



*UCO processing area to accommodate two 60,000L Cone-bottom tanks

**Existing bulk storage tank to be re-used for UCO storage

Greg Lott Environmental Authority and Development Approval Application Used Cooking Oil Processing Facility Environmental Report

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/158-2022 Dated: 3 April 2023 STEER ENVIRONMENTAL CONSULTING

Greg Lott- Application for an Environmental Authority and Development Approval for a Waste Reprocessing Facility at Port Alma QLD

Environmentally Relevant Activity 55 – Other Waste Reprocessing or Treatment

Applicant Name:Greg LottAR #:Project #:EA Application #:EPPR00426913

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1 Abbreviations

- BoM
- DA
- DES
- DSDILGP
- EA
- EP Act
- EP Regulation
- EPP Air
- EPP Noise
- EPP Water
- ERA
- EV
- EoWC
- Fitzroy River EVs/WQOs
- GPCL
- LPG
- MCU
- MSES
- Portside Storage
- RRC
- RSO
- SARA
- SDAP
- STEER EC
- UCO
- US
- WRR Act
- WQO

- Bureau of Meteorology
- Development Approval
- Department of Environment and Science
- Department of State Development, Infrastructure,
- Local Government and Planning
- Environmental Authority
 - Environmental Protection Act 1994
 - Environmental Protection Regulation 2019
- Environmental Protection (Air) Policy 2019
- Environmental Protection (Noise) Policy 2019
- Environmental Protection (Water and Wetland Biodiversity) Policy 2019
- Environmentally Relevant Activity
- Environmental Value
 - End of Waste Code
 - Environmental Protection (Water) Policy 2009
 Fitzroy River Sub-basin Environmental Values and
 Water Quality Objectives Basin No. 130 (part),
 including all waters of the Fitzroy River Sub-basin,
 September 2011
 - Gladstone Ports Corporation Limited
- Liquid Petroleum Gas
- Material Change of Use
- Matters of State Environmental Significance
 - Portside Storage Pty Ltd
 - Rockhampton Regional Council
 - Registered Suitable Operator
 - State Assessment and Referral Agency
 - State Development Assessment Provisions
 - STEER Environmental Consulting
 - Used Cooking Oil
- United States
 - Waste Reduction and Recycling Act 2011
 - Water Quality Objective

2 Executive Summary

This environmental report has been prepared to support an application for an environmental authority (EA) and development approval (DA) for Mr Greg Lott, owner and operator of Portside Storage Pty Ltd (Portside Storage), to conduct a waste management environmentally relevant activity (ERA) at Port Alma. Portside Storage operates a bulk liquid storage facility adjacent to the Port of Rockhampton, Port Alma Terminal and has up until now handled bulk quantities of new products that arrive through the adjacent port terminal or via road.

Portside Storage plans to accept used cooking oil (UCO) on site, undertake basic processing to remove contaminants, and then despatch it as a resource either overseas or domestically to customers that will then use it to manufacture biodiesel. There are presently no entities processing UCO in central Queensland, and Portside Storage has the ideal facility and location for doing so. Some new infrastructure will be installed to process UCO, however existing infrastructure will be utilised to store the processed UCO.

This environmental report considers all likely environmental impacts that the waste processing ERA may have on the identified environmental values (EVs) in the receiving environment and provides mitigation measures where required. The report will also assist Rockhampton Regional Council (RRC) to properly assess the material change of use (MCU) application from the perspective of environmental management.

All environmental impacts (and risks of impacts) the proposed activity presents can be mitigated to an acceptable level of impact.

3 Purpose and structure of this report

STEER Environmental Consulting (STEER EC) has been commissioned by Mr Greg Lott, owner of Portside Storage Pty Ltd (Portside Storage) to prepare an environmental report to support an application for relevant approvals to undertake a waste reprocessing environmentally relevant activity (ERA) at the company's bulk liquid storage facility at Port Alma, between Rockhampton and Gladstone.

This report considers the proposed waste reprocessing ERA in terms of potential impact on the receiving environment, and the necessary environmental management requirements to prevent and/or minimise potential impact. This report addresses the assessment requirements of the *Environmental Protection Act 1994* (EP Act) and subordinate legislation by identifying potential impacts from the proposed activity on the environment, and where necessary, proposes appropriate mitigation strategies to prevent or minimise potential impacts.

This report has been structured to serve three purposes:

- Provide supporting information for an environmental authority (EA) application to the Department of Environment and Science (DES) to conduct the following ERA:
 - ERA 55 Other waste reprocessing or treatment
- Provide supporting environmental management information for development approval (DA) application for a material change of use (MCU) for a non-devolved ERA to the State Assessment and Referral Agency (SARA) within the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP) for the waste reprocessing ERA (a concurrence ERA).
- Provide supporting environmental management information for a MCU application for a non-devolved ERA to Rockhampton Regional Council (RRC).

Effectively, this report combines three separate reports into a single document. This will allow DES, DSDILGP and RRC to understand the proposal to accept and process used cooking oil (UCO) into a resource, while each focusing upon their respective areas of assessment.

3.1 Environmental Authority

Prior to issuing an EA, DES must ensure the decision to issue the EA is made in accordance with the regulatory requirements for environmental management decisions as prescribed in the Environmental Protection Regulation 2019 (EP Regulation). This report discusses the waste management ERA in terms of the environmental management objectives for the major environmental management subject areas described in the EP Regulation, which are *air, noise, water (including groundwater and wetlands), land and waste.*

Specifically, this report addresses the following in relation to the requirements of Queensland's environmental legislation:

- The criteria and environmental management objectives prescribed in Schedule 8, Part 3, Division 1 of the EP Regulation.
- Identification of environmental values (EVs) in the receiving environment.
- Assessment of the likely impact on EVs identified in the receiving environment.
- Where necessary, present appropriate mitigation measures to prevent or minimise potential impacts on environmental values in the receiving environment.

The assessment of the likely impact on identified EVs and consideration of the environmental objectives and responses addressing the performance outcomes prescribed in Schedule 8, Part 3, Division 1 of the EP Regulation are presented within each major environmental management subject area.

4 Background

4.1 Existing operation

Portside Storage operates a bulk liquids storage facility on Lot 46 Plan DS438 on Port Alma Road at Port Alma 4699 (Figure 1). The facility is approved to handle and store bulk materials and chemicals under EA EPPR00426913. The specific materials accepted and stored at the facility vary over time dependent upon current demands and contractual arrangements. For instance, Portside Storage currently handles and stores palm oil unloaded from ships at the adjacent Port Alma facility before transferring it into road tankers which then distribute it via road. The facility also handles and stores tallow manufactured at a meat processing facility in Rockhampton before transferring it to ships in bulk quantities at the adjacent port. Portside Storage has transfer pipelines between its facility and the adjacent load out points at Port Alma. In the past the facility has received and stored various combustibles and flammables such as diesel, biodiesel and unleaded petroleum under the EA, however none of those materials are presently stored on site.

Figure 1. The location of the Port of Rockhampton (shown by the orange circle), in relation to Rockhampton to the northwest, and Gladstone to the southeast. The blue hatching indicates the jurisdiction of Gladstone Ports Corporation.

4.2 Site Location

Portside Storage's facility was established adjacent to the Port of Rockhampton, Port Alma Terminal to receive and despatch bulk materials (Figure 2). The Port Alma Terminal is situated on the southern aspect of the Fitzroy River delta approximately 62 km east of the city of Rockhampton (Figure 3). Most of the land surrounding this deep water port is zoned strategic port land, however the freehold land parcel occupied by Portside Storage is zoned rural in the RRC Planning Scheme. The subject land, Lot 36 on DS438 occupies an area of 4.58 hectares having a perimeter of 850 m (Figure 5).

The Port of Rockhampton, Port Alma Terminal is managed by Gladstone Ports Corporation Limited (GPCL), which is a government-owned corporation responsible for the import of raw material and export of products produced by large industry in central Queensland. GPCL also manages and operates the Port of Gladstone and the Port of Bundaberg.

Figure 2. Portside Storage (circled yellow) in relation to the adjacent Port or Rockhampton. A ship is evident in the forefront docked at wharf [Source: GCPL].

Figure 3. Port of Rockhampton, Port Alma Terminal in relation to the Fitzroy River Delta. Lot 46 DS438 occupied by Portside Storage is shown as a yellow polygon at the terminus of Port Alma Road.

The Port of Rockhampton, Port Alma Terminal has been used to export bulk sea salt mined nearby, although this cargo usually leaves via road transport now. Port Alma is still routinely used to receive large quantities of explosives, and ingredients such as ammonium nitrate used in explosives manufacturing which occurs at the Bajool Explosives Reserve on the Bruce Highway approximately 26 km away. The explosives and ingredients to manufacture such that arrive through the Port Alma Terminal are typically used in the mining industry in central Queensland.

The only sealed road access to the Port Alma Terminal is via Bajool-Port Alma Road from Bajool, which is also a HAZMAT Class 1 explosive freight and ammonium nitrate route according to the Department of Transport and Main Roads. Goods entering or leaving the Port Alma Terminal were also previously transported via rail, however the rail line was removed in the latter half of last century.

Pipelines between Portside Storage and Port Alma Terminal allow the transfer of bulk materials such as tallow or fuel either from or onto ships berthed at the wharf.

4.3 Surrounding Area

Portside Storage is located at the end of Bajool-Port Alma Road, adjacent to the Port Alma Terminal. The location is quite isolated and limited in terms of development that has occurred. The land on and surrounding the facility consists of extensive salt/mud flats abutting the large estuarine systems that include the Fitzroy River, Casuarina and Raglan creeks and The Narrows (the estuary that separates Curtis Island from the mainland). Two salt harvesting facilities have been established on Port Alma Road and use solar salt farming techniques to evaporate seawater before harvesting and processing for use in a range of applications from home cooking, chemical manufacturing, and agricultural supplements (Figure 4).

Figure 4. Portside Storage (yellow polygon) adjacent to the Port Alma Terminal, shown in relation to the surrounding salt/mud flats and the salt mining operations to the immediate west.

Along with Portside Storage and the Port Alma Terminal, another bulk fuel storage facility is also present at Port Alma (Figure 5). Port Alma also has a public boat ramp which is used by professional and amateur fisherpersons to access the large estuarine systems via Raglan Creek.

Figure 5. Portside Storage (shaded orange) and its immediate neighbours, which includes the Port Alma Terminal and a privately owned bulk fuel storage facility opposite Portside Storage on Port Alma Road.

4.4 Rehabilitation upon cessation of activity

Portside Storage is a long-established bulk liquid storage facility strategically positioned beside the Port of Rockhampton's Port Alma Terminal. The waste management ERA which will permit the processing of waste UCO will be installed within the established and developed operational footprint of the bunded bulk liquid storage area. The Port Alma Terminal is an ideal deep water port for receiving local and international cargo ships up to 180 m in length, and GPCL envisages a long operational life for this facility. There is no intention to cease port operations at this location, and the private bulk storage facilities situated adjacent to site are also likely to remain operational for many decades to come.

The recent introduction of fees for the waste levy in Queensland is driving industry to develop ways to avoid disposing of waste. UCO is recognised as a high energy resource with established uses globally. This is not likely to change in the future. Rather, Portside Storage may recognise other waste materials suitable for use as resources, and that will require storage adjacent to a port prior to despatch overseas or elsewhere in Australia. Thus, Portside Storage has not proposed a finite lifespan for the waste management facility – instead the intention is to continue to provide this

service from the licensed place for many years. However, as with any ERA where a footprint from a commercial activity will remain after cessation of the activity, the intention is to leave the land in a condition that is safe, stable, non-polluting, and fit for the intended subsequent use. The most likely end use for the facility at this stage remains unknown, and due to the intention to continue operating the proposed activity for many years, a rehabilitation plan will not be developed at this time. Instead, if it becomes known that the activity will eventually cease by a particular date, a plan to leave the footprint for the waste management ERA in an appropriate condition will be developed and implemented.

5 Environmentally Relevant Activities

Portside Storage is presently licensed to undertake the following ERAs under the EA in effect:

- ERA 50 Mineral and bulk material handling, threshold 2 loading or unloading 100 tonnes or more of bulk materials in a day; and
- ERA 08 Chemical storage, threshold 3 storing more than 500 m³ of chemicals of Class C1 or C2 combustible liquids or dangerous good Class 3 under AS 1940.

The following sections describe the proposed activity in terms of economic incentive, environmental benefits and a general overview of how it will be conducted. The identified risks to the receiving environment, and mitigation measures to prevent/minimise risk of impact are discussed in Section 6.

5.1 Waste reprocessing ERA

UCO is listed in the EP Regulation as a category 2 regulated waste. Until such time as it is processed into a resource, UCO remains a regulated waste. Portside Storage intends to process UCO into a saleable product for use as biodiesel. A pre-lodgement process was undertaken with SARA to discuss the proposal to accept and process UCO into a resource. The pre-lodgement advice is provided in Appendix A and confirms that Mr Lott will be conducting the following ERA:

ERA 55 – Other waste reprocessing or treatment, threshold 2(a) – Operating a facility for receiving and reprocessing or treating up to 5,000 t of category 2 regulated waste in a year.

5.2 Benefits of biodiesel

It is well recognised that our fossil fuel reserves are present in finite reserves. Fossil fuel also requires significant investments in time, energy, and capital to extract from locations within the earth's crust. In Australia, most of our fossil fuels are imported, which requires the combustion of more fossil fuels to transport it here from around the globe. Petroleum diesel is derived from fossil fuels and Australia is highly dependent on this type of fuel as an energy source to run the diesel engines in most of our heavy vehicles we rely on for our road transport industry. Many Australians also retain a preference for passenger vehicles that run on diesel petroleum. Australia's local oil refineries constantly compete with imported petroleum products from large highly efficient refineries in Asia, regardless of the cost of importing and refining crude oil. Consequently, the price of petrol at Australian refineries is based on international petrol prices. Both diesel and unleaded are refined from crude oil which is purchased in United States (US) dollars. Thus, the value of the Australian dollar in relation to the US dollar also has a significant impact on the price of petroleum products in Australia. When the exchange rate for the Australian dollar to US dollar reduces, our fuel costs increase.

The use of UCO to manufacture biodiesel has gained significant interest over the past few decades for both economic and environmental reasons. UCO is widely available in Australia, generated by the thousands of commercial kitchens in restaurants and fast food venues, and by food factories manufacturing on a large scale. In the past, this waste has either gone to landfill or been used to

manufacture biodiesel on the black market. Composting activities now accept UCO as a feedstock, however other options to use this high energy waste as a resource are also being investigated. DES has recently released an End of Waste Code (EoWC) which allows UCO to be used to supplement stockfeed for animals such as cattle. However, UCO can only make up 3% of stockfeed under the EoWC. The multi-billion dollar fossil fuel industry has enormous capacity to capably incorporate biodiesel into fuels by appropriately blending it with hydrocarbon diesel automotive diesel oil to make a bio-diesel blend.

The environmental benefits of biodiesel are many.

Biodiesel:

- is a renewable resource that has lower life cycle carbon dioxide emissions than diesel refined exclusively from fossil fuel.
- contains almost no sulphur and no aromatic hydrocarbons which means lower exhaust emissions including polycyclic aromatic hydrocarbons.
- is biodegradable.
- can be manufactured from ingredients already present in Australia.
- use can reduce emissions including greenhouse gases.
- reduces the reliance on importing fossil fuels.

UCO is manufactured into biodiesel through use of a simple chemical reaction known as transesterification, which is achieved by introducing a suitable catalyst. According to the American Society for Testing and Materials, biodiesel is defined as, 'fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats'.

5.3 Intended process

Portside Storage will establish new infrastructure within the footprint of the controlled bulk liquid storage facility at Port Alma to process UCO, however existing infrastructure will also be utilised. For instance, an existing bulk liquid storage tank will be used to store processed UCO prior to despatch from site (Figure 6).

Processing of UCO will be minimal and straightforward. Essentially, processing will involve:

- Removing the bulk of water by draining.
- Evaporating any remaining moisture by heating.
- Removing solid particles that remain from the cooking process by:
 - o Gravity
 - Filtration
- Transferring to a storage tank ready for despatch.

Figure 6. Indicative location for the proposed UCO processing facility is shown by the pink polygon. The existing bulk storage tank that will be used to store processed UCO is circled blue. Trucks delivering UCO will enter the driveway, follow the turning path before parking adjacent to the UCO processing area for unloading.

UCO will originate from establishments such as restaurants and fast food outlets. At least one company established within the UCO industry and boasting a reputable track record will collect UCO from various suppliers and transport it to Portside Storage for processing. Most UCO will come from businesses in central Queensland, however larger consignments may also arrive from further afield. There is presently no facility accepting and processing UCO in central Queensland, so the market is expected to increase once UCO generators become aware this waste is being processed into a resource locally.

Portside Storage will ensure any UCO that arrives on site is transported by a licensed regulated waste transporter. UCO will be transported in semi-tankers or body truck tankers. Trucks making a delivery of UCO to Portside Storage will enter the driveway off Bajool-Port Alma Road. Portside Storage staff will direct drivers to follow the driveway around before parking adjacent to pumps in the UCO processing area. Truck drivers will be instructed to apply the park brake and shut off the engine. The transfer of UCO will then occur into the first of two cone-bottomed tanks. All unloading

of UCO from delivery vehicles into the first tank will occur under the direct supervision of a Portside Storage staff member. The transfer of UCO will occur through an industrial hose coupled to the delivery vehicle and the tank. Tanks will be fitted with high level alarms and automatic shut off controls. The Portside Storage staff member will ensure that the consignment paperwork has been completed and matches the delivery.

Gravity will play a significant role in the processing of UCO. Once transferred into the conebottomed tank, any water remaining in the UCO will drop into the cone point on the bottom of the tank where it will be decanted and stored in a separate tank. Both cone-bottomed tanks will be fitted with heating coils, however the bulk of the heating of UCO will be achieved by passing it through a heat exchanger to raise the temperature to approximately 75°C. Once the UCO reaches this temperature, it will be transferred to the second cone-bottomed tank where it will be left to settle. Any remaining solids such as food batter or solid food material remaining in the UCO from the cooking process will settle to the bottom of the processing tank where it will be drained. Any remaining water will be also drained from the bottom of the cone. Portside Storage will install dedicated waste material tanks to store any solids and water removed from the UCO during processing.

Portside Storage already has a ready supply of liquid petroleum gas (LPG) on site which is used as an energy source to heat tallow prior to transfer onto ships. LPG will also be used to heat water in the heat exchanger to evaporate water from UCO. Portside Storage is also investigating the viability of installing up to 100 MW of solar array on site to reduce the cost of using gas for heating, but to also lower the site's carbon footprint.

Up to 5,000 tonnes of used vegetable oil will be received on site and processed in a year. Although animal fats can be used to manufacture biodiesel, no animal fats will be received on site under this proposal.

Processed UCO will be either transferred onto ships at the adjacent Port of Rockhampton, Port Alma Terminal for transport to customers overseas or in Australia or loaded onto road transport for transfer to a facility within Australia. Existing markets are established in the US and Singapore.

Any waste removed from the processing of UCO to remove contaminants will be transported to a facility that can lawfully accept it. Portside Storage will make every effort to ensure this waste avoids being landfilled. Discussion with local composting facilities have identified the suitability of the waste for use as a composting feedstock, thus using it as a resource will be the preferred endpoint.

5.4 Registered Suitable Operator

Portside Storage is owned by Mr Gregory John Lott. Mr Lott is the holder of the existing EA and a Registered Suitable Operator (RSO) under the EP Act (RSO reference # 403112). Mr Lott is the entity applying to conduct the new waste management ERA. Once the new EA is issued, Mr Lott will apply to combine the existing EA with the newly issued EA into an amalgamated project authority.

6 Assessment of Possible Impacts on Environmental Values and Mitigation Measures

The EP Act prescribes certain requirements for including with applications for EAs to conduct ERAs. ERAs that require either a variation or site-specific application are required to address additional requirements compared to lower risk ERAs that may be able to operate under a standard approval. There is no ERA standard for ERA 55, which consequently requires this EA application is made as a site-specific application. Section 125 of the EP Act places additional requirements on variation and site-specific applications and states they must:

- *i. include an assessment of the likely impact of each relevant activity on the environmental values, including*
 - a. a description of the environmental values likely to be affected by each relevant activity; and
 - b. details of any emissions or releases likely to be generated by each relevant activity; and
 - c. a description of the risk and likely magnitude of impacts on the environmental values; and
 - d. details of the management practices proposed to be implemented to prevent or minimise adverse impacts; and
 - e. details of how the land the subject of the application will be rehabilitated after each relevant activity ceases; and
- *ii. include a description of the proposed measures for minimising and managing waste generated by each relevant activity.*

This section discusses the proposed activity in accordance with the environmental management objectives for the major environmental management subject areas described in the EP Regulation, which are *air* (air quality and potential environmental nuisance impacts associated with dust and odour), *noise, water* (including groundwater and wetlands), *land and waste*.

6.1 Air

This section will address how the waste reprocessing ERA will be undertaken in a manner that will prevent and/or minimise potential impact on the air environment.

6.1.1 Environmental management objectives

Schedule 8, Part 3 of the EP Regulation contains *Division* 1 - Operational assessment, which prescribes the environmental objectives and performance outcomes for the broad areas of environmental management. The environmental objectives and performance outcomes for air are reproduced below:

Environmental Objective

The activity will be operated in a way that protects the environmental values of air.

Performance outcomes

- 1. There is no discharge to air of contaminants that may cause an adverse effect on the environment from the operation of the activity.
- 2. All of the following-

(a) fugitive emissions of contaminants from storage, handling and processing of materials and transporting materials within the site are prevented or minimised;

(b) contingency measures will prevent or minimise adverse effects on the environment from unplanned emissions and shut down and start up emissions of contaminants to air;

(c) releases of contaminants to the atmosphere for dispersion will be managed to prevent or minimise adverse effects on environmental values.

Schedule 8, Part 2, Section 2(4) of the EP Regulation states that the relevant environmental objective is achieved if either item 1 of the performance outcome for the environmental objective is achieved, or item 2 of the performance outcomes for the relevant environmental objective is achieved.

6.1.2 Environmental values for the air environment (Air)

The Environmental Protection (Air) Policy 2019 (EPP Air) identifies the following EVs for air to be protected:

- a) the qualities of the air environment that are conducive to protecting the health and biodiversity of ecosystems; and
- b) the qualities of the air environment that are conducive to human health and wellbeing; and
- c) the qualities of the air environment that are conducive to protecting the aesthetics of the environment, including the appearance of buildings, structures and other property; and
- *d)* the qualities of the air environment that are conducive to protecting agricultural use of the environment.

Likely emissions that will be produced by the proposed activity, the risk and likely magnitude of impacts, and management practices to be implemented to prevent or minimise impacts upon the EVs of the air environment are detailed below.

6.1.3 Management of potential impacts

The potential impacts on the air environment are discussed below in terms of environmental nuisance and environmental harm. An understanding of localised climate data is important to appropriately managing potential risks to the receiving environment that may result from operating activities that produce air emissions. The closest climate data station to Portside Storage is the Australian Bureau of Meteorology's (BoM) Rockhampton Aero station, which is approximately 45 km northwest of the facility. Site details for the Rockhampton Aero station are provided in Table 1 below:

Table 1. Site details for BoM climate data station, Rockhampton Aero

Site Name	Rockhampton Aero
Site number	039083
Commenced	1939
Latitude	-23.3753
Longitude	150.4775
Elevation	10.4 m
Operational status	Open

Prevailing wind direction is an important climatic variable that many ERA operators must keep in mind in terms of potential to cause environmental nuisance. Wind direction and speed can influence the location where any dust generated by conducting the activity may impact upon. BoM publishes wind roses for several climate data stations around Australia and which generally demonstrate locations experience wind from predominant directions. This is an advantage for ERA operators since knowing the predominant wind direction provides a more informed understanding of the potential for impacting on sensitive receptors in the receiving environment.

BoM makes available annual wind rose data for two separate times in a day – 9:00 AM and 3:00 PM for some sites that record wind data. The 9:00 AM and 3:00 PM annual wind roses for Rockhampton Aero station are presented in Appendix B. The wind roses show that the predominant breeze at 9:00 AM and 3:00 PM is from the southeast and east respectively. The greatest risk to sensitive receptors in the receiving environment would be those situated immediately to the northwest and west of Portside Storage.

Sections 6.1.3.1 and 6.1.3.2 discuss the potential environmental nuisance impacts from dust and odour respectively. Section 6.1.3.3 discusses the potential for environmental harm on the air environment from emissions that may emanate from the waste management facility, and proposes mitigation measures to minimise potential impacts on the EVs of air.

6.1.3.1 Dust

Portside Storage is located on a remote area of the coastline between Rockhampton and Gladstone. One residence is present immediately across Bajool-Port Alma Road (Figure 7), however the Port of Rockhampton, Port Alma Terminal and the bulk liquid storage facilities operate 24 hours a day. International shipping companies dock at any time during the day and night, and regardless of the day of the week. Bulk fuel trucks travel to and from the bulk liquid storage facilities day and night and access fuel using remote access cards to open automatic gates. UCO will only be received during the day when Portside Storage has staff present on site.

Appropriate dust mitigation strategies are in use at the site to minimise the risk of dust nuisance, and will continue to be used.

Figure 7. Photograph taken from atop a bulk fuel storage tank at Portside Storage facing toward Raglan Creek in the background. The location of the residential sensitive use is shown by the yellow arrow.

To assess the risk and likely magnitude of impacts on EVs for the air environment from dust, several factors were considered:

- Dust mitigation measures in place to control dust.
- The location of the activity in relation to sensitive uses.
- The surface of the waste processing operational area.
- The surface of trafficable areas.
- The predominant wind direction and wind speed for the area in relation to sensitive receptors.
- Staff training in environmental management.

After considering potential impacts on EVs for the air environment and surrounding sensitive uses in relation to dust, it is not considered that the activity will have any impact upon these uses. Portside Storage is located in a remote area at Port Alma, and although there is a single private residence located directly across the road, this is owned by a commercial fisherman who works the estuaries in the Fitzroy River delta and the Narrows. This sensitive use is accustomed to living adjacent to a 24-

hour, 7 day a week international port. Also, no complaints have been received in relation to dust emanating from the facility.

Management practices to prevent or minimise adverse impacts from dust include:

- Concreted trafficable areas.
- Ensuring plant and vehicles travelling over trafficable surfaces are operated at sufficiently low speed to minimise generation of dust. Management will actively enforce this requirement on plant and transport operators that enter site.
- Regularly sweeping trafficable areas to remove dirt that may result in the generation of dust.
- Assessing weather forecasts ahead of commencement of daily operations to remain informed about impending climatic conditions. This will allow proper preparation and planning to implement necessary control measures in a timely manner, especially on windy days and during periods of prolonged dry, and prior to dust having the opportunity to become a nuisance at sensitive receptors in the receiving environment.
- Ensuring vehicles, plant and equipment are maintained in an excellent state of repair and operated in accordance with manufacturer's specifications.
- Ensuring all staff are appropriately trained to ensure housekeeping practices are adhered to, and to identify potential sources of dust before they reach levels that might result in a significant dust nuisance in the receiving environment.

The proposed waste processing activity does not have the potential to generate dust. The only waste that will be processed is UCO, which will arrive on site as a liquid and will remain so. The entryway into site has been concreted and all processing and storage of UCO and the waste recovered from the process will be undertaken in enclosed vessels. The residence nearby is also upwind of the dominant winds the area experiences.

6.1.3.2 Odour

UCO has the potential to be odorous, depending on several factors including age, the level of contamination from foodstuffs that remain after its useful life, and how much exposure it has had to air and water. Oxidation occurs when unsaturated and polyunsaturated oils are exposed to oxygen in air and water which breaks carbon bonds in the long chain fatty acids, creating odorous compounds such as aldehydes, ketones and carboxylic acids. These new compounds often have a rancid smell. However, with appropriate mitigation strategies in place the odour risk associated with processing UCO can be managed. Factors considered when assessing potential impact from odour emanating from the waste transfer station activity on surrounding sensitive uses were:

- The way UCO will be received, processed and stored.
- The proximity of the waste processing facility to nearby sensitive uses.
- The predominant wind direction and wind speed for the area in relation to sensitive uses.

• Staff training in environmental management.

After considering potential impacts on EVs for the air environment and surrounding sensitive uses in relation to odour, it is not considered that the activity will have any impact upon these uses with appropriate mitigation measures in place. Portside Storage is in an industrial area at the Port of Rockhampton, Port Alma Terminal and apart from the single residence also located within the industrial area surrounding the subject site, it is ideally situated away from higher density residential development.

Management practices to prevent or minimise adverse impacts from odour will include:

- UCO will only arrive in fully enclosed tankers.
- The transferring of UCO into processing tanks will be undertaken in a fully enclosed system.
- All processing and storage of UCO will be undertaken in enclosed vessels.
- Ensuring vehicles, plant and equipment are maintained in an excellent state of repair and operated in accordance with manufacturer's specifications.
- Ensuring that management and staff are aware of weather conditions and wind direction by checking weather forecasts daily, and thereby being aware of the potential for odour to travel toward sensitive receptors.
- Ensuring staff are appropriately trained to manage and operate all equipment.

6.1.3.3 Air quality

Operation of the waste processing facility will not involve release of emissions from any point sources such as a boiler stack, although any plant and vehicles used on site are considered point sources of emissions.

The following controls will be in place to ensure impact on air quality is minimised or prevented:

- UCO will only arrive in fully enclosed tankers.
- The transferring of UCO into processing tanks will be undertaken in a fully enclosed system. All processing and storage of UCO will be undertaken in enclosed vessels.
- Ensuring vehicles, plant and equipment are maintained in an excellent state of repair and operated in accordance with manufacturer's specifications.
- Ensuring that management and staff are aware of weather conditions and wind direction by checking weather forecasts daily, and thereby being aware of the potential for odour to travel toward sensitive receptors.
- Ensuring staff are appropriately trained to manage and operate all equipment.

6.1.4 Summary of analysis of potential impact from dust and odour, and provisions to protect the environmental values of air

The location of the waste reprocessing ERA has been chosen with the specific intention of establishing the activity in a remote area with other industry. Although one residence is located within 100 m of the facility, appropriate mitigation measures are in place to prevent and/or minimise the impact on the air environment. The activity is not a type that risks creating a dust nuisance, and odour will be controlled by processing and storing UCO in fully enclosed vessels. Regardless, Portside Storage staff will monitor for potential dust nuisance by ensuring potential dust sources are appropriately managed.

Air quality in the receiving environment will also be protected. There are no point sources where emissions are dispersed to the atmosphere since UCO will remain in enclosed vessels at all times while on site.

By conducting the activity in the proposed manner and employing the measures described above to manage potential impacts from dust and odour, the performance outcomes described in item 2 for the environmental objective as prescribed in the EP Regulation Schedule 8, Part 3, Division 1 for air will be met. The operation of the UCO processing facility will be undertaken in such a way that the qualities of the air environment conducive to protecting the health and biodiversity of ecosystems and human health are protected. This extends to ensuring the qualities of the air environment conducive to protected, including the appearance of buildings, structures and other property are also protected. Further, the mitigation measures the activity will adopt will ensure the agricultural air environment is also protected. The proposed activity will have no significant impacts on the EVs of air.

6.2 Noise

This section will address how the UCO processing facility will be managed in a manner that will prevent and/or minimise the potential impact of noise on sensitive uses in the receiving environment.

6.2.1 Environmental management objectives

Schedule 8, Part 3, Division 1 of the EP Regulation prescribes the environmental objectives and performance outcomes for noise as follows:

Environmental Objective

The activity will be operated in a way that protects the environmental values of the acoustic environment.

Performance outcomes

1. Sound from the activity is not audible at a sensitive receptor.

2. The release of sound to the environment from the activity is managed so that adverse effects on environmental values including health and wellbeing and sensitive ecosystems are prevented or minimised.

Schedule 8, Part 2, Section 2(4) of the EP Regulation states that the relevant environmental objective is achieved if either item 1 of the performance outcome for the environmental objective is achieved, or item 2 of the performance outcomes for the relevant environmental objective is achieved.

6.2.2 Environmental values for the acoustic environment (Noise)

The Environmental Protection (Noise) Policy 2019 (EPP Noise) identifies the following EVs for the acoustic environment to be protected:

- a) the qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems; and
- b) the qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following
 - i) sleep;
 - *ii) study or learn;*
 - iii) be involved in recreation, including relaxation and conversation; and
- c) the qualities of the acoustic environment that are conducive to protecting the amenity of the community.

Likely emissions to be produced by the proposed activity, the risk and likely magnitude of impacts, and management practices to be implemented to prevent or minimise impacts upon the EVs of the acoustic environment are detailed below.

6.2.3 Management of potential impacts

Likely emissions to be produced by the proposed activity, the risk and likely magnitude of impacts, and management practices to be implemented to prevent or minimise impacts upon the EVs of the acoustic environment are detailed below. The proposed activity presents a risk of noise emissions due to the following processes:

- Truck movements to and from the facility.
- Unloading and loading processed UCO from/into trucks or ships.

To assess the risk and likely magnitude of impacts on EVs for the acoustic environment, several factors were considered:

• The closest residential sensitive use is immediately adjacent to the facility.

- There are several commercial sensitive uses in the area.
- The predominant wind direction and wind speed for the area in relation to sensitive receptors.
- Staff training in environmental management.

Management practices proposed to prevent or minimise adverse impacts from noise will include:

- Conducting the waste processing activity during normal business hours Monday to Friday, and between 07:00 AM and 1:00 PM on Saturday. Deliveries will not be received on Sunday or public holidays. Eventually processed UCO may be loaded onto ships at the adjacent Port of Rockhampton, Port Alma Terminal, however Portside Storage already operates 24 hours a day for the purpose of loading products into international ships.
- Ensuring all plant and equipment on-site will be maintained in sound working order and to manufacturer's specifications. Any mechanical failures will be repaired as soon as practicable to ensure no unnecessary noise is generated.
- Ensuring vehicle movements are kept to a sufficiently slow speed to minimise the potential
- Inducting all staff to ensure they are aware of environmental obligations under the EA and penalties that can potentially be imposed by not complying with conditions in the EA or wider obligations under the EP Act.

6.2.4 Summary of analysis of potential impact from noise on the acoustic environmental values

After considering potential impacts on EVs for the acoustic environment and surrounding sensitive uses in relation to noise, it is not considered that the waste management facility will have any impact upon these uses, with appropriate mitigation measures in place.

By employing the measures described above to manage potential impacts from noise, the performance outcomes described in item 2 for the environmental objective as prescribed in the EP Regulation Schedule 8, Part 3, Division 1 for noise will be met. The UCO processing facility will have no impact on the qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems, nor human health and wellbeing. A suitable acoustic environment for enjoying activities such as sleep, study, or recreation will be preserved, and the amenity of the community will be protected.

6.3 Water

Handling and processing UCO presents possible risks to the EVs of water, which includes EVs identified in surface water, and where present, groundwater and wetlands. UCO has a high biochemical oxygen demand and if spills are not managed properly, there is a risk that it could impact upon waters in the receiving environment. However, appropriate mitigation strategies will be implemented to ensure the UCO processing activity will not pose significant risk to the EVs of water.

The following sections address how environmental risk to water in the receiving environment will be appropriately managed.

6.3.1 Surface water

The proposed activity presents potential impacts on the EVs of surface water, which include:

- Allowing clean stormwater to interact with potentially contaminated waste.
- Contamination of receiving waters by discharging UCO or solid waste removed from UCO off site.
- Vehicles releasing hydrocarbons to ground which has the potential to reach the receiving environment.

6.3.1.1 Environmental management objectives

Schedule 8, Part 3, Division 1 of the EP Regulation prescribes the environmental objectives and performance outcomes for waters as follows:

Environmental Objective

The activity will be operated in a way that protects environmental values of waters.

Performance outcomes

- 1. There is no actual or potential discharge to waters of contaminants that may cause an adverse effect on an environmental value from the operation of the activity.
- 2. All of the following—
 - (a) the storage and handling of contaminants will include effective means of secondary containment to prevent or minimise releases to the environment from spillage or leaks;
 - (b) contingency measures will prevent or minimise adverse effects on the environment due to unplanned releases or discharges of contaminants to water;
 - (c) the activity will be managed so that stormwater contaminated by the activity that may cause an adverse effect on an environmental value will not leave the site without prior treatment;
 - (d) the disturbance of any acid sulfate soil, or potential acid sulfate soil, will be managed to prevent or minimise adverse effects on environmental values;

- (e) acid producing rock will be managed to ensure that the production and release of acidic waste is prevented or minimised, including impacts during operation and after the environmental authority has been surrendered;
- (f) any discharge to water or a watercourse or wetland will be managed so that there will be no adverse effects due to the altering of existing flow regimes for water or a watercourse or wetland;
- (g) for a petroleum activity, the activity will be managed in a way that is consistent with the coal seam gas water management policy, including the prioritisation hierarchy for managing and using coal seam gas water and the prioritisation hierarchy for managing saline waste;
- (h) the activity will be managed so that adverse effects on environmental values are prevented or minimised.

Schedule 8, Part 2, Section 2(4) of the EP Regulation states that the relevant environmental objective is achieved if either item 1 of the performance outcome for the environmental objective is achieved, or item 2 of the performance outcomes for the relevant environmental objective is achieved.

6.3.1.2 Environmental values of water

When considering potential impact on EVs of water, waters in the immediate receiving environment must be considered since waters across Queensland have been assigned specific EVs. Portside Storage is adjacent to Port Alma on the lower estuarine section of Raglan Creek, which is in the Fitzroy River catchment. Raglan Creek joins the Fitzroy River at its delta. Thus, Portside Storage is at the end of the Fitzroy River catchment area. The Port of Rockhampton, Port Alma Terminal was built on salt/mud flats adjacent to the large estuarine system in the Fitzroy River delta. The land in this area has a very low gradient across the salt/mud flats and there are no freshwater streams present. Only estuaries are found here including Raglan Creek to the immediate east, Casuarina Creek to the north, and small unnamed estuaries that flow into those creeks (Figure 8).

Figure 8. Portside Storage (yellow polygon) at Port Alma shown in relation to surrounding watercourses. Overland flow from the area around Portside Storage enters directly into Raglan Creek to the east.

The Environmental Protection (Water and Wetland Biodiversity) Policy 2019 (EPP Water) identifies the following EVs for waters to be protected:

- a) for high ecological value waters—the biological integrity of an aquatic ecosystem that is effectively unmodified or highly valued;
- b) for slightly disturbed waters—the biological integrity of an aquatic ecosystem that has effectively unmodified biological indicators, but slightly modified physical, chemical or other indicators;
- c) for moderately disturbed waters—the biological integrity of an aquatic ecosystem that is adversely affected by human activity to a relatively small but measurable degree;
- d) for highly disturbed waters—the biological integrity of an aquatic ecosystem that is measurably degraded and of lower ecological value than waters mentioned in paragraphs (a) to (c);
- e) for waters that may be used for producing aquatic foods for human consumption—the suitability of the water for producing the foods for human consumption;

- *f)* for waters that may be used for aquaculture—the suitability of the water for aquacultural use;
- g) for waters that may be used for agricultural purposes—the suitability of the water for agricultural purposes;
- *h)* for waters that may be used for recreation or aesthetic purposes, the suitability of the water for
 - i) primary recreational use; or
 - ii) secondary recreational use; or
 - iii) visual recreational use;
- *i)* for waters that may be used for drinking water—the suitability of the water for supply as drinking water;
- *j)* for waters that may be used for industrial purposes—the suitability of the water for industrial use;
- *k*) the cultural and spiritual values of the water.

6.3.1.3 Environmental values of waters in the Fitzroy River basin

The EPP Water also describes specific EVs for rivers and creeks in many basins across the state. For waters in the receiving environment of Portside Storage, the *Environmental Protection (Water) Policy 2009 Fitzroy River Sub-basin Environmental Values and Water Quality Objectives, Basin No. 130 (part), including all waters of the Fitzroy River Sub-basin, September 2011* (Fitzroy River EVs/WQOs), applies. The Fitzroy River EVs/WQOs prescribes EVs and water quality objectives (WQOs) for the Fitzroy River and its tributaries, including the estuarine section of Raglan Creek.

The Fitzroy River EVs/WQOs describes the estuarine section of Raglan Creek where Portside Storage is located as *Raglan Creek and tributaries (estuarine reaches)*. The aquatic ecosystems in the Fitzroy River enclosed coastal/lower estuary waters are described as moderately disturbed, and the Fitzroy River EVs/WQOs lists the following EVs as necessary to protect:

- Aquatic ecosystems
- Aquaculture
- Human consumer
- Secondary recreation
- Visual recreation
- Cultural and spiritual values

The physico-chemical WQOs and management intent (level of protection) for *Fitzroy River* – *Enclosed coastal/lower estuary waters* are reproduced from the Fitzroy River WQOs/EVs in Table 2. The management intent for most waters is to achieve no lower quality then a moderately disturbed condition, for which DES has derived corresponding WQOs.

Water area/type	Management intent (level of protection)	Water quality objectives to protect aquatic ecosystem EVs
Fitzroy River enclosed coastal/lower estuary waters	Aquatic ecosystem – moderately disturbed	 ammonia N: <8 µg/L oxidised N: <3 µg/L organic N: <180 µg/L total nitrogen: <200 µg/L filterable reactive phosphorus (FRP): <6 µg/L total phosphorus: <20 µg/L chlorophyll a: <2 µg/L dissolved oxygen: 90% – 100% saturation pH: 8.0 – 8.4

Table 2. Physico-chemical water quality objectives for Fitzroy River enclosed coastal/lower estuary waters.

6.3.1.4 Management of potential impacts

Potential impacts on surface waters in the receiving environment will be managed/mitigated by:

- Maintaining the bund in place that surrounds the entire ERA footprint at Portside Storage. This bund was installed to capture a major spill or rupture from the bulk liquid storage tanks on site and is more than adequate to contain any potential spills from the UCO processing activity.
- Diverting clean stormwater around disturbed areas on site.
- Maintaining vehicles and plant in an excellent state of repair and operated in accordance with manufacturer's instructions. No servicing of plant or vehicles will be undertaken on site.
- Storing chemicals within a secondary containment system.
- Regularly inspecting trafficable areas for signs of wear and damage and making timely repairs.
- Maintaining spill response equipment on site and training staff in their use. Any spills will be cleaned up using dry clean up methods.
- Inducting all staff to ensure they are aware of environmental obligations under the EA and penalties that can potentially be imposed by not complying with conditions in the EA or wider obligations under the EP Act.

6.3.2 Groundwater

The waste management facility presents only a minor risk of impacting upon the groundwater environment. These risks include:

- Contamination from chemical spills that reach surface waters, which in turn can recharge groundwater systems.
- Contamination from chemicals through spills that are permitted to soak into the ground.

The closest registered bores to Portside Storage are on the mining leases for the salt harvesting operations to the west of Portside Storage. These are all water supply bores used to flood areas of land for the purpose of evaporating the seawater and harvesting the salt. The bore logs describe the water quality in each of the six closest bores as 'brine', indicating the highly saline condition of the water.

6.3.2.1 Environmental management objectives

Schedule 8, Part 3, Division 1 of the EP Regulation prescribes the environmental objectives and performance outcomes for groundwater as follows:

Environmental Objective

The activity will be operated in a way that protects environmental values of groundwater and any associated surface ecological systems.

Performance outcomes

- 1. Both of the following apply—
 - (a) there will be no direct or indirect release of contaminants to groundwater from the operation of the activity;
 - (b) there will be no actual or potential adverse effect on groundwater from the operation of the activity.
- 2. The activity will be managed to prevent or minimise adverse effects on groundwater or any associated surface ecological systems.

Schedule 8, Part 2, Section 2(4) of the EP Regulation states that the relevant environmental objective is achieved if either item 1 of the performance outcome for the environmental objective is achieved, or item 2 of the performance outcomes for the relevant environmental objective is achieved.

6.3.2.2 Environmental values of groundwater

The Fitzroy River EVs/WQOs states that where groundwaters interact with surface waters, groundwater quality should not compromise identified EVs and WQOs for those waters.

6.3.2.3 Management of potential impacts

The potential impacts on groundwater will be managed/mitigated by:

• Ensuring there are no direct or indirect releases of contaminants to groundwater. There are no bores on site, and therefore no opportunity for persons to wilfully and directly pollute groundwater.

- Undertaking the UCO processing activity within the bunded footprint of the existing bulk liquid storage facility. The facility already has an oil-water separator to capture any spills and prevent discharge to the receiving environment.
- Maintaining vehicles and plant in an excellent state of repair and operated in accordance with manufacturer's instructions. No servicing of plant or vehicles will be undertaken on site.
- Storing chemicals within a secondary containment system.
- Regularly inspecting trafficable areas for signs of wear and damage, and making timely repairs to prevent erosion of the underlying soil.
- Maintaining spill response equipment at all times on site.
- Inducting all staff to ensure they are aware of environmental obligations under the EA and penalties that can potentially be imposed by not complying with conditions in the EA or wider obligations under the EP Act.

6.3.3 Wetlands

Given the proximity of Portside Storage to the large estuarine system of the Fitzroy River delta, there are mapped estuarine wetlands in the receiving environment adjacent to Portside Storage (Figure 9). Although there are no wetlands of high ecological significance mapped as present near Portside Storage, there are mapped wetlands of general ecological significance present over and around Lot 46 on DS438 (Figure 10).




Figure 9. Wetland areas mapping from Queensland Globe showing the presence of mapped estuarine wetland. Portside Storage is shown as a blue polygon.





Figure 10. Map of Queensland Wetland Environmental Values for the subject land (red polygon) showing mapped wetlands of general ecological significance on and surrounding Portside Storage [© State of Queensland, 2022].



6.3.3.1 Environmental management objectives

Schedule 8, Part 3, Division 1 of the EP Regulation prescribes the environmental objectives and performance outcomes for wetlands as follows:

Environmental Objective

The activity will be operated in a way that protects the environmental values of wetlands.

Performance outcomes

- 1. There will be no potential or adverse effect on a wetland as part of carrying out the activity.
- 2. The activity will be managed in a way that prevents or minimises adverse effects on wetlands.

Schedule 8, Part 2, Section 2(4) of the EP Regulation states that the relevant environmental objective is achieved if either item 1 of the performance outcome for the environmental objective is achieved, or item 2 of the performance outcomes for the relevant environmental objective is achieved.

6.3.3.2 Management of potential impacts

The potential impacts on wetlands will be managed/mitigated by:

- Ensuring there are no direct or indirect releases of contaminants to wetlands.
- Undertaking the UCO processing activity within the bunded footprint of the existing bulk liquid storage facility. The facility already has an oil-water separator to capture any spills and prevent discharge to the receiving environment.
- Maintaining vehicles and plant in an excellent state of repair and operated in accordance with manufacturer's instructions. No servicing of plant or vehicles will be undertaken on site.
- Storing chemicals within a secondary containment system.
- Regularly inspecting trafficable areas for signs of wear and damage, and making timely repairs to prevent erosion of the underlying soil.
- Maintaining spill response equipment at all times on site.
- Inducting all staff to ensure they are aware of environmental obligations under the EA and penalties that can potentially be imposed by not complying with conditions in the EA or wider obligations under the EP Act.



6.3.4 Summary of analysis of potential impact of the proposed activity on surface water, groundwater and wetlands, and provisions to protect the environmental values of the aquatic environment

Appropriate mitigation strategies to prevent significant impact on surface waters in the receiving environment will be implemented and operated whilst processing UCO at Portside Storage. Further, there will be no impact on groundwater as a result of the activity, and there are no wetlands of high ecological significance in the receiving environment. Potential impacts will be avoided by conducting the activity within a highly controlled environment. In the unlikely event of a spill of chemical, or the liberation of sediment, mitigation measures in place will allow the prompt and effective removal of the potential contaminant without risk of release to waters in the receiving environment. The EVs associated with surface water and groundwater in the receiving environment will be protected.

By adhering to the measures described above to manage potential impacts on water from the activity, all of the performance outcomes prescribed in item two for the environmental objective for water as prescribed in the EP Regulation Schedule 8, Part 3, Division 1 will be met.

The performance outcome prescribed in item two for the environmental objective for groundwater as prescribed in the EP Regulation Schedule 8, Part 3, Division 1 will be met. The proposed activity will be undertaken in such a way that will protect the EVs of the groundwater environment.

The performance outcome prescribed in item two for the environmental objective for wetlands as prescribed in the EP Regulation Schedule 8, Part 3, Division 1 will be met. The activity will be undertaken in a manner which protects the EVs of moderate ecological value wetlands.

6.4 Land

The proposed waste management facility presents a possible risk of environmental impact to the EVs associated with land, which include:

- Discharging sediment-laden stormwater off site.
- Releasing UCO or waste removed from it onto land in the receiving environment through spills that aren't cleaned up.
- Releasing dust and particulates from fugitive sources that can settle on land and impact vegetation and built infrastructure.

6.4.1 Environmental management objectives

Schedule 8, Part 3, Division 1 of the EP Regulation prescribes the environmental objectives and performance outcomes for land as follows:



Environmental Objective

The activity is operated in a way that protects the environmental values of land including soils, subsoils, landforms and associated flora and fauna.

Performance outcomes

- 1. There is no actual or potential disturbance or adverse effect to the environmental values of land as part of carrying out the activity.
- 2. All of the following-
 - (a) activities that disturb land, soils, subsoils, landforms and associated flora and fauna will be managed in a way that prevents or minimises adverse effects on the environmental values of land;
 - (b) areas disturbed will be rehabilitated or restored to achieve sites that are-
 - (i) safe to humans and wildlife; and
 - (ii) non-polluting; and
 - (iii) stable; and
 - (iv) able to sustain an appropriate land use after rehabilitation or restoration;
 - (c) the activity will be managed to prevent or minimise adverse effects on the environmental values of land due to unplanned releases or discharges, including spills and leaks of contaminants;
 - (d) the application of water or waste to the land is sustainable and is managed to prevent or minimise adverse effects on the composition or structure of soils and subsoils.

Schedule 8, Part 2, Section 2(4) of the EP Regulation states that the relevant environmental objective is achieved if either item 1 of the performance outcome for the environmental objective is achieved, or item 2 of the performance outcomes for the relevant environmental objective is achieved.

6.4.2 Environmental values for the land environment

The document "Guideline - Application requirements for activities with impacts to land", ESR/2015/1839 - Version 4.00, produced by DES identifies the following EVs for land that may need to be protected:

- Terrain, geology, shallow groundwater systems, floodplains, springs, soil descriptions and the presence of distinct or unique features.
- Soil health and function, and the ability for soil to sustain growth of native vegetation, crops and other flora (i.e. soil suitability).
- Bioregions and regional ecosystems including their health and biodiversity.
- The natural interaction of the relevant land with other ecosystems, including wetlands, faults connecting groundwater systems, surface waters etc.
- Flora including vegetation communities endangered, vulnerable, rare or near threatened species and pest species.



- Fauna including fauna present, protected animal breeding places, endangered, vulnerable, rare or near threatened species, pest species, plants or animals and their habitats, including threatened wildlife, near threatened wildlife and rare wildlife under the relevant legislation including Nature Conservation Act 1992. Flora and fauna identification will likely require detailed studies to be undertaken to allow the applicant to accurately describe these environmental values.
- Category A and B and C environmentally sensitive areas for resource activities. Both category A and B environmentally sensitive areas are listed within the Environmental Protection Regulation 2008.
- Areas with high ecological significance values including, but not necessarily limited to, wetlands, nationally threatened ecological communities, large tracts of remnant vegetation, corridors and special biodiversity areas.
- Prescribed environmental matters as defined in the Queensland Environmental Offsets Act 2014.
- For land that may be used in primary industry or for agricultural purposes, the suitability of the land for that use.
- For land that may be used for recreation or aesthetic purposes, the suitability of the land for that purpose.
- For land that may be used for industrial purposes, the suitability of that industrial use.
- The cultural and spiritual values of the land.
- Qualities of the land which are conducive to human health and wellbeing.
- The qualities of the land which are conducive to protecting the aesthetics of the environment, including the appearance of buildings, structures and other property.

Portside Storage occupies land at Port Alma that was developed mid last century as a bulk liquid storage facility. Other than GPCL, the competing bulk fuel storage facility across Bajool-Port Alma Road, and the residence also across the road, there has been no other development in the immediate vicinity. The mud/salt flats characteristic of the location have a very low gradient and are sparsely vegetated with salt-tolerant species (Figures 11 and 12). Vast salt deposits encrust land areas between estuaries at Port Alma, and on king tides large areas of the mud/salt flats are inundated with seawater. Large areas of Port Alma are under mining leases to harvest salt, and approximately a quarter of the land is actively solar farming salt at any point in time.

A Wildnet Records – Conservation Significant Species List report generated for the subject land also includes observations made within a 1 km radius around Portside Storage. There have been no conservation significant species recorded within the 1 km radius around Portside Storage (Appendix C).





Figure 11. Photograph taken from atop a bulk liquid storage tank at Portside Storage, facing northwest toward the Fitzroy River and the Broadmount Range. The landscape is typical of the land environment at Port Alma.





Figure 12. Photograph taken from atop a bulk liquid storage tank at Portside Storage, facing southwest toward

6.4.3 Management of potential impacts

The potential impacts to land will be managed/mitigated by:

- Ensuring there are no direct or indirect releases of contaminants to wetlands.
- Undertaking the UCO processing activity within the bunded footprint of the existing bulk liquid storage facility. The facility already has an oil-water separator to capture any spills and prevent discharge to the receiving environment.
- Sweeping concreted surfaces to remove material that may lead to the generation of excessive airborne dust (which may settle on surrounding land).
- Maintaining vehicles and plant in an excellent state of repair and operated in accordance with manufacturer's instructions. No servicing of plant or vehicles will be undertaken on site.
- Storing chemicals within a secondary containment system.
- Regularly inspecting trafficable areas for signs of wear and damage, and making timely repairs to prevent erosion of the underlying soil.
- Maintaining spill response equipment at all times on site.



• Inducting all staff to ensure they are aware of environmental obligations under the EA and penalties that can potentially be imposed by not complying with conditions in the EA or wider obligations under the EP Act.

6.4.4 Summary of analysis of potential impact of the proposed activity on land, and provisions to protect the environmental values of the land environment

The proposed activity will implement appropriate mitigation strategies to prevent significant impact on the EVs of land. Potential impacts will be avoided by conducting the UCO processing activity within the controlled area of the bulk liquid storage facility.

By adhering to the measures described above to manage potential impacts on land from the activity, all of the performance outcomes prescribed in item two for the environmental objective for land as prescribed in the EP Regulation Schedule 8, Part 3, Division 1 will be met. Although there is no intention to cease conducting the proposed activities in the near future, upon cessation the land will be left in a condition that is safe, stable, non-polluting and able to accommodate an appropriate land use after rehabilitation or restoration.

6.5 Waste

The proposed activity aims to minimise production of waste products wherever possible. However, not all materials that return to the facility are reusable or recyclable, and given the nature of the activity it is inevitable that waste will be generated during the course of operating the waste management facility.

All waste materials will be managed (reused, recycled or disposed of) in accordance with the requirements of the local authority (RRC) and DES.

6.5.1 Environmental management objectives

Schedule 8, Part 3, Division 1 of the EP Regulation prescribes the environmental objectives and performance outcomes for waste as follows:

Environmental Objective

Any waste generated, transported, or received as part of carrying out the activity is managed in a way that protects all environmental values.

Performance outcomes

- 1. Both of the following apply—
 - (a) waste generated, transported or received is managed in accordance with the waste and resource management hierarchy in the Waste Reduction and Recycling Act 2011;



(b) if waste is disposed of, it is disposed of in a way that prevents or minimises adverse effects on environmental values.

Schedule 8, Part 2, Section 4 of the EP Regulation states that the relevant environmental objective is achieved if either item 1 of the performance outcome for the environmental objective is achieved, or item 2 of the performance outcomes for the relevant environmental objective is achieved.

6.5.2 Management of potential impacts from waste

Portside Storage is aware of obligations to manage and dispose of waste in an appropriate manner that meets the prescribed requirements of an EA, and the broader obligations under the EP Act and the *Waste Reduction and Recycling Act 2011* (WRR Act) and subordinate legislation. General waste will continue to be stored in closed industrial waste bins and removed by a waste contractor on scheduled collection days. On the odd occasion where it is necessary to undertake emergency repairs on plant or vehicles, regulated waste generated as a result will be removed only by licensed regulated waste transporters and disposed at a facility that can lawfully accept the waste.

The waste recovered from the UCO processing activity will be stored separate to the processed UCO. Solid waste such as food material will be sent to a facility that can lawfully accept it. The priority will be to send it to a facility that can utilise it as a resource, such as a composting activity rather than sending it to landfill. The same will occur with any liquid waste recovered from the UCO processing activity.

Portside Storage will maintain appropriate waste records for up to five years or the period prescribed in an EA.

6.5.3 Summary of analysis of waste management and potential impact on environmental values

Portside Storage is aware of the waste and resource management hierarchy prescribed in the WRR Act, and constantly strives to achieve best practice environmental management of waste generated on site. This approach will continue upon commencement of the waste reprocessing ERA on site.

By adhering to lawful practice for waste management as described above, the waste management facility will meet item 1 of the performance outcome for managing waste as described in Schedule 8, Part 3, Division 1 of the EP Regulation.

6.6 Matters of State Environmental Significance

A Matters of State Environmental Significance (MSES) report was generated on 19 September 2022. The report is included as Appendix D and does not identify any MSES over the subject land. There are mapped areas of MSES proximal to Portside Storage, however a proactive environmental management approach and implementation and maintenance of the mitigation measures proposed in this report will prevent any impact on MSES in the receiving environment.



7 State Development Assessment Provisions

- Processing up to 5,000 tonnes of UCO in a year triggers ERA 55(2)(a) which is prescribed as a concurrence ERA in the EP Regulation. Advice from SARA has stated that the activity requires a DA from the state. An application must therefore address the relevant State Development Assessment Provisions (SDAPs). The following SDAPs have been addressed by completing the relevant code response templates as part of this supporting environmental report:
- State code 22 Environmentally Relevant Activities

Completed SDAP Code response templates are included as Appendix E.



8 Environmental Management Procedures

To appropriately manage possible environmental impacts, Portside Storage will operate the UCO processing facility in accordance with written procedures which describe environmental management processes and procedures. These written procedures will be in the form of environmental management procedures which are reviewed from time to time and updated as necessary. These environmental management procedures will address at least the following:

- Assessment of environmental risks and mitigation strategies
- Staff induction and environmental awareness training
- Incident response procedures (eg. Spill management procedures)
- Complaint register
- Review of environmental performance



9 Conclusion

This document has provided a description and analysis of the environmental risks and impacts that the UCO processing facility is likely to present. The environmental risks and impacts that have been considered are in relation to:

- Air
- Noise
- Water
- Land
- Waste

This environmental report demonstrates that the proposal to receive and process UCO will not significantly impact the receiving environment at Port Alma. Appropriately locating the facility within a bulk liquid storage facility which already has significant measures to mitigate environmental impact will achieve highly acceptable environmental outcomes.

10 Appendices

Appendix A – SARA Pre-lodgement Advice – Portside Storage Pty Ltd – 17 August 2022 SARA reference: 2207-29855 SPL Applicant reference: -

17 August 2022

Portside Storage Pty Ltd PO Box 450 ROCKHAMPTON QLD 4700 gg@gideontownplanning.com.au

Dear Sir/Madam

SARA Pre-lodgement advice - Bajool Port Alma Road, Port Alma

I refer to the pre-lodgement meeting held on 27 July 2022 in which you sought advice from the State Assessment and Referral Agency (SARA) regarding the proposed development at the above address. This notice provides advice on aspects of the proposal that are of relevance to SARA.

SARA's understanding of the project

Portside Storage Pty Ltd (the applicant) currently operates a bulk liquids storage facility over Lot 46 on DSS438 (the subject site). The existing facility operates under the conditions of an existing environmental authority (EA) for environmentally relevant activities (ERA) 8 (Chemical storage) and ERA 50 (Mineral and bulk material handling).

The applicant is proposing to expand its existing operation by accepting, storing and processing used cooking oil. The development is expected to utilise the existing facilities on the subject site. As the activity will involve the management of bulk quantities of waste, an EA for ERA 55 (Other waste reprocessing or treatment) will be required.

Supporting information

The advice in this letter is based on the following documentation that was submitted with the prelodgement request or tabled at the pre-lodgement meeting.

Drawing/report title	Prepared by	Date
RE: Application for a pre- lodgement meeting and written advice – Environmental Authority and Development Approval Application – Environmentally Relevant Activity 55 – Other waste reprocessing or treatment – Lot 46 DS438 at Port Alma	Steer Environmental Consulting	12 July 2022

Pre-lodgement meeting record

Meeting date	27 July 2022
Meeting location	Microsoft Teams
Meeting chair	Thomas Gardiner
Meeting attendees	Refer to Attachment 1

Meeting	outcomes
1.	Gideon Town Planning / Steer Environmental Consulting
	• The applicant currently operates a bulk liquids storage facility at the subject site which is approved to handle and store bulk materials under an existing EA. The type of materials received at the subject site varies.
	• The current proposal seeks to accept, store and process used cooking oil at the subject site, which is a common waste material generated by commercial kitchens and factories.
	• The proposed activity will involve delivery of used cooking oil to the subject site by road tanker where it will be filtered to remove solid contaminants. The used cooking oil will be heated to evaporate any remaining moisture and ensure it remains in the liquid phase to facilitate simple transfer between containing vessels.
	 Processed used cooking oil will be stored in bulk storage before being transferred to ships at the adjacent port for export.
	• The applicant is discussing the development with the Rockhampton Regional Council (the council) to ascertain if the development will require assessment under the local categorising instrument (the planning scheme).
2.	Department of State Development, Infrastructure, Local Government and Planning
	• If an application is required to be made to the council, SARA will be a referral agency for the development.
	 If the development is not assessable under the planning scheme, SARA will be the assessment manager for the development.
	• A development application for a material change of use for a concurrence ERA will also be considered to be an application for an environmental authority (EA) for the ERA under the <i>Environmental Protection Act 1994</i> .
	• SARA understands that the average annual throughput of the activity will be up to 5,000

	 tonnes per annum. On this basis, the proposal is unlikely to be for an aspect of development stated in Schedule 20 of the Planning Regulation 2017. Bajool-Port Alma Road provides the site with its only road frontage to the south. It is noted that part of this road (approximately 800 metres to the west of the subject site) is identified as "state-controlled". The section of Bajool-Port Alma Road which directly fronts the subject site is not state-controlled. Referral for proximity of the development to
	a state-controlled road will not be required.The subject site is identified as an erosion prone area, however, only part of the subject
	site is located in a coastal management district (CMD). The CMD traverses into the northern and eastern boundaries of the subject site. Referral for a material change of use involving work in a CMD is unlikely to be required as the development will not involve building work in an erosion prone area in a CMD. The development footprint is not located on the section of the site containing the CMD.
3.	Department of Environment and Science
	• Based on the information provided, the proposed activity triggers environmental relevant activity (ERA) 55(2) Other waste reprocessing or treatment – operating a facility for receiving and either reprocessing or treating, category 2 regulated waste.
	• Please ensure the application includes adequate information for an environmental objective assessment to be completed as required by Schedule 8 of the Environmental Protection Regulation 2019. The applicant may wish to address the performance outcomes specifically. The divisions relevant to this application include: Air, Water, Wetlands, Groundwater, Noise, Waste and Land.

Pre-lodgement advice

The following advice outlines the aspects of the proposal that are of relevance to SARA.

SARA's	jurisdiction and fees
1.	The application will require referral to SARA under the following provisions of the Planning
	 Schedule 10, Part 5, Division 4, Table 2, Item 1 – Material change of use involving a non-devolved environmentally relevant activity
	This will require a fee of 3,430* fee units to be paid in accordance with Schedule 10, Part 5,
	Division 3, Table 1, Item 5(b)(ii).
	SARA would be a referral agency** for the proposed application.
	*At the time of issue the fee unit value is currently \$1.025. From 1 July each year the fee unit value will be updated to reflect the Government Indexation Rate and will increase. The value of the fee unit is prescribed in the <u>Acts Interpretation (Fee Unit) Regulation 2022</u> .
	**If the council advises that the development is not assessable under the local categorising instrument, the application will require lodgement to SARA under Schedule 10, Part 5, Division 3, Table 1, Item 1 of the Planning Regulation 2017.

Key ma	tters and action items		
2.	Please refer to Attachment 1 of this document which details information which is required		
	to accompany an application for an Environmental Authority.		
Lodgem	dgement material		
3.	It is recommended that the following information is submitted when lodging or referring the		
	application to SARA:		
	DA form 1.		
	Development application Form 1 – Application details – attachment for an application		
	<u>for an environmental authority – ESR/2015/1791</u> .		
	A full response to the relevant sections of the <u>State Development Assessment</u>		
	Provisions State Code 22: Environmentally relevant activities.		
	Landowner's consent.		
	Relevant plans as per the DA Forms guide.		

This advice outlines aspects of the proposed development that are relevant to SARA's jurisdiction. This advice is provided in good faith and is:

- based on the material and information provided to SARA
- current at the time of issue
- not applicable if the proposal is changed from that which formed the basis of this advice.

The advice in this letter does not constitute an approval or an endorsement that SARA supports the development proposal. Additional information may be required to allow SARA to properly assess the development proposal after a formal application has been lodged.

For further information please contact Thomas Gardiner, Principal Planning Officer, on 07 3243 1664 or via email RockhamptonSARA@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Anthony Walsh Manager Planning

enc Attachment 1 – Application for an environmental authority Attachment 2 – Pre-lodgement meeting attendance record

Development details		
Proposal:	Store, accept and process used cooking oil	
Street address:	Bajool-Port Alma Road, Port Alma	
Real property description:	Lot 46 on DS438	
SARA role:	Assessment manager or Referral agency	
Assessment Manager:	Rockhampton Regional Council or the State Assessment and Referral Agency	
Assessment criteria:	State Development Assessment Provisions (SDAP): - State code 22: Environmentally relevant activities	
Existing use:	Bulk liquids storage facility operating under an existing environmental authority (EA) for environmentally relevant activities (ERA) 8 (Chemical storage) and ERA 50 (Mineral and bulk material handling).	
Relevant site history:	Premises are operating under an existing EA for ERA 8 and ERA 50	

Attachment 1 – Application for an environmental authority

Description of the Environmental Relevant Activity	Based on the information provided, the proposed activity triggers environmental relevant activity (ERA) 55(2) Other waste reprocessing or treatment – operating a facility for receiving and either reprocessing or treating, category 2 regulated waste.
Annual fee	The first annual fee is payable within 20 business days of the effective date of an environmental authority.
	If multiple ERAs are undertaken as part of a project, the annual fees will be based on the ERA with the highest Aggregate Environmental Score (AES). Current annual fees for ERAs can be found at the following link: <u>https://environment.des.qld.gov.au/data/assets/pdf_file/0025/88702/era-is-summary-annual-fees.pdf</u>
Nominated	You may nominate a take effect date in the ERA application form.
take effect	This may either be:
date.	1. the day the development application is approved;
	2. a nominated date after the development application has been approved.
Information to	Site-specific information required
provide in a	It is advised that you include the following information in your application:
application	 the total quantity of used cooking oil proposed to be received and processed in a year;
	 site layout plan including details of tank storage limits and locations;
	 description of the proposed processing method;
	 stormwater management details;
	secondary containment/bunding;
	 contingency measures such as staff training, spill kits etc;
	• any potential impacts to the MSES identified below.
	Environmental Objective Assessment
	Please ensure the application includes adequate information for an environmental objective assessment to be completed as required by Schedule 8 of the Environmental Protection Regulation 2019. You may wish to address the performance outcomes specifically. The divisions relevant to your application include: Air, Water, Wetlands, Groundwater, Noise, Waste and Land.
	Legislative Requirements
	As outlined in section 125 of the <i>Environmental Protection Act 1994</i> , an application will need to include:
	 a description of the environmental values (both onsite and offsite) likely to be affected by the proposed activity
	 details of any emissions or releases likely to be generated by the proposed activity
	 a description of the risk and likely magnitude of impacts on the environmental values

	 details of the management practices proposed to be implemented to prevent or minimise adverse impacts
	 details of how the land the subject of the application will be rehabilitated after the relevant activity.
	 a description of the proposed measures for minimising and managing waste generated by the relevant activity
	 details of any site management plan (i.e. associated with contaminated land) that relates to the land that is the subject of the application.
Technical guidelines	Technical guidelines have been developed to outline what information to include in an application where impacts related to air, land, noise, water or waste have been identified. These are available at: <u>https://www.business.qld.gov.au/business/running/environment/licences-permits/applying-environmental-authority/technical-information-requirements</u>
Environmental Values at the	Matters of State Environmental Significance listed below have been identified within proximity to the site:
Proposed Site	 Regulated Vegetation: Essential habitat Vegetation within the defined distance of a watercourse. Category R – GBR Riverine Declared Fish Habitat High Ecological Significance Wetlands Wildlife habitat; Special least concern animal; Endangered or vulnerable. Beach Stone Curlew; Greater Sand Plover; Lesser Sand Plover; Yellow Chat (Dawson); Red Knot; Curlew Sandpiper; Great Knot; Western Alaskan bar-tailed godwit; Eastern curlew; Australian snubfin dolphin.
Common conditions	The department has developed ' <u>Common conditions</u> ' to enable you to gauge what conditions will likely be included in your site specific environmental authority.
Notifiable activity	The applicant should note that waste storage, treatment or disposal is a notifiable activity. Under the <i>Environmental Protection Act 1994</i> , the owner of the land where a notifiable activity is occurring has a duty to notify the department. Information on the notification process can be found at the following location: <u>https://www.qld.gov.au/environment/pollution/management/contaminated-land/notifications/</u>
Reef discharge standards to Great Barrier Reef Catchment waters	The project is located within the Great Barrier Reef catchment and river basins. New sediment and nutrient discharge standards for new, expanded or intensified point source activities now apply. Under section 41AA of the Environmental Protection Regulation 2019, environmental authority applications that propose to release fine sediment or dissolved inorganic nitrogen (DIN) to Great Barrier Reef catchment waters must demonstrate a no net decline to Reef water quality. The department must refuse an application if the activity will, or may, result in residual impacts to the Reef

catchment from dissolved inorganic nitrogen and fine sediment from a point source release.
Further guidance on the new Reef discharge standards and the additional information that should be submitted with an environmental authority application to address section 41AA of the EP Regulation has been described in the <u>Guideline—Reef discharge</u> <u>standards for industrial activities—ESR/2021/5627 (PDF, 665KB)</u> .
Additional information is located on the Queensland Government website.

Attachment 2 — Pre-lodgement meeting attendance record

Meeting attendees:

Name	Position	Organisation
Thomas Gardiner	Principal Planning Officer	Department of State Development, Infrastructure, Local Government and Planning
Helena Braye	Principal Environmental Officer	Department of Environment and Science
Destiny Tsiamis	Environmental Officer	Department of Environment and Science
Gideon Genade	Principal Town Planner	Gideon Town Planning
Glenn Druery	Principal Environmental Consultant	STEER Environmental Consulting

Appendix B –BoM Wind Roses – Rockhampton Aero Station (9:00 AM and 3:00 PM)

Rose of Wind direction versus Wind speed in km/h (01 Apr 1939 to 05 Apr 2016)

Custom times selected, refer to attached note for details

ROCKHAMPTON AERO

Site No: 039083 • Opened Jan 1939 • Still Open • Latitude: -23.3753° • Longitude: 150.4775° • Elevation 10.m

An asterisk (*) indicates that calm is less than 0.5%. Other important info about this analysis is available in the accompanying notes.





Rose of Wind direction versus Wind speed in km/h (01 Apr 1939 to 05 Apr 2016)

Custom times selected, refer to attached note for details

ROCKHAMPTON AERO

Site No: 039083 • Opened Jan 1939 • Still Open • Latitude: -23.3753° • Longitude: 150.4775° • Elevation 10.m

An asterisk (*) indicates that calm is less than 0.5%. Other important info about this analysis is available in the accompanying notes.





Appendix C – Wildnet Records – Conservation Significant Species List Report, 19 September 2022.

WildNet Records Conservation Significant Species List



For the selected area of interest 4.58ha Lot: 46 Plan: DS438

Current as at 19/09/2022

WildNetCSSpeciesList



Map 1. Locality Map



Summary Information

The following table provides an overview of the area of interest Lot: 46 Plan: DS438.

Table 1. Area of interest details

Size (ha)	4.58	
Local Government(s)	Rockhampton Regional	
Bioregion(s)	Brigalow Belt	
Subregion(s)	Marlborough Plains	
Catchment(s)	Fitzroy	

Protected Area(s)

No estates or reserves are located within the area of interest.

World Heritage Area(s)

No World Heritage Areas are located within the area of interest.

Ramsar Area(s)

No Ramsar Areas are located within the area of interest.

Conservation Significant Species List

Introduction

This report is derived from a spatial layer generated from the <u>WildNet database</u> managed by the Department of Environment and Science. The layer which is generated weekly contains the WildNet wildlife records that are not classed as erroneous or duplicate, that have a location precision equal to or less than 10000 metres and do not have a count of zero.

Conservation significant species are species listed:

- as threatened or near threatened under the Nature Conservation Act 1992;
- as threatened under the Environment Protection and Biodiversity Conservation Act 1999 or
- migratory species protected under the following international agreements:
 - o Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
 - o China-Australia Migratory Bird Agreement
 - o Japan-Australia Migratory Bird Agreement
 - o Republic of Korea-Australia Migratory Bird Agreement

The WildNet dataset is constantly being enhanced and the taxonomic and status information revised. If a species is not listed in this report, it does not mean it doesn't occur there and listed species may also no longer inhabit the area. It is recommended that you also access other internal and external data sources for species information in your area of interest (Refer Links and Support).

Table 2 lists the species recorded within the area of interest and its one kilometre buffer.

Table 2. Conservation significant species recorded within the area of interest and its one kilometre buffer

No species found within the area of interest.

Taxon Id: Unique identifier of the taxon from the WildNet database.

NCA: Queensland conservation status of the taxon under the *Nature Conservation Act 1992* (Least Concern (C), Critically Endangered (CR), Endangered (E), Extinct (EX), Near Threatened (NT), Extinct in the Wild (PE), Special Least Concern (SL), and Vulnerable (V)).

EPBC: Australian conservation status of the taxon under the *Environment Protection and Biodiversity Conservation Act 1999* (Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Vulnerable (V), and Extinct in the Wild (XW)).

Specimens: The number of specimen-backed records of the taxon.

Records: The total number of records of the taxon.

Last record: Date of latest record of the taxon.

Links and Support

Other sites that deliver species information from the WildNet database include:

- <u>Species profile search</u> access species information approved for publication including species names, statuses, notes, images, distribution maps and records
- <u>Species lists</u> generate species lists for Queensland protected areas, forestry areas, local governments and areas defined using coordinates
- Biomaps view biodiversity information, including WildNet records approved for publication, and generate reports
- Queensland Globe view spatial information, including WildNet records approved for publication
- <u>Qld wildlife data API</u> access WildNet species information approved for publication such as notes, images and records etc.
- Wetland Maps view species records, survey locations etc. approved for publication
- Wetland Summary view wildlife statistics, species lists for a range of area types, and access WildNet species profiles
- WildNet wildlife records published Queensland spatial layer of WildNet records approved for publication generated weekly
- <u>Generalised distribution and densities of Queensland wildlife</u> Queensland species distributions and densities generalised to a 10 km grid resolution
- <u>Conservation status of Queensland wildlife</u> access current lists of priority species for Queensland including nomenclature and status information
- Queensland Confidential Species the list of species flagged as confidential in the WildNet database.

Please direct queries about this report to the WildNet Team.

Other useful sites for accessing Queensland biodiversity data include:

- <u>Useful wildlife resources</u>
- <u>Queensland Government Data</u>
- Atlas of Living Australia (ALA)
- Online Zoological Collections of Australian Museums (OZCAM)
- Australia's Virtual Herbarium (AVH)
- Protected Matters Search Tool

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government, to the maximum extent permitted by law, makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.



Appendix D – Matters of State Environmental Significance Report, generated 19 September 2022



Department of Environment and Science

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest Lot: 46 Plan: DS438

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@des.qld.gov.au

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.



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Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

Table 1: Summary table, details for AOI Lot: 46 Plan: DS438

Size (ha)	4.58
Local Government(s)	Rockhampton Regional
Bioregion(s)	Brigalow Belt
Subregion(s)	Marlborough Plains
Catchment(s)	Fitzroy



Matters of State Environmental Significance (MSES)

MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the Nature Conservation Act 1992;

- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the *Marine Parks Act 2004*;

- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;

- Threatened wildlife under the *Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;

- Regulated vegetation under the Vegetation Management Act 1999 that is:

• Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;

• Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;

• Category R areas on the regulated vegetation management map;

• Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;

• Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;

- Strategic Environmental Areas under the Regional Planning Interests Act 2014;

- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;

- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;

- Legally secured offset areas.
MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

Table 2: Summary of MSES present within the AOI

0.0 %
0.0 %
0.0 %
0.0 %
0.0 %
0.0 %
0.0 %
0.0 %
Not applicable
0.0 %
0.0 %
0.0 %
0.0 %
Not applicable
0.0 %
0.0 %
0.0 %
0.0 %
Not applicable
0.0 %
0.0 %
0.0 %

Additional Information with Respect to MSES Values Present

MSES - State Conservation Areas

1a. Protected Areas - estates

(no results)

1b. Protected Areas - nature refuges

(no results)

1c. Protected Areas - special wildlife reserves

(no results)

2. State Marine Parks - highly protected zones

(no results)

3. Fish habitat areas (A and B areas)

(no results)

Refer to Map 1 - MSES - State Conservation Areas for an overview of the relevant MSES.

MSES - Wetlands and Waterways

4. Strategic Environmental Areas (SEA)

(no results)

5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values

(no results)

6a. Wetlands in High Ecological Value (HEV) waters

(no results)

6b. Waterways in High Ecological Value (HEV) waters

(no results)

Refer to Map 2 - MSES - Wetlands and Waterways for an overview of the relevant MSES.

MSES - Species

7a. Threatened (endangered or vulnerable) wildlife

Not applicable

7b. Special least concern animals

Not applicable

7c i. Koala habitat area - core (SEQ)

Not applicable

7c ii. Koala habitat area - locally refined (SEQ)

Not applicable

7d. Wildlife habitat (sea turtle nesting areas)

Not applicable

Threatened (endangered or vulnerable) wildlife habitat suitability models

Species	Common name	NCA status	Presence
Boronia keysii		V	None
Calyptorhynchus lathami	Glossy black cockatoo	V	None
Casuarius casuarius johnsonii	Sthn population cassowary	E	None
Crinia tinnula	Wallum froglet	V	None
Denisonia maculata	Ornamental snake	V	None
Litoria freycineti	Wallum rocketfrog	V	None
Litoria olongburensis	Wallum sedgefrog	V	None
Macadamia integrifolia		V	None
Macadamia ternifolia		V	None
Macadamia tetraphylla		V	None
Melaleuca irbyana		E	None
Petaurus gracilis	Mahogany Glider	E	None
Petrogale persephone	Proserpine rock-wallaby	E	None
Pezoporus wallicus wallicus	Eastern ground parrot	V	None
Phascolarctos cinereus	Koala - outside SEQ*	V	None
Taudactylus pleione	Kroombit tinkerfrog	E	None
Xeromys myoides	Water Mouse	V	None

*For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.

Threatened (endangered or vulnerable) wildlife species records

(no results)

Special least concern animal species records

(no results)

Shorebird habitat (critically endangered/endangered/vulnerable)

Not applicable

Shorebird habitat (special least concern)

Not applicable

*Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL). Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E), Vulnerable (V)

Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J), Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)

To request a species list for an area, or search for a species profile, access Wildlife Online at: https://www.qld.gov.au/environment/plants-animals/species-list/

Refer to Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals, Map 3b - MSES - Species - Koala habitat area (SEQ) and Map 3c - MSES - Wildlife habitat (sea turtle nesting areas) for an overview of the relevant MSES.

MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:

https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/

For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at: https://environment.ehp.gld.gov.au/regional-ecosystems/

8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)

Not applicable

8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)

Not applicable

8c. Regulated Vegetation - Category R (GBR riverine regrowth)

Not applicable

8d. Regulated Vegetation - Essential habitat

Not applicable

8e. Regulated Vegetation - intersecting a watercourse**

(no results)

8f. Regulated Vegetation - within 100m of a Vegetation Management wetland

Not applicable

Refer to Map 4 - MSES - Regulated Vegetation for an overview of the relevant MSES.

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MSES - Offsets

9a. Legally secured offset areas - offset register areas

(no results)

9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation

(no results)

Refer to Map 5 - MSES - Offset Areas for an overview of the relevant MSES.

Map 1 - MSES - State Conservation Areas



Map 2 - MSES - Wetlands and Waterways



Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals



Map 3b - MSES - Species - Koala habitat area (SEQ)



Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)



Map 4 - MSES - Regulated Vegetation



Map 5 - MSES - Offset Areas



Appendices

Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). The compiled MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The Queensland Government's "Method for mapping - matters of state environmental significance for use in land use planning and development assessment" can be downloaded from:

http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html .

Appendix 2 - Source Data

The datasets listed below are available on request from:

http://qldspatial.information.qld.gov.au/catalogue/custom/index.page

• Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

MSES layers	current QSpatial data (http://qspatial.information.qld.gov.au)
Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves	 Protected areas of Queensland Nature Refuges - Queensland Special Wildlife Reserves- Queensland
Marine Park-Highly Protected Zones	Moreton Bay marine park zoning 2008
Fish Habitat Areas	Queensland fish habitat areas
Strategic Environmental Areas-designated	Regional Planning Interests Act - Strategic Environmental Areas
HES wetlands	Map of Queensland Wetland Environmental Values
Wetlands in HEV waters	HEV waters: - EPP Water intent for waters Source Wetlands: - Queensland Wetland Mapping (Current version 5) Source Watercourses: - Vegetation management watercourse and drainage feature map (1:100000 and 1:250000)
Wildlife habitat (threatened and special least concern)	 WildNet database species records habitat suitability models (various) SEQ koala habitat areas under the Koala Conservation Plan 2019 Sea Turtle Nesting Areas records
VMA regulated regional ecosystems	Vegetation management regional ecosystem and remnant map
VMA Essential Habitat	Vegetation management - essential habitat map
VMA Wetlands	Vegetation management wetlands map
Legally secured offsets	Vegetation Management Act property maps of assessable vegetation. For offset register data-contact DES
Regulated Vegetation Map	Vegetation management - regulated vegetation management map

Appendix 3 - Acronyms and Abbreviations

AOI	- Area of Interest
DES	- Department of Environment and Science
EP Act	- Environmental Protection Act 1994
EPP	- Environmental Protection Policy
GDA94	- Geocentric Datum of Australia 1994
GEM	- General Environmental Matters
GIS	- Geographic Information System
MSES	- Matters of State Environmental Significance
NCA	- Nature Conservation Act 1992
RE	- Regional Ecosystem
SPP	- State Planning Policy
VMA	- Vegetation Management Act 1999

Appendix E – SDAP Responses

State code 22: Environmentally relevant activities

<u>Guideline – SDAP State code 22: Environmentally Relevant Activities</u> provides direction on how to address this code.

Table 22.1: All development

Performance outcomes	Acceptable outcomes	Response
All ERAs		
P01 Development is suitably located and designed to avoid or mitigate environmental harm to the acoustic environment .	AO1.1 Development meets the acoustic quality objectives for sensitive receptors identified in the Environmental Protection (Noise) Policy 2019.	Portside Storage is located adjacent to the Port of Rockhampton, Port Alma Terminal which is a 24-hour, 7 day-a- week facility accepting and despatching international shipments. Refer to section 6.2 in the above environmental report which considers the acoustic quality objectives in the EPP Noise.
PO2 Development is suitably located and designed to avoid or mitigate environmental harm to the air environment .	AO2.1 Development meets the air quality objectives of the Environmental Protection (Air) Policy 2019.	Portside Storage is located adjacent to the Port of Rockhampton, Port Alma Terminal which is a 24-hour, 7 day-a- week facility accepting and despatching international shipments. Refer to section 6.1 in this environmental report which discusses the air quality objectives in the EPP Air.
PO3 Development (other than intensive animal industry for poultry farming), is suitably located and designed to avoid or mitigate environmental harm on adjacent sensitive land uses caused by odour.	No acceptable outcome is prescribed.	Portside Storage is located adjacent to the Port of Rockhampton, Port Alma Terminal which is a 24-hour, 7 day-a- week facility accepting and despatching international shipments. Refer to section 6.1.3.2 in this environmental report for how potential impacts from odour will be managed/mitigated.
PO4 Development is suitably located and designed to	AO4.1 Development meets the management intent,	Portside Storage has appropriate
avoid or mitigate environmental harm to the	water quality guidelines and objectives of the Environmental Protection (Water and Wetland	mitigation measures installed to prevent impact on receiving waters. Potential

Performance outcomes	Acceptable outcomes	Response
receiving waters environment .	Biodiversity) Policy 2019.	impacts to waters and management strategies/mitigation measures for preventing impacts to waters in the receiving environment are discussed in section 6.3 in this environmental report.
 PO5 Development is designed to include elements which: 1. prevent or minimise the production of hazardous contaminants and waste as by-products; or 2. contain and treat hazardous contaminants onsite rather than releasing them into the environment; and 3. provide secondary containment to prevent the accidental release of hazardous contaminants to the environment from spillage or leaks. 	No acceptable outcome is prescribed.	No hazardous contaminants/waste is generated by the activity. Where chemicals are stored on site, they are stored appropriately within a secondary containment system.
PO6 Environmentally hazardous materials located on-site are stored to avoid or minimise their release into the environment due to inundation during flood events.	No acceptable outcome is prescribed.	Where chemicals are stored on site, they are stored appropriately within a secondary containment system.
All development – matters of state environmental si	gnificance	
 PO7 Development is designed and sited to: avoid impacts on matters of state environmental significance; or minimise and mitigate impacts on matters of state environmental significance after demonstrating avoidance is not reasonably possible; and provide an offset if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable significant residual impact on a matter of state environmental significance. Statutory note: For Brisbane core port land, an offset may only be applied to development on land identified as E1 Conservation/Buffer, E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan. 	No acceptable outcome is prescribed.	No MSES will be impacted by the proposal.

Performance outcomes	Acceptable outcomes	Response
Intensive animal industry – poultry farming (ERA 4(2))	
PO8 Poultry farming development (where farming more than 200,000 birds) is suitably located and designed to avoid or mitigate environmental harm on adjacent sensitive land uses , caused by odour.	 AO8.1 For poultry farming involving 300,000 birds or less, development meets the separation distances as determined using the S-factor methodology to: 1. a sensitive land use in a rural zone; and 2. boundary of a non-rural zone. OR 	Not applicable.
	 AO8.2 Development meets the separation distances as determined by odour modelling using the following criteria: 1. 2.5 odour units, 99.5 percent, 1 hour average for a sensitive land use in a rural zone; or 2. 1.0 odour units, 99.5 percent, 1 hour average for the boundary of a non-rural zone. 	