



CEO-initiated amendment to licence

Division 3, Part V *Environmental Protection Act 1986*

Licence number	L9123/2018/2
Licence holder	Elders Rural Services Australia Ltd and Nutrien Ag Solutions Ltd
ACN	004 045 121 and 008 743 217
File number	DER2018/000478
Premises	Boyanup Cattle Saleyards 31 Salter Road BOYANUP WA 6237
Date of report	26 September 2023
Status of report	Final

Amendment description

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend an existing licence issued for a prescribed premises as set out below.

This amendment is on the initiative of the Chief Executive Officer (CEO) of the department and relates to changes to on-site waste management practices following an incident that was brought to the CEO's attention by the community.

In completing the assessment documented in this report, the department has considered and given due regard to its regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

Purpose and scope of assessment

Elders Rural Services Australia Ltd and Nutrien Ag Solutions Ltd (licence holder) hold licence L9123/2018/2, issued under Part V Division 3 of the *Environmental Protection Act 1986*.

The licence relates to operation of a livestock saleyard in the Boyanup townsite, about 20 km south of Bunbury. The main activities occurring on the premises include the temporary holding of cattle within pens, pending their sale, and the subsequent management of manure (faeces and urine) generated during cattle sales.

Following recent incidents at the site, the department has determined to review the existing licence to ensure it accurately reflects the activities being undertaken on the premises; that all emissions and discharges have been properly identified; and there is an appropriate level of regulatory control being applied commensurate to the risk of impacts from on-site waste management practices to public health and the environment.

Background

In March 2023, the department was notified by the community of an incident in which an unknown volume of raw manure (sludge) was pumped from the effluent collection system and discharged over an adjacent tree lot on the premises.

According to the licence holder, the incident was the result of a failure of the pump that transfers effluent from the cattle pens' gross pollutant trap (GPT) to the secondary sedimentation tank (SST). Due to this failure, the GPT had become clogged with manure and solids; the licence holder subsequently engaged a contractor to vacuum pump out the solids and dispose over the adjacent tree lot, which correlates with the irrigation area delineated on the licence.

The incident was observed by members of the public, who reported to the Shire of Capel (shire). Shire environmental officers visited the site and verified the incident with the contractor, who was still on-site at the time. The contractor estimated between 5,000 – 7,000 L of manure/sludge (including about 2,000 L of potable water used to break up the solids) was discharged to the on-site irrigation area.

The incident was reported to the media and articles published in the local newspaper over the following weeks. The department also received several public enquiries, including concerns about the saleyard (and its waste management practices) posing a risk to public health from zoonotic diseases.

In August 2023, the department was notified by the Shire of another incident involving overtopping of the SST following 70 mm of rain falling in less than 24 hours. The incident was observed by members of the public, who reported to the Shire. Shire environmental officers visited the site and observed effluent being piped from an overflowing SST to the adjacent tree lot, where significant pooling was occurring and a strong odour present.

In response, the licence holder advised the Shire they had ceased the discharge and since had a volume of effluent pumped out by a liquid waste contractor.

Review

The department has reviewed the existing licence and notes the following:

- it predates, and has not been subjected to a detailed environmental risk assessment under, the department's current regulatory framework;
- it does not accurately reflect the activities being undertaken on the premises, nor have all emissions and discharges been properly identified;
- there is not an appropriate level of regulatory control being applied commensurate to the risk of impacts from operations and on-site waste management;
- it is unclear what infrastructure is authorised on the premises, particularly for on-site waste management; and
- the requirements for compliance with respect to on-site waste management are unclear.

Manure management

In considering this incident, the licence holder was of the view that condition 5(i) of the existing licence provided the necessary authorisation to dispose of raw manure/sludge on the premises, as it refers to using 'material removed from the sedimentation tank as a soil conditioner' – despite never previously having disposed of this material on-site (always removed off-site).

On review, the department considers the wording of this condition to be unclear, particularly in terms of the requirements for compliance, and in the absence of a definition for what constitutes 'soil conditioner', accepts how this condition could be interpreted in that manner.

However, the department notes this condition specifically refers to material removed from the 'sedimentation tank' (the material disposed in this incident was pumped directly from the GPT and not the SST) and does not specify where this material may be used or disposed.

On review, the department does not support the on-site disposal of raw or unprocessed manure, as it poses an unacceptable risk of impacts to public health and the environment (in terms of the potential for the transfer of zoonotic diseases, nuisance odour and flies, etc., and nutrient contamination of groundwater and/or surface waters).

Should the licence holder wish to manage solids generated from the saleyard within the premises, it must firstly be processed (i.e., pasteurised) and be tested to ensure it meets specified quality standards for indicator pathogens and plant propagules, prior to use as a soil conditioner (approvals are not required for off-site reuse or sale if the material has been properly processed). Should it wish to include this provision on the licence, the licence holder is advised to apply for an amendment, with sufficient supporting information.

Alternatively, all solids must be removed from the premises for disposal at a premises that is lawfully able to accept that kind of waste, such as a licensed composting/organics recycling facility or a solid waste facility.

Effluent management

The department's understanding of current effluent management at the premises is that manure runoff from the cattle yards/hardstand area(s) are directed to three GPTs, prior to being automatically transferred/pumped to a sedimentation system (SST) via float switch.

Carryover solids are settled out using a series of screens prior to entering a final sump, where the resultant effluent is automatically pumped to an adjacent tree lot and irrigated over an 0.5 ha (100 m x 50 m) area using fixed sprinklers.

The existing licence requires a quarterly sample for effluent quality and includes quality limits for pH, BOD and suspended solids only – there is no requirement to keep records of irrigation volumes, nor is there any requirement to meet discharge criterion for nutrients (or consider nutrient loading) or conduct groundwater or soil monitoring.

On review, the department does not support the continued practice of simply irrigating effluent

on-site – unless it is supported by a detailed nutrient management plan that identifies the limiting nutrient and demonstrates how nutrients added to the landscape are subsequently removed.

In the absence of soil testing, groundwater monitoring, etc., the department considers there is a high risk that historical effluent disposal practices at this premises have resulted in over application of nutrients, leading to elevated levels in soil (runoff to surface drains), leaching to soil and potentially groundwater based on the levels of nutrients being routinely applied.

The premises is also located within the Lower Preston surface water catchment, a tributary of the Preston River, which is classified as a 'recovery' catchment under the *Leschenault Estuary water quality improvement program (WQIP)* (DoW 2012). Recovery catchments are those where the estimated nutrient concentration in runoff does not meet either the nitrogen or phosphorus water quality targets, and therefore dramatic reductions in nutrient and organic matter pollution are required in order to meet the specified water quality objectives under the WQIP.

Consultation

The department sought comment from relevant public authorities on current effluent management infrastructure and disposal practices at the premises, in terms of its adequacy in controlling risks to public health and the environment:

- The shire considers there is insufficient detail to demonstrate how current management of wastewater at the premises is adequate and sustainable; refers to the existing environmental management plan for the site that it considers to be difficult to interpret, lacks details on the design and operation of the water and effluent management system, and is oftentimes contradictory. The shire has also raised concerns about questionable dumping practices and lack of a controlled waste contractor.

The shire also advised its recent decision to extend the lease for the site is subject to a capital upgrade plan that includes significant upgrades to water and effluent disposal infrastructure and management practices. The capital upgrades will require development approval.

- The Department of Health (DoH) advised that animal waste effluent disposed in a tree lot poses a significant public health risk as the public walking through this area may be exposed to, and at risk of severe infection from, zoonotic pathogens (all people attending a livestock saleyard have the potential to acquire zoonotic diseases from the animals, animal waste and immediate environment if precautions/infrastructure are not in place to help mitigate the risk of exposure).

Although DoH has no record of public health issues or occupational zoonotic diseases related to operation of this saleyard or any other livestock saleyard in Western Australia, DoH considers it critical that measures should be in place to prevent exposure of people to zoonotic pathogens, such as having procedures in place for the timely and safe removal and disposal of animal waste.

- The Department of Primary Industries and Regional Development (DPIRD) likens the management of effluent at livestock saleyards to that of a dairy farm, i.e., should meet the minimum standards outlined in the [Code of Practice for Dairy Farm Effluent Management Western Australia](#).

DPIRD also expects the irrigation of nutrient-rich wastewater from agribusiness operations to be supported by a detailed nutrient management plan that identifies the limiting factor and demonstrates how nutrients added to the landscape are subsequently removed.

Decision

Manure management

The delegated officer does not support the on-site disposal of raw or unprocessed manure and considers this practice poses a high risk to public health and impacts to surface and groundwaters and other forms of land degradation. This determination is based on the following:

- the risk to public health, in terms of biosecurity concerns and potential for transfer of zoonotic diseases that are likely present in raw cattle manure, which is further increased given the area is openly accessible to the public;
- the risk of nuisance odour, flies and vermin from the spreading of raw manure, which is further increased with residential dwellings within 250 m of the premises;
- the risk of over-application of nutrients and salts over time (in the absence of an appropriate nutrient offtake strategy and adequate soil testing and groundwater monitoring), leading to the leaching of nutrients through the soil profile and potentially to groundwater and other land degradation issues; and
- the risk of overland runoff of nutrients to nearby surface waters and/or perched groundwater during winter (in the absence of adequate runoff controls).

To address these issues, the delegated officer has determined to require this material be removed off-site to a premises that is lawfully able to accept that type of waste, such as a licensed composting or organics recycling facility or a solid waste facility.

The following controls have also been added to the licence, to further minimise the risk of impacts from the handling and management of manure:

- addition of an infrastructure table, to specify authorised infrastructure for the handling and management of manure and the design standard to which they must be maintained during ongoing operations, such as:
 - effluent sumps, which must be maintained with a pump that is capable of pumping effluent to the SST;
 - removal of manure from pens after every sale event; and
 - must remove solids from the SST at least once every 12 months;
- requiring regular inspections of the effluent sumps and SST, to confirm integrity and minimise the potential for blockages;
- requiring records be kept of all manure removed from the premises, including who removed the waste and the receiving premises; and
- notification must be given to the CEO prior to, and after, all desludging events.

Effluent management

The delegated officer does not support the continued practice of disposing (irrigating) effluent on-site – unless it is supported by a detailed nutrient management plan that identifies the limiting factor and demonstrates how nutrients added to the landscape are subsequently removed.

In the absence of such a plan, the delegated officer considers this practice poses a high risk to public health and impacts to surface and groundwaters and other forms of land degradation. This determination is based on the following:

- the risk to public health, in terms of biosecurity concerns and potential for transfer of zoonotic diseases that are likely present in the effluent;
- the risk of over-application of nutrients and salts over time (in the absence of an appropriate nutrient offtake strategy and adequate soil testing and groundwater monitoring), leading to the leaching of nutrients through the soil profile and potentially to groundwater and other land degradation issues; and
- the risk of overland runoff of nutrients to nearby surface waters and/or perched

groundwater during winter (in the absence of adequate runoff controls).

To address these issues, the delegated officer has determined to require all effluent be removed off-site to a premises that is lawfully able to accept that type of waste, such as a licensed a liquid waste facility, or a composting or organics recycling facility.

The following controls have also been added to the licence, to further minimise the risk of impacts from managing effluent and runoff:

- addition of an infrastructure table, to specify authorised infrastructure for managing stormwater and effluent runoff and the design standard to which they must be maintained during ongoing operations, such as:
 - specifying what constitutes the controlled drainage area and the infrastructure within;
 - effluent sumps, which must be maintained with a pump that is capable of pumping effluent to the SST;
 - requiring uncontaminated surface runoff to be diverted away from the cattle pens and effluent catch drain;
 - ensuring a minimum freeboard of 300 mm on the SST, to ensure overtopping events do not occur;
- requiring regular inspections of the effluent sumps and SST, to confirm integrity and minimise the potential for blockages;
- requiring effluent to be removed from the premises at a frequency that ensures a minimum 300 mm freeboard is maintained within the SST;
- allowing provision for clean overland runoff during cattle sales to be diverted to a stormwater buffer tank, and if meeting specified quality criterion for urban stormwater, being discharged to the on-site swale drain; and
- requiring records be kept of all effluent removed from the premises, including who removed the effluent and the receiving premises.

Other matters

In reviewing the existing licence, the delegated officer has also determined to:

- require more detailed recording and reporting of inputs and outputs, for compliance purposes;
- update complaints management requirements, including communication with complainants;
- removing conditions that are now redundant, such as discharge requirements and monitoring; and
- revise licence condition numbers and realign condition numbers for numerical consistency.

Draft decision and licence holder comments

The draft amended licence and this report were provided to the licence holder on 7 July and 5 September 2023. The key issues raised by the licence holder on the initial draft licence related to the difficulties in managing the volumes of surface water runoff from the pens, as the site was not setup to manage clean overland flow separate to effluent runoff.

Provision has therefore been provided to allow the diversion of clean overland flow from the pens between sale events (following removal of manure and high pressure wash down) to a stormwater buffer tank, and subsequent discharge to the stormwater system if the water meets specified quality criterion.

Other minor corrections and clarifications have also been made, to ensure consistency with current and proposed changes to on-site management of wastes.

Summary of changes

The below table provides a summary of the updates and will act as a record of implemented changes. All changes have been incorporated on the licence.

Condition / table	Description
<i>New condition 1, Table 1</i>	<i>Inclusion of infrastructure table, identifying authorised infrastructure for livestock holding and waste management (cattle pens, effluent sumps, controlled drainage area, SST) and their respective design requirements that must be maintained during ongoing operations</i>
<i>New condition 2, Table 2</i>	<i>Inclusion of operational requirements table, specifying minimum requirements for the infrastructure identified in condition 1</i>
<i>New conditions 3 & 4, Table 3</i>	<i>Inclusion of inspection of infrastructure requirements, including the requirement to conduct regular inspections, record the results and take corrective action where required</i>
<i>New conditions 5 & 6</i>	<i>Inclusion of requirement to remove mortalities and solid manure off-site, including record-keeping</i>
<i>New conditions 7, 8 & 9</i>	<i>Inclusion of requirement to remove effluent and sludge off-site (no on-site disposal), including record-keeping</i>
<i>New condition 10, Table 4</i>	<i>Inclusion of provision for release of stormwater from the buffer tank, including the requirement to firstly sample and test the quality of water, and only release once it has been confirmed as meeting specified water quality criterion for urban stormwater</i>
<i>New conditions 11, 12 & 13</i>	<i>Inclusion of requirements for water sampling and testing, including record-keeping</i>
<i>New condition 14, Table 5</i>	<i>Inclusion of requirement to monitor inputs and outputs</i>
<i>New conditions 15 & 16</i>	<i>Inclusion of updated complaints management requirements, including communication with complainants</i>
<i>New conditions 17, 18 & 19</i>	<i>Updated record-keeping requirements, consistent with current DWER licence template</i>
<i>New conditions 20 & 21</i>	<i>Inclusion of notification requirements for desludging events</i>
<i>Old condition 1</i>	<i>Condition regarding management of dust liftoff has been incorporated into new condition 2, Table 2, item 1(e)</i>
<i>Old condition 2</i>	<i>Condition regarding stormwater management has been incorporated into new condition 1, Table 1, item 3(c) and condition 2, Table 2, item 4(a)</i>
<i>Old condition 3</i>	<i>Condition regarding removal of deceased animals has been incorporated into new condition 2, Table 2, item 1(d)</i>
<i>Old condition 4</i>	<i>Condition regarding removing accumulated material within SST has been incorporated into new condition 2 (various items)</i>
<i>Old condition 5</i>	<i>Condition regarding removal of manure/sludge has been incorporated into new condition 2, Table 2, item 1(c)</i>
<i>Old conditions 6, 7, 8 & 9</i>	<i>Conditions regarding discharge of effluent and monitoring have been removed as they are now redundant</i>
<i>Schedule 1: Map</i>	<i>Premises map updated to reflect amended conditions, authorised infrastructure delineated, irrigation area removed</i>