (if know or provided):
   (i) the date and time that the complaint was lodged;
   (ii) a general description of the emission or the impact of the emission that caused the complaint to be lodged;
   (iii) the date and time of the emission from the premises that caused the complaint to be lodged;
   (iv) any on–site activities that may have caused or contributed to the emission;
   (v) the likely source of the emission;
   (vi) wind direction, wind speed and temperature at the time of the emission; and
   (vii) actions taken in response to the complaint.

ANNUAL AUDIT COMPLIANCE REPORT

8. The licensee shall by 1 August in each year, provide to the CEO an Annual Audit Compliance Report in the form in Attachment 1 to this licence, signed and certified in the manner required by Section C of the form, indicating the extent to which the licensee has complied with the conditions of this licence, and any previous licence issued under Part V of the Act for the Premises, during the period beginning 1 July the previous year and ending on 30 June in that year.

LICENCE NUMBER: L8426/2010/2 **FILE NUMBER:** DEC14749

SECTION A

LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name: Trading as:	ABN:
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of licence complied with within the reporting period? (please tick the appropriate box)

Yes □ Please proceed to Section C
No □ Please proceed to Section B

Each page must be initialed by the person(s) who signs Section C of this annual audit compliance report

INITIAL:_____

LICENCE NUMBER: L8426/2010/2 **FILE NUMBER:** DEC14749

SECTION B - DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each licence condition that was not complied with.

a) Licence condition not complied with?	
b) Date(s) when the non compliance occurred, if applicable?	
c) Was this non compliance reported to DEC?	
☐ Yes ☐ Reported to DER verbally Date _____ ☐ Reported to DER in writing Date _____	☐ No
d) Has DER taken, or finalised any action in relation to the non compliance?	
e) Summary of particulars of non compliance, and what was the environmental impact?	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram)	
g) Cause of non compliance	
h) Action taken or that will be taken to mitigate any adverse effects of the non compliance	
i) Action taken or that will be taken to prevent recurrence of the non compliance	

Each page must be initialed by the person(s) who signs Section C of this annual audit compliance report

INITIAL:_____

LICENCE NUMBER: L8426/2010/2 **FILE NUMBER:** DEC14749

SECTION C - SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report may only be signed by a person(s) with legal authority to sign it. The ways in which the Annual Audit Compliance Report must be signed and certified, and the people who may sign the statement, are set out below.
Please tick the box next to the category that describes how this Annual Audit Compliance Report is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
an individual	□	by the individual licence holder, or
	□	by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	□	by affixing the common seal of the licensee in accordance with the Corporations Act 2001; or
	□	by two directors of the licensee; or
	□	by a director and a company secretary of the licensee, or
	□	if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	□	by the chief executive officer of the licensee; or
	□	by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of $50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____ SIGNATURE: _____

NAME: (printed) _____ NAME: (printed) _____

POSITION: _____ POSITION: _____

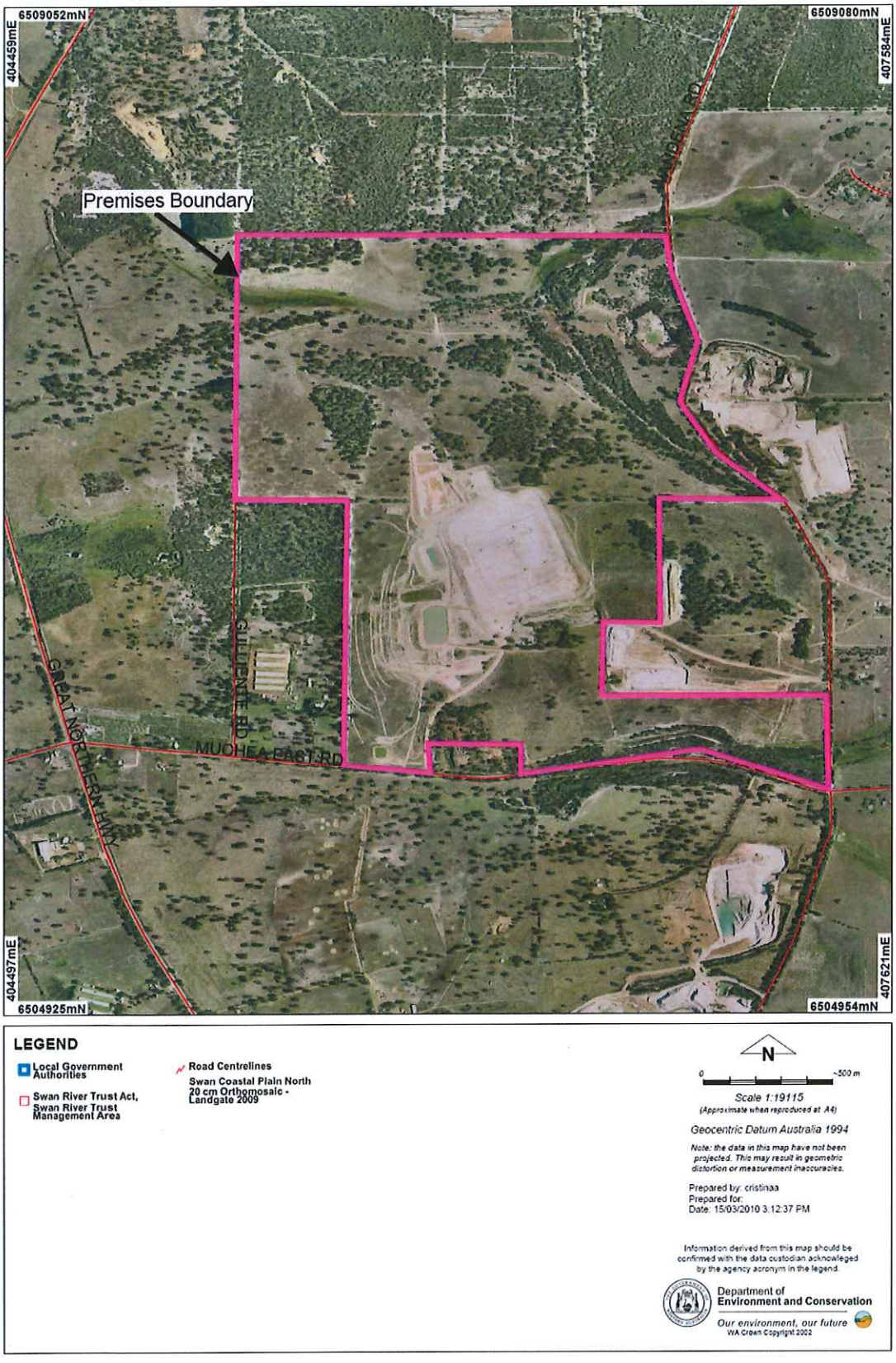
DATE: _____/_____/_____ DATE: _____/_____/_____

SEAL (if signing under seal)

ATTACHMENT 2

LICENCE NUMBER: L8426/2010/2 **FILE NUMBER:** DEC14749

The Livestock Centre- Lot 5 on Plan 49665 Muchea East, Muchea



Government of Western Australia
Department of Environment Regulation

ENVIRONMENTAL ASSESSMENT REPORT

LICENCE NUMBER: L8426/2010/2
LICENCE FILE NUMBER: DEC14749
APPLICATION DATE: 9/03/2010
EXPIRY DATE: 29/04/2020

PREMISES DETAILS

LICENCE HOLDER AND OCCUPIER

Western Australian Meat Industry Authority
15 Spring Park Road
MIDLAND WA 6936

ABN: 16 961 190 339

PREMISES

The Livestock Centre - Muchea
Lot 5 on Plan 49665 Muchea East Road
MUCHEA, WA, 6501

PRESCRIBED PREMISES CATEGORY

Table 1: Prescribed Premises Category from Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Description	Production or Design Capacity	Nominated Rate of Throughput	Throughput Classification *
55	Livestock saleyard or holding pen: Premises on which live animals are held pending their sale, shipment or slaughter	(maximum plant capability) 120,000 cattle and 1,000,000 sheep per year	(actual/current) Up to 120,000 cattle and 1,000,000 sheep per year	More than 50, 000 animals per year

* From Schedule 4 of the *Environmental Protection Regulations 1987*

This Environmental Assessment Report (EAR) has been drafted for the purposes of detailing information on the management and mitigation of emissions and discharges from the prescribed premises. The objective of the EAR is to provide a risk assessment of emissions and discharges, and information on the management of other activities occurring onsite which are not related to the control of emissions and discharges from the prescribed activity. It is important to note that the licence is not a mechanism to regulate those activities that occur on-site that are not related to the prescribed activity.

Basis of Assessment

The Livestock Centre (TLC) - Muchea, has been assessed as requiring a licence under the *Environmental Protection Act 1986.* This licence relates to operation of a livestock saleyard, associated holding pens and wastewater treatment ponds.

The premises is prescribed under Category 55 -Livestock saleyard or holding pen: premises on which live animals are held pending their sale, shipment or slaughter within Schedule 1 of the *Environmental Protection Regulations 1987*.

TLC is expected to process 110,000 to 120,000 cattle per year and 900,000 to 1,000,000 sheep per year in line with the current throughput at the Midland Livestock Saleyards. Livestock transporters will have access to truck washing and parking facilities and will take cattle for live export. Additionally, TLC will develop facilities to allow for the sale of stud livestock and training of livestock management and handling skills. This facility will not sell pigs.

1.0 BACKGROUND

1.1.1GENERAL COMPANY DESCRIPTION

The Western Australian Meat Industry Authority (WAMIA) is a statutory regulatory authority which is registered under section 7 of the *West Australian Meat Industry Act 1976* and reports to the Minister for Western Australian Agriculture and Food. WAMIA is responsible for encouraging and promoting improved efficiency throughout the meat industry. WAMIA manages the existing Midland Livestock Saleyards, which is located on Clayton Road in Midland while overseeing the development of the new saleyards located at Muchea.

WAMIA has been operating from the Midland Livestock Saleyards for over 100 years. This facility will be replaced with TLC – Muchea once development has been completed and the facility is fully operational.

The Muchea saleyards have been constructed to comply with the National Saleyard Quality Assurance Program, a national saleyard accreditation program that promotes best practice in all facets of the industry.

1.1.2 PREVIOUS LICENCE HISTORY

The Midland Livestock Saleyards have in the past had non-compliance issues including the late submission of monitoring reports and a number of breaches of the wastewater irrigation conditions, including, exceedences of the Nitrogen and Phosphorus loading limits. A Formal Letter of Warning was issued on 8 November 2004 by the Department of Environment for these non-compliances.
DEC has receive a few complaints in relation to dust emissions from the Midland Livestock Saleyards.

1.2 LOCATION OF PREMISES

TLC is located at Lot 5 on Plan 49665 (302.6 hectares) Muchea East Road, Muchea within the Shire of Chittering. The site is within the Ellen Brook catchment area which connects with the Swan-Canning river system. This site was previously cleared for grazing in the late 1800's and has since been used for the extraction of clay.

As the site is situated at the southern extremity of the Dandaragan Plateau at the foothills of the Darling Scarp, the soils are comprised predominantly of sand, clay with a lateritic cap. The two water courses which run through the site include the seasonal Wandena Creek to the north and a small unnamed creek which runs along the southern boundary of the premises. The unnamed creek has been fenced off to prevent livestock access as part of a Landcare project. Groundwater can be located in an unconfined aquifer on the

western side of the premises at a depth of approximately 9 to 14 metres below ground level.

The nearest residential dwelling to the site is the caretakers residence on an adjacent poultry farm which is approximately 750m from the saleyards. The next closest residential dwelling is situated approximately 1100m from the proposed site. The Environmental Protection Authority (EPA) "Guidance Statement No 3: Separation distances between industrial and sensitive land uses" recommends a separation distance of at least 1,000m from livestock saleyards to residential dwellings.

1.3 PROCESS DESCRIPTION

The licence is issued for the livestock saleyard, associated holding pens and wastewater treatment ponds. The saleyard is situated in the centre of a 16ha pad area. Within the 16ha pad lies a 5.2ha saleyard shed (covered area) where there are separate sheep and cattle areas with a mixture of hard surface flooring (concrete) and soft floor areas (compacted clay overlain with sawdust and woodchips). There is additional 8.63ha of hardstand area surrounding the saleyard shed within the 16ha pad area. This has a bituminised surface to support truck movements including the unloading and loading of livestock, an 8 bay truckwash and vehicle parking and depot areas. An additional area of 0.62ha will incorporate a waste management workshop area, maintenance compound and general workshop. Approximately 1.39ha will be landscaped gardens.

The vendor arranges to deliver the animals to the saleyard where they are received onto the site. Pens of different sizes may be used for the receival, drafting and auction of animals. Depending on the distance that animals have travelled to reach the site they may be fed, watered and rested prior to being processed. The processing of cattle normally takes 24 hours as they are sold on a liveweight basis and sheep are sold on a per head basis and processing usually takes about 12 hours. Cattle sales will take place every Monday, and sheep sales will take place every Tuesday.

After being received on the site, the animals are drafted which involves sorting them into categories to maximise the return for the vendor usually based on body condition, breed, sex and colour. The sorted animals are diverted into smaller sale pens where they are auctioned off. Once sold the animals are collected by the buyer or his nominee and removed from the site. If the animals cannot be transported off the site immediately following sale, they, on occasion can be placed into larger holding pens.

Trucks may be washed down after delivering livestock to the site and it is expected that the carcasses of approximately 1,200 sheep and 200 cattle will need to be disposed of each year as a result of on-site activities.

TLC has been designed with the objective of limiting the generation of liquid waste from the prescribed activity. Wastewater generated from the wash down of transport vehicles, concrete sales floors and drafting areas within the saleyard is directed to the wastewater treatment ponds. There are five ponds, two anaerobic and three aerobic all of which have been clay lined, constructed and tested in accordance with the standards recommended in *Water Quality Protection Note: Liners for containing pollutants using engineered soils (2006)*. The wastewater passes through a pre-treatment facility which removes solids from the effluent stream through a 'Hunter screen', grid and a sump before being diverted to the anaerobic treatment pond, one of which will be in use at any one time. The anaerobic

ponds will be covered with a geotextile covering and the wastewater will have a 10 day retention time in this primary treatment pond in which time stabilisation and further settling of organic wastes will occur before being transferred to one of three secondary aerobic ponds. The aerobic ponds are evaporative and designed to contain incident rainfall in the event of a 1:100 year rainfall event.

The site will have two large stormwater retention basins; one for collecting clean water runoff from the roof of the saleyard, and another for collecting grey water from the bitumenised hardstand area surrounding the saleyard shed. The grey water will be used for dust suppression, yard washing and vehicle wash down. The clean water will be fitted with an automated disinfection system to ensure that microbial quality is maintained and then used as a drinking water source for humans and livestock at the facility. WAMIA have provided a detailed water balance model for the site based on 48 years of data from the nearby Muchea Tree farm site and from Pearce Airbase where data was missing from the Muchea Tree farm site, included in the *Attachment C1 to Works Approval Supplementary Report: The Livestock Centre Water Management Plan*.

WAMIA have conducted groundwater baseline monitoring (*Baseline Water Assessment Report Proposed Livestock Facility Muchea East, Western Australia)* and continued to monitor groundwater quality during construction (*Acid Sulphate Soil Investigation and Management Plan, The Livestock Centre Muchea East Road, Muchea WA*) and once the site becomes operational (*Nutrient Management Plan Proposed Livestock Facility, Muchea East, Western Australia*) to ensure that the prescribed activity does not adversely impact on groundwater quality in the area.

1.4 REGULATORY CONTEXT

1.4.1 Part IV Environmental Protection Act 1986, Environmental Impact Assessment

There are no Ministerial conditions set for this proposal and it was determined by the EPA in September 2005 that the proposal should not be subject to the formal environmental impact assessment process under Part IV of the *Environmental Protection Act 1986.*

1.4.2 Part V Environmental Protection Act 1986, Environmental Management

Works approval and licensing are required under Part V of the *Environmental Protection Act 1986* as the premises is prescribed under Category 55 (Livestock Saleyard or holding pen) within Schedule 1 of the *Environmental Protection Regulations 1987*.

A compliance document has been submitted by the proponent prior to the issuing of a licence and the subsequent commissioning of the operations. This document contains a copy of independent auditor's report confirming that each of the commitments made in the application and the supporting documentation for the construction of the new premises has been met. DEC conducted a site inspection and carried out a desk top review to verify that the commitments have been met.

WAMIA has submitted management plans for the major emissions and discharges of odour, noise, and water management.

1.4.3 Local Government Authority

WAMIA was granted conditional development approval by the Shire of Chittering for the construction of the saleyard complex on 14 December 2005. An amendment to Town Planning Scheme (TPS) No. 6 for TLC accompanied these approvals including the permissibility of land use change, changes to road width, deviation and road buffer area as well as a plan for the area south of Muchea Road East to be used for industrial purposes.

The Shire of Chittering has carried out consultation with residents close to the proposed site to ensure that they are aware of any potential issues, in particular odour emissions, and WAMIA's management practices to address these issues.

1.4.4 Rights in Water Irrigation Act 1914

WAMIA does not currently hold a groundwater licence for the proposed facility at Lot 5 Muchea East Road, Muchea. An application for groundwater may be submitted in the future for stock watering purposes. WAMIA aim to be as self sufficient as possible, sourcing water from roof and hardstand runoff and storing this water in the retention basins for reuse as detailed in the *Attachment C1 to Works Approval Supplementary Report: The Livestock Centre Water Management Plan*.

2.0 STAKEHOLDER AND COMMUNITY CONSULTATION

SUBMISSIONS RECEIVED DURING 21 DAY PUBLIC COMMENT PERIOD

The Application for works approval details for this facility was advertised in the Western Australian newspaper on 5 April 2010 as a means of advising stakeholders and to seek public comments. DEC received only one submission which related to the following issues:

WAMIA have developed a best practice complaints management system and has given a written commitment to implement it. Complaints management will be integrated by the community liaison group which aims to report and resolve issues arising with the facility. At the date of issuing the licence a number of community liaison group meetings have been held and the outcomes reported to DEC.

3.0 EMISSIONS AND DISCHARGES RISK ASSESSMENT

The following section assesses the emissions and discharges from TLC during operation of the facility. In order to determine if the operating practices meets design and emission standards, an emission and discharges risk assessment matrix was used (Appendix B). This matrix gives consideration to the significance of the emissions and the community context of the site to determine the appropriate environmental regulation of the emissions and discharges. The results of this are summarised in Table 2.

Table 2: Risk assessment and regulatory response summary table.

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation, tools, agencies)
Dust emissions	Operation:- significance of emission rating: 1. Dust emissions from the prescribed activity will be minimal during operation as the majority of trafficable areas are bituminised, concrete, or clay overlain with sawdust or woodchips. Dust will be managed through the DMP.	Low	E = No regulation, other management mechanisms	LIC – no conditions	No reference	DMP commitments include one or more of the following : • sprinkling water over soft floor areas; • fogging aerosols of water from the ceiling of the saleyard to bind airborne particulate matters to the water droplets as they travel downwards; and • Establishment of a vegetative shelterbelt on the eastern side of the facility to reduce exposure of the site to easterly winds. The holding paddocks outside of the 16ha saleyard area will hold animals for short periods of time. Dust management commitments for the paddocks includes: • Limiting stocking rates to the paddocks to under 50 head per ha for the short term (7-10 day) holding pens. • Limiting stocking rates in longer term yards to 1 head/2 ha in the 171ha seasonal grazing area. If stocking rates cause a dust nuisance then water trucks will be used to suppress dust.

Odour emissions	Operation- significance of emission rating 3. Attachment C2 to Works Approval Supplementary Report on odour emissions modelling for the premises indicates that odour emissions from the premises in themselves are not considered to be significant given the best practice design of the infrastructure to be installed and management practices implemented, as detailed in the Odour Management Plan produced for the facility. However, because of the proximity to a nearby poultry farm the odour modelling indicates the cumulative odour emissions have the potential to exceed DEC's adopted Guidelines- Queensland EPA odour criteria- 99.5 percentile 2.5OU at one of the two nearest sensitive premises, with the potential for 3.OU to be experienced at these sites (resident situated 1,300m SW of proposed site). DEC will permit a borderline 3OU in a semi-rural location, based on WAMIA's commitment to best management practices including a Complaints Database system combined with the setting up of a Community Liaison Group, a post commissioning odour assessment and a continual improvement Odour Management Plan The most significant odour contributor to this is the nearby Poultry farm which is unregulated and situated between the proposed livestock saleyards and the residence. The predicted impact of odours from TLC odours at these residences has been modelled at between 1-1.5OU without influence of the poultry farm. This modelling is based on current bird stocking rates at the adjacent poultry farm and modelling based on the following commitments being undertaken by the proponent: • covering of the livestock saleyard; • regular sweeping, screening, drying and removal of animal waste material on hard and soft floor surfaces; • removal of dried animal waste solids off site; • minimisation of wet cleaning of hard surfaces; • sprinkling of soft floor surfaces to minimise dust and associated odours; • wastewater effluent screened and solids removed prior to entering ponds; • the anaerobic wastewater treatment ponds will be covered by an impermeable geothermal membrane; • sludge decanted from anaerobic pond will be pumped out and trucked off site; and • sales will occur on Monday and Tuesdays and carcasses will be disposed of (off site) on sale days. On other days, sheep carcases will be chilled and removed from site and taken to a licensed waste disposal facility. On other days, cattle carcases will be removed from site and taken to a licensed waste disposal facility.	Medium. Cumulative odour was raised as an issue of concern by one stakeholder. No submissions were received from neighbouring properties that are likely to be affected by the premises.	C - licence condition (setting limits + EMPs - short timeframes)(setting targets optional)	LIC– condition to prevent unreasonable odour emissions.The proponent has committed to undertake a post commissioning Odour Assessment and develop an odour management plan if odour complaints are received.	Appendix A 1.1.	Odours will be managed according to the practices outlined in the Odour management Report. In addition to this, the proponent has committed to undertaking one or more of the following additional measures should odours from TLC be confirmed as being the source of unreasonable odour emissions: • gas venting from the anaerobic ponds in accordance with *Water Quality Protection Note: Animal Industry Wastewater Ponds* (Department of Water November 1998;); • turning of the soft floors twice weekly; • establishment of shelter belts; • limit the maximum livestock permitted onsite for sale; and • a Community Liaison Group will be established for the site and will address odour issues should further action be required. The general provisions of the *Environmental Protection Act 1986*

Noise emissions	Operation: Significance of emission rating: 1. Noise emissions are not considered to be significant. The premises will be operating in accordance with the Attachment C4 to Works Approval Supplementary Report- Noise Management Plan (NMP) and a TNMP. Sale days are restricted to Monday and Tuesday and delivery times for animals is between 5am and 7am with approximately 7 trucks per hour arriving. Experience at the existing facility indicates that approximately 5% of trucks arrive out of hours. Modelling by Herring Stoner Acoustics indicates that a max assigned level of 55dB would be experienced at the surrounding residential properties between the hours of 10pm and 7am. The assigned noise levels at the poultry farm residence are expected to be higher that this value at all times because of its proximity to the farm animals on this site.	Low- concern was raised by one stakeholder about the excavation and risks to disturbance of Acid Sulphate Soils.	n/a	LIC– No conditions	No reference	In addition to the commitments given in the NMP and the TNMP, a commitment has been given to undertake post operation noise monitoring at 3, 12 and 24 months to ensure that the *Environmental Protection (Noise) Regulations 1997* are complied with. This monitoring will be conducted according to the following: • carried out or supervised by a member of the Australian Acoustic society; • noise meter used to carry out measurements will be capable of measuring LAmax, LA1, LA10 and LAeq noise levels; • noise meters will have been calibrated within 24 months; • as a minimum, measurements will be carried out at the boundary of the site, opposite any neighbouring properties, and at a minimum of 8 locations around the hardstand facility; and • a review of the monitoring requirements will be undertaken after 24 months and any recommended amendments implemented into the NMP. A series of further commitments are proposed with an undertaking to make changes to practices and infrastructure if operational noise emissions are found to not comply with the *Environmental Protection (Noise) Regulation 1997*. One or more of these measures will be implemented so that noise is reduced to an acceptable level. A detailed complaints management procedure has been developed.

Solid / liquid wastes	Operation- significance of emission rating: 1. Liquid wastes- TLC has been designed with the objective of minimum generation of liquid wastes and WAMIA have submitted a detailed Attachment C4 to Works Approval Supplementary Report Water Management Plan (WMP) which deals with management of liquid waste as well as water conservation measures. TLC intend to be water self sufficient. Liquid waste will be generated from occasional wash down of the concrete drafting and sales floor areas and the truck wash facility. This water will be directed to the WWTP. The effluent will pass through a pre-treatment system to remove solids via a set of gross pollutant traps and grids before going through a Hunter screen prior to discharge to an anaerobic treatment pond for a minimum 10 day period before being pumped to a series of aerobic ponds for secondary treatment. No water generated offsite will be treated onsite. The sludge from the desludging of the anaerobic ponds will be trucked off site by a liquid waste contractor. No irrigation of the effluent wastewater will occur. There is some concern that waterlogging of the soil around the effluent ponds could destabilise the integrity of the clay lined, compacted holding ponds. All other runoff water will be directed to one of two retention basins. A grey water retention basin will collect water from the bitumenised hardstand areas outside of the saleyard shed for reuse in the truck wash facility and for dust suppression. The grey water and wastewater treatment and capturing infrastructure has been designed to accommodate a 1 in 100 average recurrence interval (ARI). The runoff from the saleyard roof will be diverted into a clean water retention basin, where after being chlorinated will be reused as drinking water for stock and humans. Solid waste- the concreted areas, both inside and outside of the saleyard shed will be dry cleaned as required with bobcat sized machines with rotary brushes on the front and sides. This solid material as well as that obtained from the grids, pollutant traps and hunter screen, will be collected in a fairly dry manner and moved to the manure drying bays for draining and subsequent sale, off site use or disposal. Attachment C3 to Works Approval Supplementary Report- Carcass Management Plan has been submitted and any dead animals will be kept in a skip for offsite disposal to a licensed waste disposal facility weekly after the animal sales. Also a chilled container will be kept onsite for carcasses generated between sale periods and the weekly disposal. The soft flooring in the saleyards will be turned at least weekly and will be removed as it reaches saturation which is expected to be between 6-18 months. This material will be transported off site to a composting facility.	Medium- one stakeholder raised a number of issues in relation to a number of liquid and solid wastes including: • wastewater collection, storage and re-use complies with relevant environmental and health standards; and • control, management and eradication of diseased animals.	C - licence condition (setting limits + EMPs - short timeframes)(setting targets optional)	LIC – conditions to preventon site burial of deceased animals and to notify DEC of and wastewater discharges to the environment. A restrictive condition is used to prevent water generated from livestock loading at the Fremantle Port being treated onsite as occurred at the Midland site.	Appendix A1.2	In addition to the commitments given in the WMP, WAMIA have given a series of solid and liquid waste management commitments in the Works Approval Supplementary Report. In addition they have commissioned a consultant to undertake ongoing monitoring of the groundwater to ensure that the prescribed activity is not adversely impacting on groundwater quality. The general provisions of the *Environmental Protection Act 1986* and the *Environmental Protection (Unauthorised Discharge) Regulations 2004* will apply.

4.0 GENERAL SUMMARY AND COMMENTS

The WAMIA livestock saleyard, holding pens and a wastewater treatment facility requires a license as it meets the prescribed activity requirements for Category 55 under the *Environmental Protection Regulations 1987.*

This premises has been classified as "low priority" in accordance with DEC's Licensing Priority Management Framework and as such, when the facility is licensed, the term of the licence will be for a period of 5 years.

During operations, emissions and discharges from the facility have been assessed as being suitably managed through the incorporation of appropriate design and operational practices identified in the proposal, commitments from the proponent and the development and implementation of the following:

- an odour management strategy (Works Approval Supplementary Report and Attachment C2 -Odour Emissions Modelling proposed Muchea Livestock Centre,);
- a Seepage Management Plan;
- an Acid Sulphate Soils Investigation and Management Plan;
- a Carcass Management Plan;
- a Water Management Plan;
- a Noise Management Plan; and
- a series of further management commitments as detailed in the Supplementary Report to Support Works Approval Application and a letter: Commitments to Finalise Works Approval for the Livestock Centre, Muchea (16 January 2008).

OFFICER PREPARING REPORT

Cristina Angel
Position: Environmental Officer
Swan Region
Department of Environment and Conservation
9333 7523

8 March 2010

ENDORSEMENT

Marko Pasalich
Position: Program Manager
Swan Region
Department of Environment and Conservation
9333 7528

8 March 2010-03-08

APPENDIX A: EMISSIONS AND DISCHARGES OF SIGNIFICANCE

1.1 ODOUR EMISSIONS

TLC project has the potential to generate highly variable odour emissions from various sources onsite. These are:

- Sheep and cattle concrete and soft floor saleyard pens
- Sheep and cattle holding pens
- Wastewater screens and ponds
- Manure drying bays
- Carcass storage bins
- Manure laden stock transport vehicles
- Truck washdown facilities

The proponent has conducted a site specific odour modelling using AUSPLUME, a Gaussian plume dispersion model to predict the odour emission from the proposed operation. The predicted odour emissions from TLC will be within 1.0 to 1.5OU, which are within the Queensland EPA criteria of 2.5OU, rated at the 99.5 percentile and taken over a one hour averaging period.

The nearest sensitive receptor is the poultry farm's caretaker residence, which is located 750m south west from the edge of the proposed saleyard building. Odour modelling at this location is currently at 5OU, based on emissions solely from the poultry farm. While the EPA Guidance Statement No 3 *Separation Distances between Industrial and Sensitive Land Uses* recommends a buffer distance of 1,000m between saleyards and sensitive land uses, the caretaker's residence can not be regarded as a sensitive land use.

The next sensitive receptors are located 1,300m south west and 1,100m east of the saleyards. When odour emissions from TLC are combined with the emissions from the poultry farm, there is the potential for odour to impact on these neighbours which are zoned as semi-rural farm houses. In particular, the farm house located 1,300m in a south westerly direction is in the path of the prevailing winds where odour emissions from the poultry farm are currently rated at 2.5OU. The predicted modelling of emissions from both TLC and the poultry farm are expected to be on the boundary of the 3OU contour, even though this residence does meet the EPA's recommended buffer distance.

However, the modelled emission rate assumes an additive value which may be an over or under estimation. Emission rates were calculated from all odour sources onsite using data taken from the existing Midland saleyards and the Adelaide Plains Saleyard which uses a similar infrastructure to the proposed site.

The results of the odour emissions analysis and emission rate calculations are shown in table 3 below. A third party peer review of the odour modelling indicates that figures below are likely to be an overestimation as these figures have been calculated for an open paddock with no obstruction to wind speed while the most odorous areas will be housed in the shed.

Table 3: Summary of odour model for the WAMIA proposal

Source	Odour emissions rate in OU/s (odour units per second @0.3m/s at 0.1m above surface)	% of overall odour emissions as determined by odour modelling based on emissions from the Midland Saleyard
Cattle housing- soft floor	**23,287** (during sale 12pm Sun-4pm Mon) **12,287** (after sale before sawdust turned 4pm Mon-5pm Tues) **10,194** (after sawdust turned 5pm Tue-12pm Sun)	46% 24% 20%
Cattle housing- concrete floor walkways and scales	**Negligible**	0%
Sheep holding pens- concrete	**11,323** (during sale 2pm Mon-5pm Tues) **5,960** (until wash down 5pm Tues-3pm Wed) **Negligible** (after wash down)	22% 12% 0%
Total shed	**40,131** Max (49,786m^2)	**78%**
Screen area	1,470	3%
Covered drying shed	290	1%
Anaerobic pond	1,875	4%
Aerobic pond 1	2,880	6%
Aerobic pond 2	1,770	3%
Aerobic pond 3	2,613	5%
Holding paddocks	Minor	0
Unloading/loading trucks	Not modelled	0
Removal and storage of sawdust	Not modelled	0
Total	**51,029**	100%

WAMIA has committed to undertaking a series of further management commitments should unreasonable odour emissions be confirmed as being emitted from TLC. These commitments were noted in Table 2 and include one or more of the following:

- gas venting from the anaerobic ponds in accordance with *Water Quality Protection Note: Animal Industry Wastewater Ponds* (Department of Water, November 1998);
- turning of the soft floors twice weekly;
- establishment of shelter belts; and
- limit the maximum livestock permitted onsite for sale.

ODOUR EMISSIONS RISK ASSESSMENT

Odour emissions from the prescribed activity have been given a risk assessment of "C", according to Table 2. Predicted odour emissions from WAMIA's operations are within the Queensland EPA guidelines of 2.5OU, except for one resident located at 1,300m in a SW direction. DEC has acknowledged that, while there is the potential to exceed the Queensland EPA guidelines, a borderline 3OU is permissible in a semi-rural location provided that the proponent is prepared to ensure best-management practices on site and carry out further odour assessment post commissioning should odours be a problem. Letters were sent to all stakeholders who fall within the potential cumulative odour impact area requesting comments in relation to the site.

The level of community concern was low with only one stakeholder raising concerns about cumulative odour issues in the area and a suggestion that odour monitoring be conducted at the premises boundary to ensure compliance with the Queensland EPA guidelines. However, the rating for the socio-political context, according to Table 2, has been rated as 'medium' given that the predicted odour modelling, when combined with odours from the adjacent poultry farm, have the potential to exceed this guideline at a nearby sensitive receptor.

RECOMMENDED STRATEGY FOR MANAGING ODOUR EMISSIONS

The issue of odour emissions are suitable for licence conditions which ensure that odour_emissions on site are monitored and any concerns from the community are tracked by WAMIA's best practice complaints management system. It is also expected that WAMIA's contact with the community liaison group will be effective in gauging the potential for impact from odour emissions during operations.

WAMIA have committed to undertake improvements in odour management at the site if emissions are found to impact on the community. This will require a post commissioning odour assessment and a continual improvement Odour Management Plan to be developed which will need to be reflected in management practices on adjacent odour emitting premises.

1.2.1 SOLID WASTE MANAGEMENT

TLC will produce solid waste from the following sources:

- manure removed from hard and soft floor areas within the saleyard shed,
- solid material removed from the wastewater stream
- soft flooring (generated approximately once in every 18months)
- sludge from effluent ponds (generated approximately once in every decade)
- deseased animals
- waste from administration building

Concrete areas within the under cover saleyards and external hardstand areas around the loading and unloading ramps will be dry cleaned on a regular basis using bobcat sized machines with rotary brushes on the front and side.

Wash-down water from the truck wash and the concreted portions of the undercover saleyards will be initially screened by gross pollutant traps and grids in order to remove solid waste from the wastewater stream. The effluent is then directed over trafficable

sumps and pumped over hunter screens where the remaining solids can be collected in a relatively dry state.

Over a number of years it is anticipated that the effluent ponds may lose capacity and accumulate sludge. Once the current effluent pond has less than 50% capacity it will be desludged and removed off site by a licensed liquid waste carrier and taken to an approved premises for further treatment or disposal.

The solid wastes produced on site from dry cleaning, solids screening and occasional sump cleanouts will be transferred to the manure drying bays for draining and subsequent sale and off-site usage or disposal. The manure drying area will be roofed and occupy a 24m by 6m portion of the concrete floor bunded 'waste management area'. The solids generated from the manure drying area the wastewater treatment system, the swept manure, the soft flooring and the effluent pond sludge are all suitable for use and reuse at other facilities and could be sold as a product.

The waste from the administration building will be recycled where possible and the remaining fraction disposed of at a municipal waste facility.

Carcasses generated onsite will be placed in a large covered waste skip located within the concrete floored and bunded waste management area. The skip will be transported by an approved transport contractor to a licensed putrescibles landfill facility as soon as possible, if not weekly. A chiller may be used onsite for the retention of a small number of carcasses that require disposal between sales. These carcasses will be added to the skip bin when it is due to be emptied.

SOLID WASTE RISK ASSESSMENT

The solid waste disposal risk assessment has been given a risk assessment of "C" according to table 2 because of the on site storage of carcasses and the relatively high expense to disposal of small numbers of animals of site.

The level of community concern was low.

RECOMMENDATIONS

That the offsite disposal of carcasses be managed by licence condition.

1.2.2 LIQUID WASTE MANAGEMENT

TLC will produce liquid waste from the following sources:

- occasional wash down of hard-floor sale and drafting areas within saleyard shed
- truck wash down
- on site toilet facilities

TLC has been designed with the objective of minimum generation of liquid wastes. The livestock saleyards will be fully roofed to minimise wastewater generation and to also retain rainwater for onsite use. A combination of hard and soft absorbent flooring is used in the saleyard shed to facilitate the ability to employ dry cleaning of the areas. Wash-down will still be used on hard areas where needed but only after dry cleaning has occurred to reduce the strength and quantity of the effluent produced. Wash-down effluent will be directed towards the ponds are pre-treatment. All other surface runoff from the external hardstand area will be

directed to a grey water retention basin for ultimate re-use for truck washing and dust suppression.

The wastewater pre-treatment is essentially a solids removal system comprising a series of grids and a lined sump through which the effluent passes before being pumped by means of a submersible sewage pump over a Hunter screen. The effluent is the discharged into wastewater treatment ponds with ultimate disposal through solar evaporation.

The effluent treatment system comprises of two parallel primary treatment anaerobic ponds, of which only one is used at any one time, followed by a secondary treatment which involves three aerobic ponds. The aerobic ponds have been designed as a closed system which does not allow for overflow, discharge or spillage even in the even of a 1:100 year 72 hour rainfall event.

WAMIA treated effluent that was generated from the loading of live export at the Fremantle Port at the former Midland Livestock saleyard. This activity has not been considered in the assessment for TLC.

DEC has expressed concern that these ponds, while constructed to AS could be destabilised because of the likelihood of prolonged water logging of the soils surrounding the ponds.

LIQUID WASTE RISK ASSESSMENT

The liquid waste from the prescribed activity has been given a risk assessment of "C" according to Table 2 as there is the potential for liquid waste discharges and runoff if not management appropriately to impact on ground and surface water resources.

RECOMMENDATIONS

The issue of liquid waste management is suitable for licence conditions which ensure that liquid waste onsite is collected, stored and treated appropriately. As WAMIA have provided a commitment to monitor groundwater to ensure there is no impact on groundwater from the prescribed activity, there is no need for this to be regulated specifically, however they will be required to notify DEC is they become aware of wastewater discharge to the environment.

APPENDIX B: EMISSIONS AND DISCHARGES RISK ASSESSMENT MATRIX

Table 4: Measures of Significance of Emissions

Emissions as a percentage of the relevant emission or ambient standard		Worst Case Operating Conditions (95th Percentile)			
		>100%	50 – 100%	20 – 50%	<20%*
Normal Operating Conditions (50th Percentile)	>100%	5	N/A	N/A	N/A
	50 – 100%	4	3	N/A	N/A
	20 – 50%	4	3	2	N/A
	<20%*	3	3	2	1

*For reliable technology, this figure could increase to 30%

Table 5: Socio-Political Context of Each Regulated Emission

		Relative proximity of the interested party with regards to the emission				
		Immediately Adjacent	Adjacent	Nearby	Distant	Isolated
Level of Community Interest or Concern*	5	High	High	Medium High	Medium	Low
	4	High	High	Medium High	Medium	Low
	3	Medium High	Medium High	Medium	Low	No
	2	Low	Low	Low	Low	No
	1	No	No	No	No	No

Note: These examples are not exclusive and professional judgement is needed to evaluate each specific case

*This is determined by the DEC using the DEC "Officer's Guide to Emissions and Discharges Risk Assessment" May 2006.

Table 6: Emissions Risk Reduction Matrix

		Significance of Emissions				
		5	4	3	2	1
Socio-Political Context	High	A	A	B	C	D
	Medium High	A	A	B	C	D
	Medium	A	B	B	D	E
	Low	A	B	C	D	E
	No	B	C	D	E	E

PRIORITY MATRIX ACTION DESCRIPTORS
A = Do not allow (fix)
B = licence condition (setting limits + EMPs - short timeframes)(setting targets optional)
C = licence condition (setting targets + EMPs - longer timeframes)
D= EIPs, other management mechanisms/licence conditions (monitoring/reporting)/other regulatory tools
E = No regulation, other management mechanisms

Note: The above matrix is taken from the DEC Officer's Guide to Emissions and Discharges Risk Assessment May 2006.