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AREA SCHEDULE

OVERALL SITE = 2.962 ha
PROPOSED = 0.0464 ha

2 / RP613519
FH

3meter LANDSCAPE BUFFER

PROPOSED SWEAT
FURNACE LOCATION

5no CAR PARKS

ROCKHAMPTON REGIONAL COUNCIL
APPROVED PLANS
These plans are approved subject to the
current conditions of approval associated with
Development Permit No.: D/78-2018
Dated: 18 April 2019

BOUNDARY

CURRENT SITE
1 / RP609889
2.962 ha
FH

BOUNDARY

1 / SP260358
FH

BOUNDARY

1 / SP260358
FH

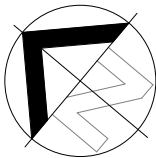
CAPRICORN HIGHWAY

SOMERSET ROAD

CENTRAL LINE

drawing title:
LOCATION PLAN

drawing no: SK-001 project no: GG-018



project: A3 DRAWING NOTED SCALES RELATE TO A3 DRAWINGS	
SWEAT FURNACE	
location: 227 SOMERSET ROAD, GRACEMERE, Q.L.D	client: ZEBRA GROUP

REV	DESCRIPTION	DATE
1	PRELIMINARY	2018-04-24
2	PRELIMINARY	2018-05-01
3	PRELIMINARY	2019-01-31
4	PRELIMINARY	2019-04-04

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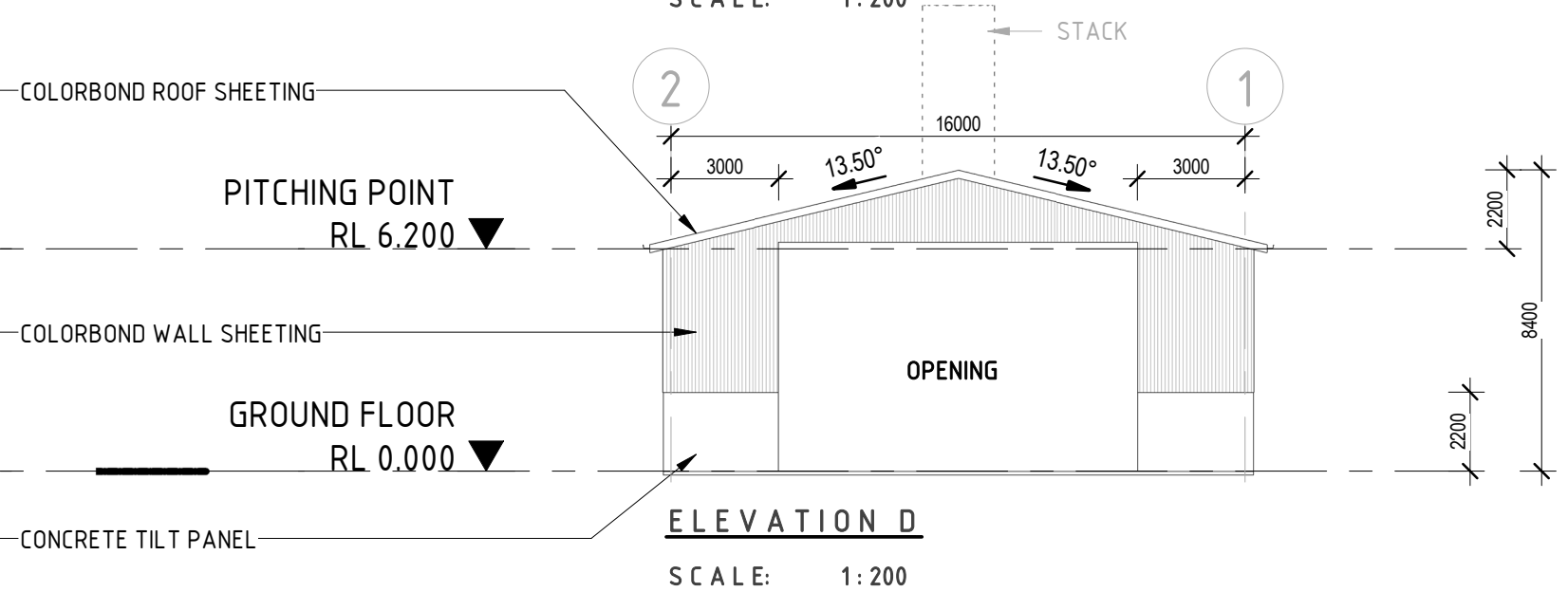
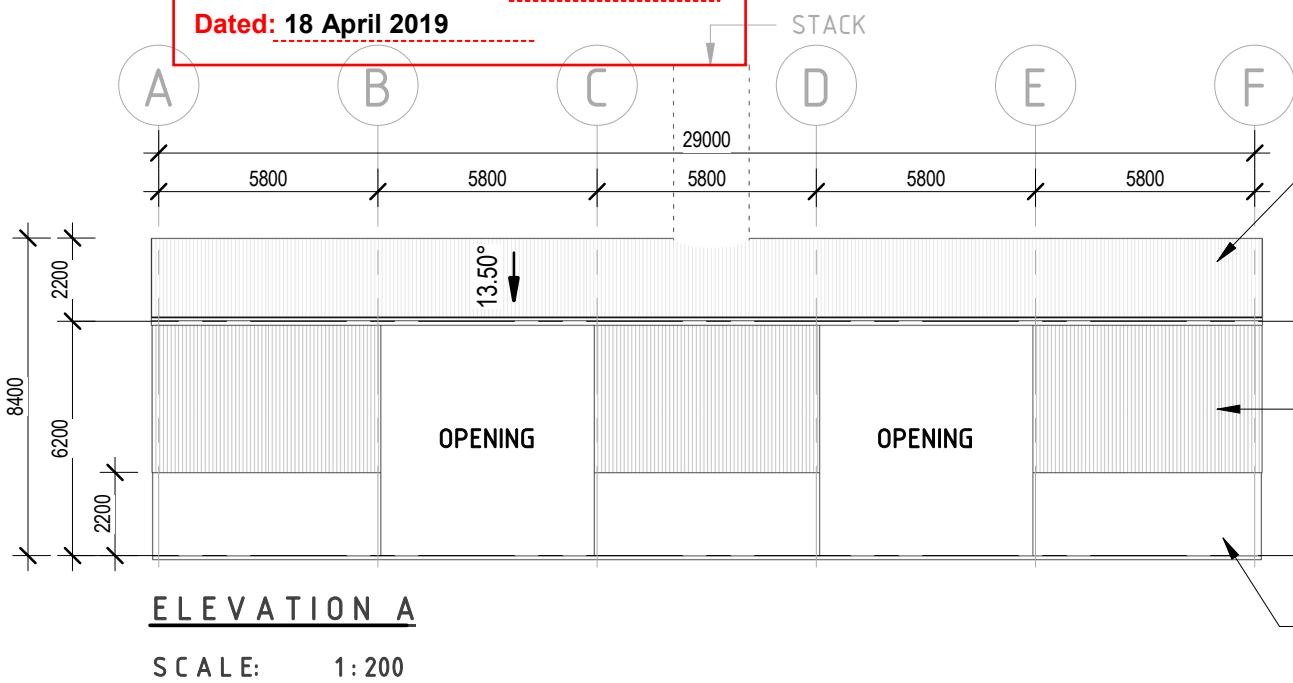
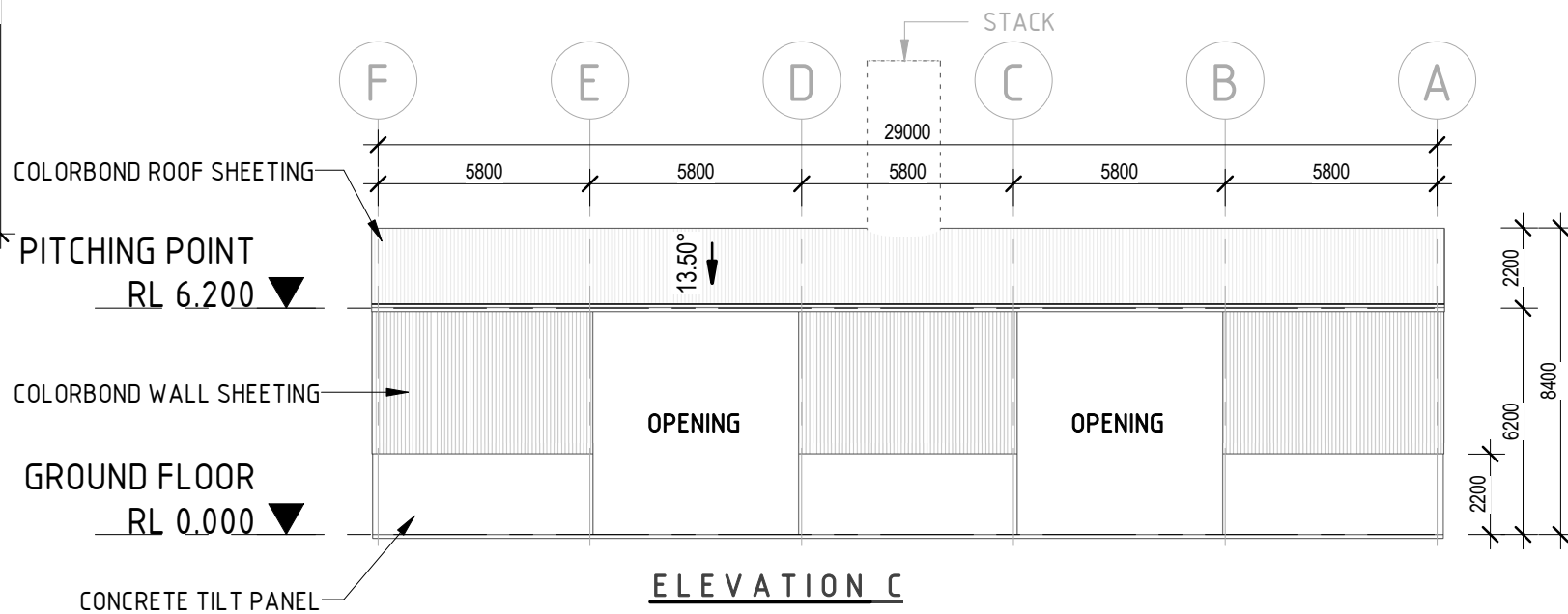
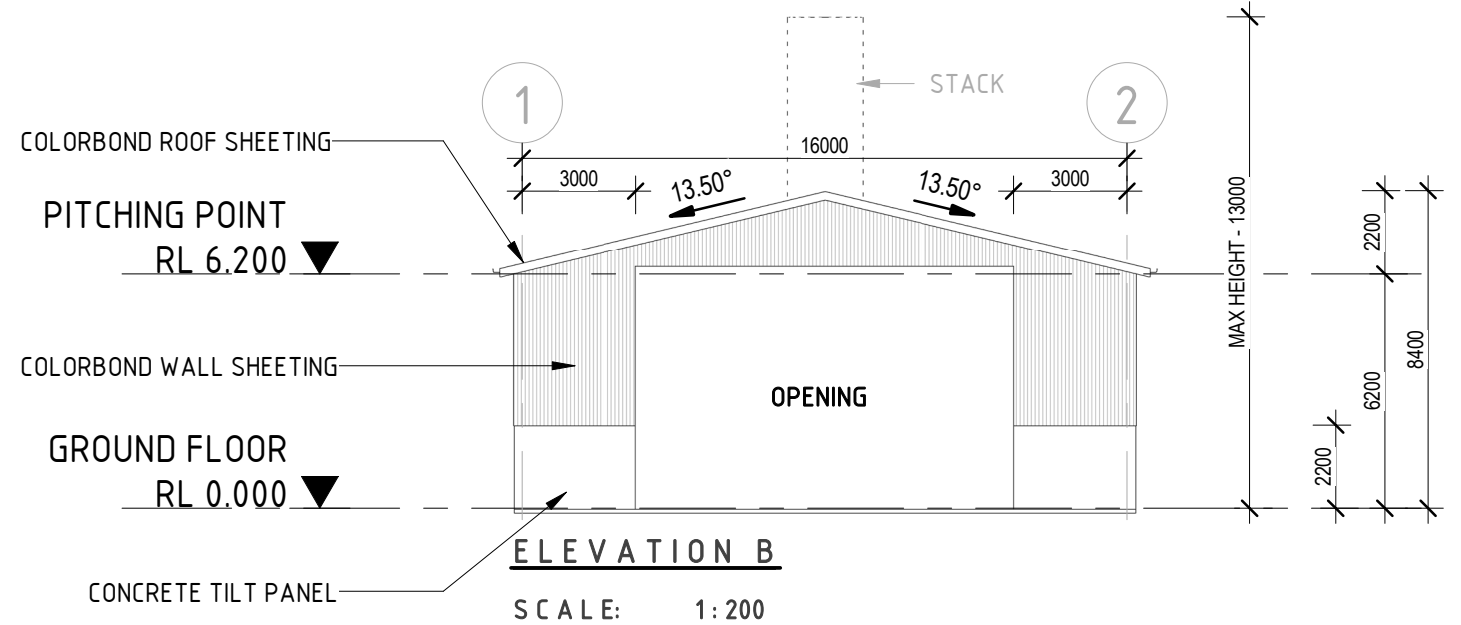
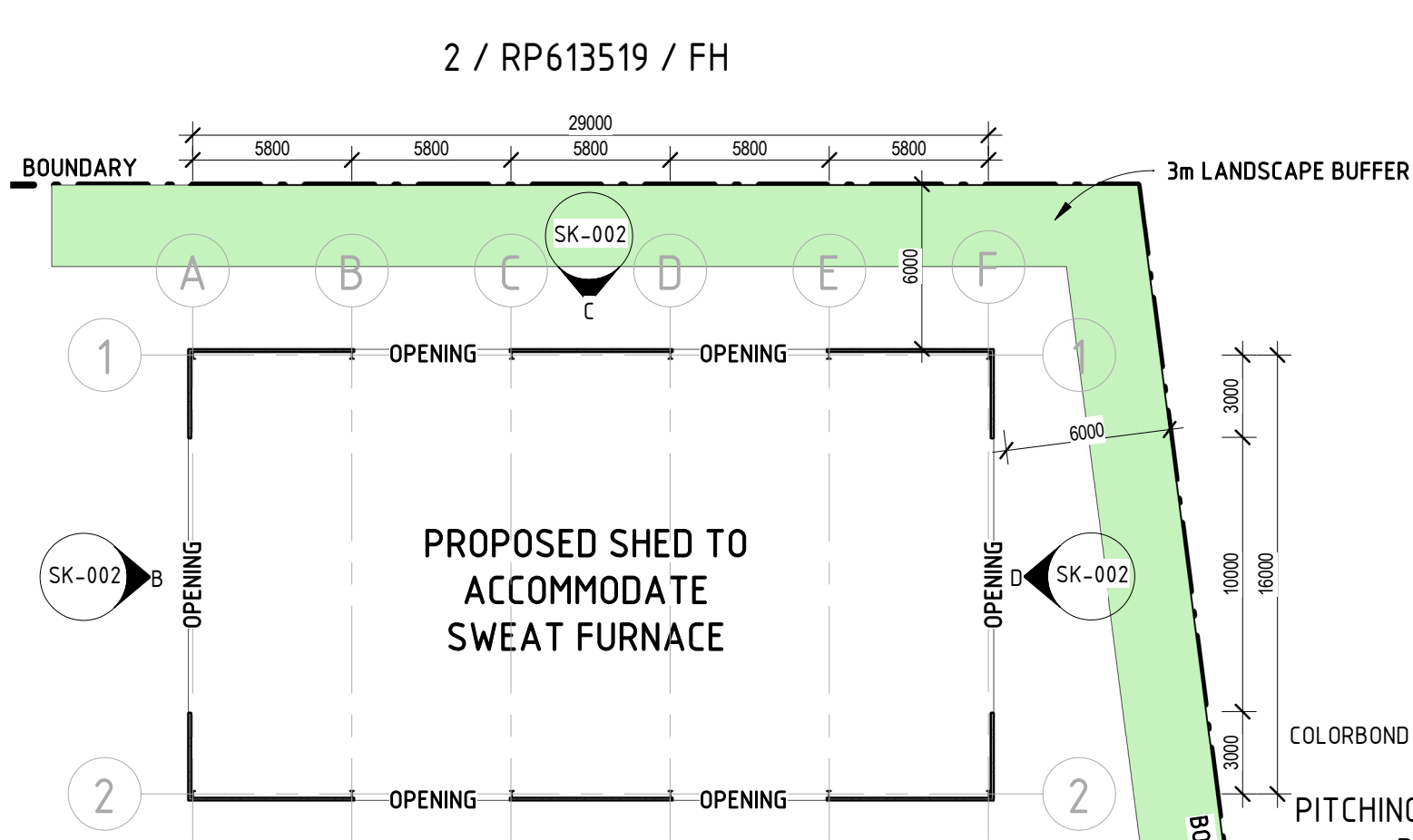


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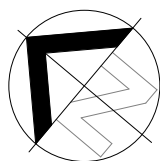
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reg no:4610

ISSUED FOR		
PRELIMINARY		
scale	1 : 1000	rev
date	JAN 19	4
drawn	CC	



drawing title:
FLOOR PLAN

drawing no: SK-002 project no: GG-018



project:	A3 DRAWING	NOTED SCALES RELATE TO A3 DRAWINGS
SWEAT FURNACE		
location:	227 SOMERSET ROAD, GRACEMERE, Q.L.D	client: ZEBRA GROUP

REV	DESCRIPTION	DATE
2	PRELIMINARY	2018-05-01
3	PRELIMINARY	2019-01-31
4	PRELIMINARY	2019-04-04

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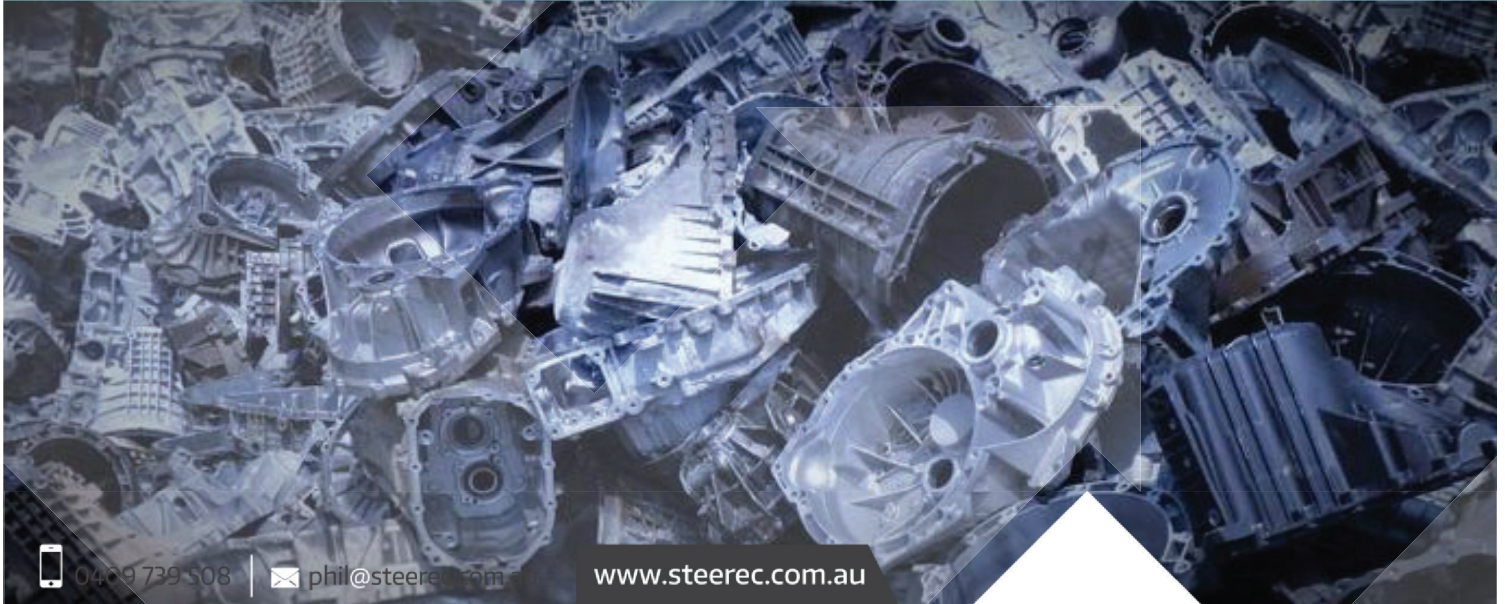
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scale	As indicated
date	JAN 19
drawn	CC
rev	4

Bowes Investments Pty Ltd T/as Zebra Metals and Environmental Services Application for Environmental Authority and Development Approval to conduct a metal foundry operation Environmentally Relevant Activity



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STEER
ENVIRONMENTAL CONSULTING

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/78-2018

Dated: 18 April 2019

**Bowes Investments Pty Ltd T/as Zebra Metals and
Environmental Services - Application for an
Environmental Authority and Development Approval to
conduct a metal foundry operation ERA at 227
Somerset Road, Gracemere QLD**

Environmentally Relevant Activity 29 - Metal foundry
operation

Applicant Name: Bowes Investments Pty Ltd T/as
Zebra Metals and Environmental Services

AR #:

Project #:

EA Application #:

Existing EA Permit #: N/A

Report Prepared by: STEER Environmental Consulting




13 June 2018

Document Status

Report Type: Environmental report – EA Application

Project: Application for Environmental Authority and development Approval to conduct Metal foundry ERA at 227 Somerset Road, Gracemere QLD

Client: Bowes Investments Pty Ltd T/as Zebra Metals and Environmental Services

Document Version	Date	Author	Checked	Approved
Final	13.06.2018	Glenn Druery	Phil Steer	Phil Steer
Signed				

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1 Abbreviations

• DA	- Development Approval
• DES	- Department of Environment and Science
• DSDMIP	- Department of State Development, Manufacturing, Infrastructure and Planning
• EA	- Environmental Authority
• EP Act	- <i>Environmental Protection Act 1994</i>
• EP Reg	- <i>Environmental Protection Regulation 2008</i>
• EPP Air	- <i>Environmental Protection (Air) Policy 2008</i>
• EPP Noise	- <i>Environmental Protection (Noise) Policy 2008</i>
• EPP Water	- <i>Environmental Protection (Water) Policy 2009</i>
• ERA	- Environmentally Relevant Activity
• Fitzroy River WQOs/EVs	- <i>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</i>
• MCU	- Material Change of Use
• MSES	- Matters of State Environmental Significance
• RSO	- Registered Suitable Operator
• RRC	- Rockhampton Regional Council
• SBMP	- Site Based Management Plan
• STEER EC	- STEER Environmental Consulting
• WRR Act	- <i>Waste Reduction and Recycling Act 2011</i>

2 Executive Summary

This Environmental Report has been prepared to support an application for an environmental authority (EA) and development approval (DA) for Bowes Investments Pty Ltd T/as Zebra Metals and Environmental Services (Bowes Investments Pty Ltd) to conduct environmentally relevant activity (ERA) 29 – *Metal foundry operation* at 227 Somerset Road, Gracemere. Bowes Investments Pty Ltd is owned by Mr Ron and Mrs Tracey Bowes who also currently undertake ERA 20 – *Metal recovery* under an EA held by Zebra Wrecking Co Pty Ltd and a DA on the subject land. Both the EA and the DA are managed by Rockhampton Regional Council (RRC). A mobile and temporary ERA (regulated waste transport) is also held by Bowes Investments Pty Ltd, however this ERA is regulated by the Department of Environment and Science (DES). Mr Ron and Mrs Tracey Bowes have been operating the wrecking yard continuously at 227 Somerset Road for greater than 32 years and the operation is a significant local employer and recycler of waste automotive components and industrial equipment.

An intrinsic component of conducting the wrecking yard activity is the recovery of metals of value from various waste streams which includes a wide range of sources such as automotive components and industrial equipment. Bowes Investments Pty Ltd has to date, separated the various metal components to the best of its ability using the limited methods that are present on site. These include separation through mechanical means, or by portioning using oxy-acetylene cutting equipment. This does not result in the most efficient separation of differing metal types routinely present in feedstock. Where various metals cannot be adequately separated, the value of the product is considerably lower than where metals such as aluminium and steel can be effectively separated. This also reduces profitability since transporting these materials to buyers includes paying increased transport costs due to the additional unnecessary weight.

Where recoverable metals can be separated into specific metal types, the recycling enterprise is made more efficient and is therefore more viable. Bowes Investments Pty Ltd has identified this and intends to improve the value of the saleable recovered product by separating aluminium from other metal types. The intention is to reclaim aluminium from automotive and industrial components such as transmissions and engine blocks, and other parts wherever possible. The reclamation method is to recover aluminium using an aluminium sweat furnace and set it in permanent moulds. There is presently no sweat furnace on the subject land.

This application describes the proposed aluminium foundry activity, which will require installation and commissioning of an appropriate sweat furnace and emissions control system. This environmental report identifies all potential environmental impacts (and risks of impacts) presented by the proposed aluminium melting activity and mitigation measures that will be applied to mitigate impacts to acceptable levels.

3 Purpose and structure of this report

This report has been structured to serve two general purposes:

- Provide supporting information for an environmental authority (EA) application for an environmentally relevant activity (ERA), *"29 (2) – Metal foundry operation – producing, in a year, more than 50 tonnes of non-ferrous metal castings using permanent moulds."*
- Provide supporting environmental management information for a material change of use (MCU) application to Rockhampton Regional Council (RRC) for the proposed industrial activity.

Effectively, this report combines two separate reports into a single document. This will allow both the Department of Environment and Science (DES) and RRC to gain an understanding of the proposed aluminium foundry activity (the proposed activity), while also focusing upon their respective areas of authority.

STEER EC has been commissioned by Bowes Investments Pty Ltd to prepare an environmental report which considers the proposed ERA from the perspective 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 ERA on the environment, and where necessary proposing appropriate mitigation strategies to prevent or minimise potential impacts.

Prior to issuing an EA for a new ERA, DES must ensure the decision to licence an activity is made in accordance with the regulatory requirements for environmental management decisions as prescribed in the *Environmental Protection Regulation 2008* (EP Reg). This report discusses the proposed activity in accordance with the environmental management objectives for the major environmental management subject areas described in the EP Reg, being air, noise, water (including groundwater and wetlands), land and waste.

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

- The criteria and environmental management objectives prescribed in Schedule 5, Part 3, Table 1 of the EP Reg.
- Identification of environmental values in the receiving environment.
- Assessment of the likely impact on environmental values identified in the receiving environment.
- Where necessary, mitigation measures to prevent or minimise potential impacts on environmental values in the receiving environment.

For simplicity's sake, the assessment of the likely impact on identified environmental values and the response addressing the criteria prescribed in Schedule 5, Part 3, Table 1 of the EP Reg will be discussed within each major environmental management subject area, i.e. air, noise, water, land and waste.

This report is intended to provide the outcome of the environmental impact assessments and mitigation measures to address all potential impacts on the receiving environment that may occur from conducting the proposed activity.

4 Background

4.1 Proponent and Existing Activities

Bowes Investments Pty Ltd specialises in dismantling and reselling a wide range of trucks, buses and machinery, and sources stock from across Queensland. The company is owned by Mr Ron and Mrs Tracey Bowes who also currently undertake environmentally relevant activity (ERA) 20 – *Metal recovery* under an EA held by Zebra Wrecking Co Pty Ltd. The metal recovery ERA is devolved to RRC to administer and regulate in accordance with section 101 of the EP Reg. Mr and Mrs Bowes have operated wrecking and metal recovery operations continuously at 227 Somerset Road, Gracemere for over 30 years. Bowes Investments Pty Ltd operates the wrecking yard under an existing development approval issued by RRC. Bowes Investments Pty Ltd has identified an opportunity to improve recovery efficiencies of metals in recyclable automotive components and industrial equipment and intends to recover aluminium by separation from other metals using an aluminium sweat furnace. Aluminium ingots will be set using permanent moulds. The proposed activity will meet the threshold for the following ERA under the EP Act:

- **29 (2) – Metal foundry operation** – *producing, in a year, more than 50 tonnes of non-ferrous metal castings using permanent moulds.*

Bowes Investments Pty Ltd is currently a registered suitable operator (RSO) under the EP Act (suitable operator reference number 610815).

4.2 Existing Site Location and Operation

Bowes Investments Pty Ltd conducts the metal recovery and wrecking yard activities at 227 Somerset Road, Gracemere 4702 (see Figure 1). The real property description for the subject land is Lot 1 on RP609889, a freehold land parcel of 2.962 ha. The wrecking yard operation has been at this location for over 32 years and is now positioned directly adjacent to the recently released Gracemere Industry Park, a 25 ha industrial land subdivision which also fronts Somerset Road. The location is approximately 10 km southwest of Rockhampton.

The Central Line railway sits adjacent/runs parallel to Somerset Road, which in turn runs parallel to the Capricorn Highway immediately to the north of the railway corridor. Bowes Investments Pty Ltd is zoned medium impact industry in the RRC planning scheme (see Appendix A). The subject land is appropriately located within the Gracemere Industrial Area which contains areas zoned for high, medium and low impact industry. RRC is actively encouraging industry to occupy this locality. The portion of the Gracemere Industry Park immediately adjacent to Bowes Investments Pty Ltd is

designated high impact industry in RRC's planning scheme, and land to the immediate east and south is zoned medium impact industry (Appendix A).

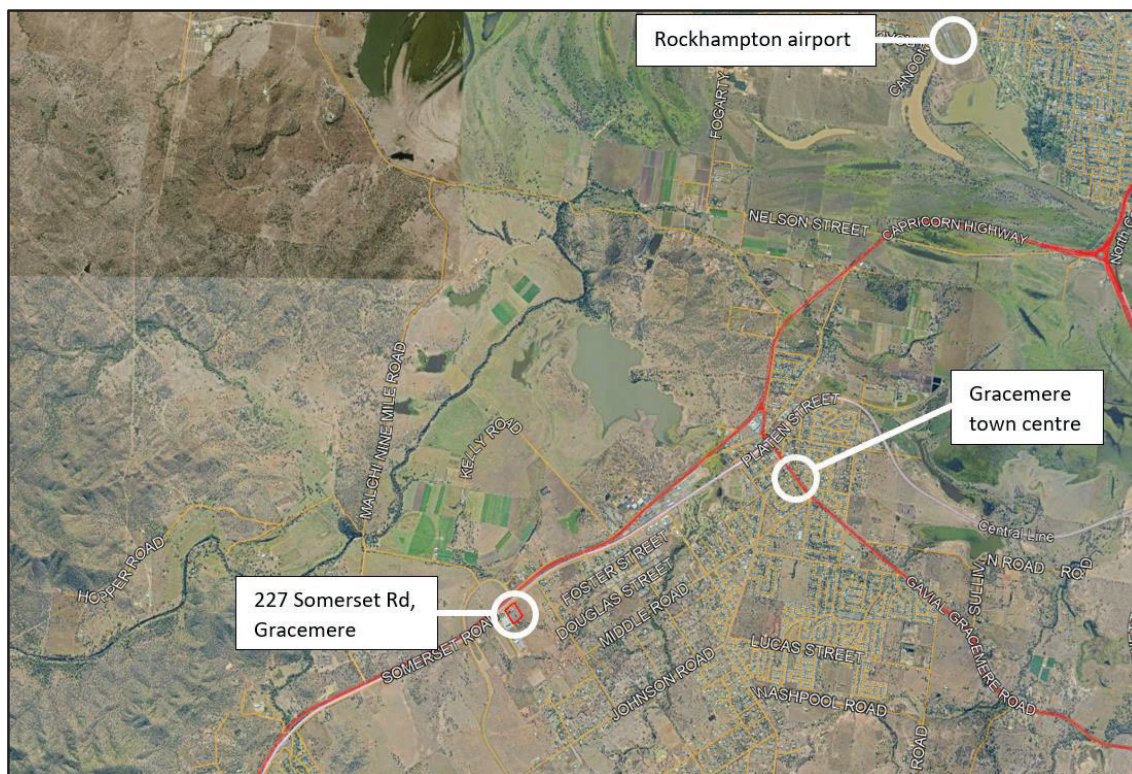


Figure 1. Location of Bowes Investments Pty Ltd at 227 Somerset Road in the Gracemere Industrial Estate in relation to Gracemere town centre and Rockhampton airport.

4.3 Proposed aluminium foundry activity

Companies owned by Mr Ron and Mrs Tracey Bowes have been undertaking dismantling and reselling of used automotive and machinery parts at 227 Somerset Road, Gracemere for longer than 32 years. The geographic location of the recycling activities conducted on site in relation to the location of customers constantly poses challenges for Bowes Investments Pty Ltd to maintain a competitive presence in Queensland's automotive recycling industry. Bowes Investments Pty Ltd is constantly striving to improve recycling efficiencies and has identified an opportunity to increase capital gain from selling aluminium by separating it from ferrous material before it leaves site. Bowes Investments Pty Ltd intends to construct a purpose-built industrial shed to house an aluminium sweat furnace which it will use to separate secondary aluminium into ingots. The sweat furnace building will be completely enclosed and constructed on a concrete pad at the southeast corner of the subject land.

4.3.1 Pre-lodgement advice and necessary approvals

The Department of Environment and Science (DES) provided written advice dated 26 April 2018 through the Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP) confirming that the proposed activity is considered the following ERA as prescribed in the EP Reg:

ERA 29 (2) – Metal foundry operation – *producing in a year, 50t or more of non-ferrous metal castings using permanent moulds.*

DSDMIP has no jurisdiction over this ERA since it is not listed as a concurrence ERA in the EP Reg, meaning an application for an EA to conduct the ERA is submitted directly to DES. DES has developed eligibility criteria and standard conditions for ERAs that pose a lower risk to the environment. ERA 29(2) *Metal foundry operation* is a lower risk ERA that DES has developed eligibility criteria and standard conditions for. However, for an activity to operate under a standard approval, it must meet all the eligibility criteria for the activity. STEER Environmental Consulting (STEER EC) has undertaken an assessment to establish whether the proposed activity meets all the eligibility criteria. The outcome of the assessment is that, with the exception of the *Activity Location* eligibility criterion, the activity meets all criteria (see Table 1 below).

Table 1. Assessment of proposed activity against DES eligibility criteria for ERA 29(2) - Metal foundry operation

Eligibility criteria category	Eligibility criteria	Assessment	Can the proposed activity meet the eligibility criteria
Activity description	The activity is producing 50 tonnes or more in a year of non-ferrous metal castings using permanent moulds	The activity will produce more than 50 tonnes of non-ferrous metal castings in a year using permanent moulds.	Yes
	The activity does not include casting lead or lead alloys.	The activity does not involve casting lead or lead alloys.	Yes
Activity location	The facility is not within 500 metres of: <ul style="list-style-type: none"> A dwelling, residential allotment, mobile home or caravan park, residential marina, motel, hotel or hostel or other residential premises. A kindergarten, school, university, library, childcare or other educational institution A medical centre or hospital A protected area under the <i>Nature Conservation Act 1992</i> A public park or gardens 	Two residential dwellings are located approximately 300 m and 400 m respectively, roughly to the east of the proposed location for the activity.	NO
	The facility is not in any category A or B environmentally sensitive area.	There are no category A or B environmentally sensitive areas near the proposed activity.	Yes

Eligibility criteria category	Eligibility criteria	Assessment	Can the proposed activity meet the eligibility criteria
	The facility is not in a designated precinct in a strategic environmental area as defined in the Regional Planning Interests Regulation 2014 or regional plan.	There are no strategic environmental areas in or near the proposed activity.	Yes
	The facility is not within 100 metres of any watercourse, wetland or spring.	The nearest watercourse is greater than 100 metres from the proposed activity.	Yes
Air	The combustion of fuel, other than natural gases, does not exceed 500 kilograms per hour.	Not more than 500 kg of fuel will be used per hour.	Yes
Water	There is no release of aqueous waste from the activity to waters.	No release of aqueous waste to water will occur.	Yes

Since there are several dwellings within 500 m of the proposed location for the proposed activity, Bowes Investments Pty Ltd cannot make application to operate under an ERA standard approval. In accordance with the EP Act, this activity requires a site-specific EA prior to undertaking. Site-specific EAs require a detailed assessment against the prescribed requirements of the EP Act. This report addresses the technical information DES requires for a site-specific application.

4.4 Surrounding Area

The proposed activity will occupy an area in the southeast corner of the subject site, which is immediately surrounded to the west by an existing industrial activity (transport depot), and cleared land which is zoned either high or medium impact industry under the RRC planning scheme to the east and south. Immediately opposite Bowes Investments Pty Ltd is the rail corridor for the main central western line, followed by the Capricorn Highway to the north. The surrounding land contributes to the Gracemere Industrial Estate, which is an area that has been set aside specifically for industry in the RRC planning scheme.

4.5 Rehabilitation upon cessation of activity

The proposed activity is a new venture which will seek to ensure efficiencies in resource recovery processes are optimised so that Bowes Investments Pty Ltd will remain competitive in the recycled metals market. Since this is a new activity, Bowes Investments Pty Ltd has not proposed a finite lifespan for the proposed activity. Significant built infrastructure is planned for construction to house the sweat furnace, and the intention is to utilise the resource for many years. However, as with any ERA where a footprint will remain after cessation of the activity, the intention is to leave the sweat

furnace building in a condition that is safe, stable, non-polluting, and fit for the intended subsequent use. The building is located on one corner of an industrial land parcel which has been used (and continues to be used) as a wrecking yard and metal recovery ERA. The most likely end use for the building will be as a storage shed. Due to the infancy of the stage of the proposed venture, a rehabilitation plan will not be developed at this time. Instead, as it becomes known that the activity will eventually cease by a particular date, a rehabilitation plan will be developed and implemented as required.

5 Assessment of Possible Impacts on Environmental Values and Mitigation Measures

The EP Act prescribes certain requirements on applications for EAs. ERAs that require either a variation or site-specific application are required to address additional requirements in accordance with the EP Act. Following an assessment of the eligibility criteria for the ERA standard for ERA 29 *Metal foundry operation*, it has been determined that the proposed activity can meet all but one of the eligibility criteria, 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.*

5.1 Air

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

5.1.1 Environmental management objectives

Schedule 5, Part 3, Table 1 of the EP Reg 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 5, Part 2, Section 4 of the EP Reg 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.

5.1.2 Environmental values for the air environment (Air)

The *Environmental Protection (Air) Policy 2008* (EPP Air) identifies the following environmental values 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.*

The proposed activity will not involve generation of significant dust and is unlikely to produce discernible odour. 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 environmental values of the air environment are detailed below.

5.1.3 Management of potential impacts

The potential impacts on the air environment are discussed below in terms of environmental nuisance and environmental harm. Sections 5.1.3.1 and 5.1.3.2 discuss the potential environmental nuisance impacts from dust and odour respectively. Section 5.1.3.3 discusses the potential for environmental harm to result from emissions from the proposed activity, and proposes mitigation measures to minimise potential impacts on the environmental values of air.

5.1.3.1 Dust

The nature of conducting an aluminium foundry operation does not present significant risk of dust generation. Bowes Investments Pty Ltd holds an EA to conduct a metal recovery ERA on the subject land and a development approval with RRC to operate a wrecking yard. The metal recovery ERA is presently operated under conditions prescribed in EA EPAEA/11/2012 managed by RRC.

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

- There will be necessary movement of recyclable materials into the sweat furnace shed from the wrecking yard. Similarly, following separation of aluminium from the recyclable materials, the relocation of ingots and separated ferrous material will require transporting from the sweat furnace shed into designated storage areas in the wrecking yard.
- There are very few sensitive uses close to the proposed activity (see Figure 2). The proposed site for the sweat furnace building is at the southeast corner of the subject land, and the nearest residential sensitive receptors are located approximately 300 m and 400 m respectively from the proposed location.
- The property boundary of the nearest commercial sensitive receptor is approximately 120 m to the west of the proposed activity location.

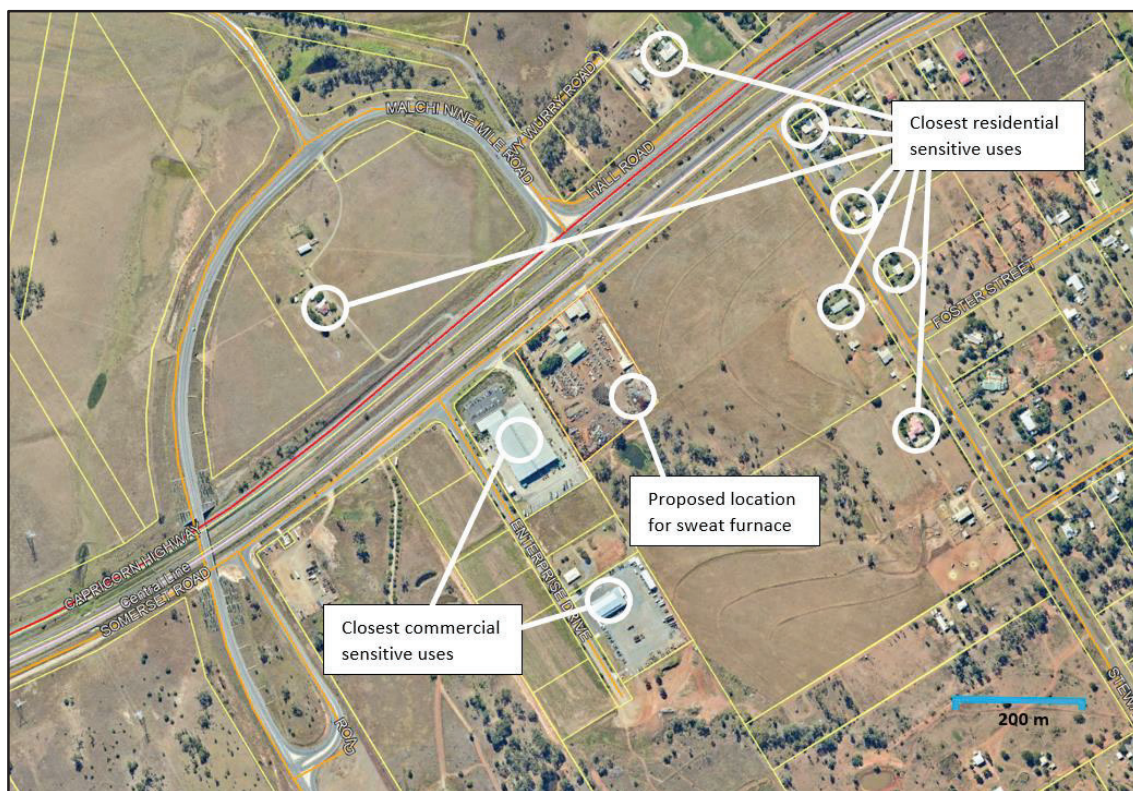


Figure 2. Location of proposed activity and closest residential and commercial sensitive uses.

After considering potential impacts on environmental values 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, with appropriate mitigation measures in place. Management practices proposed to be implemented to prevent or minimise adverse impacts are already employed in the existing approved operation, and are proposed for the amended relevant activities:

- Where necessary, unsealed surfaces will be watered to ensure transporting raw materials intended for separation of aluminium in the sweat furnace minimises the potential for dust liberation.
- The proposed activity will be conducted within the confines of a fully enclosed building.
- A Site Based Management Plan (SBMP) that addresses potential dust issues is currently in place for the existing activity. The SBMP will be reviewed and amended where necessary to ensure that potential dust issues for the proposed amended activities are identified and addressed.

5.1.3.2 *Odour*

The proposed activity has the potential to produce odorous emissions, however with appropriate mitigation strategies in place these risks can be managed. The impact of the proposed activity on environmental values for the air environment and surrounding sensitive uses in relation to odour has been assessed, and it is not considered that the activity will have any impact upon these uses.

Factors considered when assessing potential impact from odour on the surrounding sensitive uses are:

- The used automotive component parts that will serve as feedstock for the sweat furnace will be cleaned of the bulk of contaminants where required, prior to introduction into the furnace. This will ensure contaminants such as hydrocarbons are excluded from the combustion process within the furnace, therefore reducing total emissions.
- The sweat furnace will be fitted with appropriate air emissions mitigation equipment. Specifically, an afterburner will be fitted and used when aluminium recovery is being conducted. The purpose of the afterburner is to reduce the concentration of potentially toxic emissions being generated during operation of the aluminium sweat furnace.

5.1.3.3 *Air quality*

The proposed activity will involve using a sweat furnace to reclaim aluminium from automotive parts consisting of aluminium and iron. In the absence of any emission control devices, sweat furnaces release hazardous substances into the receiving environment. The most common substances released are dioxins and furans. However, these gases can be converted to less toxic substances by installing suitable emissions control equipment on the exhaust stack. An afterburner, or thermal oxidiser is a device that uses controlled flame combustion to convert air pollutants to less harmful substances. The sweat furnace proposed for installation at Bowes Investments Pty Ltd will have an afterburner installed to control the emission of potentially toxic gases. By converting the emissions to less harmful substances using the afterburner, the qualities of the air environment conducive to protecting the health and biodiversity of ecosystems and to human health and wellbeing will be protected.

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

No component of the proposed aluminium activity will generate dust likely to result in environmental nuisance at commercial or residential sensitive uses in the receiving environment. The afterburner stack will be the single point source of emissions, which will reduce the concentrations of potentially toxic gases such as dioxins and furans, and significantly reduce the risk of odour.

By 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 Reg Schedule 5, Part 3, Table 1 for air will be met. Further, the operation of the activity 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 protecting the aesthetics of the environment, 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 impact on the environmental values of air.

5.2 Noise

This section will address how the proposed activity will be undertaken in a manner that will prevent and/or minimise the potential impact of noise on sensitive uses in the receiving environment.

5.2.1 Environmental management objectives

Schedule 5, Part 3, Table 1 of the EP Reg 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 5, Part 2, Section 4 of the EP Reg 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.

5.2.2 Environmental values for the acoustic environment (Noise)

The *Environmental Protection (Noise) Policy 2008* (EPP Noise) identifies the following environmental values for air 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 environmental values of the acoustic environment are detailed below.

5.2.3 Management of potential impacts

The proposed activity presents a risk of noise emissions due to the following processes:

- Lift trucks transporting automotive component parts as feedstock and ingots of recovered aluminium and iron products that remain at the completion of the melting process.
- Trucking movements making deliveries and collecting freight.
- Melting of aluminium in the sweat furnace and conversion of exhaust gases using the afterburner.

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

- The subject land is zoned medium impact industry in RRC's planning scheme (see Appendix A). A development approval for medium impact industry (wrecking yard) resides over the lot, and the site has been operated as a wrecking yard for over 32 years. The site is also an existing metal recovery ERA with a long history of compliance with the EA conditions.
- Surrounding land is zoned either medium impact industry to the east and south, or high impact industry to the west. To the immediate north is Somerset Drive, the Central Line railway corridor and the Capricorn Highway.
- There are very few residential sensitive uses near the proposed activity (see Figure 2).
- Sensitive uses in the area are aware of the long historical presence of the wrecking yard and metal recovery activities undertaken on the subject land, and as such are accepting of the low levels of noise that may occasionally emanate from the place. To date there have been no complaints about noise emanating from the facility. The proposed activity is not expected to contribute to a higher level of noise than is already generated through conducting existing licensed activities on the subject land.
- The proposed activity will be conducted exclusively within the confines of a fully enclosed building, which will attenuate noise that may be generated during operation of the sweat furnace.
- Noise sources from the proposed activity are minimal.

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

After considering potential impacts on environmental values for the acoustic environment and surrounding sensitive uses in relation to noise, it is not considered that the activity will have any impact upon these uses, with appropriate mitigation measures in place. Management practices proposed to prevent or minimise adverse impacts are already employed in the existing approved activities conducted on site, and will continue for the aluminium foundry activity:

- All equipment and plant on-site will be maintained in sound working order to manufacturer's specifications. Any mechanical failures will be repaired immediately to ensure no unnecessary noise is generated.
- The proposed activity will be undertaken between 7:00 AM and 6:00 PM weekdays, and 7:00 AM and 12:00 PM (midday) on Saturdays. This is parallel with the operational hours of the existing EA for metal recovery ERA.
- 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.

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 Reg Schedule 5, Part 3, Table 1 for noise will be met. The proposed activity 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.

5.3 Water

The proposed activity presents possible risks to the environmental values of water. The nature of using a sweat furnace to melt aluminium requires taking precaution to ensure water is excluded from the process. Given the proposed activity will be undertaken as a completely dry process within the confines of a fully enclosed building, the activity itself will not pose significant risk to the environmental values of water. The risk is associated with the cleaning of automotive component parts used as feedstock in the proposed aluminium foundry operation. From this process, the main risk is hydrocarbons and other chemicals liberated during the cleaning process.

5.3.1 Surface water

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

- Contamination of receiving waters by discharging contaminated stormwater offsite

5.3.1.1 *Environmental management objectives*

Schedule 5, Part 3, Table 1 of the EP Reg 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 5, Part 2, Section 4 of the EP Reg 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.

5.3.1.2 *Environmental values of water*

When considering potential impact on environmental values of waters, waters in the immediate receiving environment must be considered since waters across Queensland have been assigned specific environmental values. The subject land is in the Fitzroy River sub-basin which is part of the

larger Fitzroy River catchment. Stormwater from the subject land initially discharges to a drainage line which is not mapped under the *Water Act 2000*. This depression flows northeast into the Gracemere Lagoon, which then discharges into Neerkol Creek. Neerkol Creek eventually discharges into the estuarine section of the Fitzroy River.

The *Environmental Protection (Water) Policy 2009* (EPP Water) identifies the following environmental values 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.*

5.3.1.2.1 Environmental values of waters in the Fitzroy River Sub-basin

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 WQOs/EVs), prescribes environmental values and water quality objectives for the Fitzroy River and its tributaries. The Fitzroy River WQOs/EVs describes this part of the catchment as the Fitzroy south/central tributaries (fresh water). The aquatic ecosystems in the Fitzroy River Sub-basin fresh waters are described as moderately disturbed, and the Fitzroy River WQOs/EVs lists the following environmental values as necessary to protect:

- Aquatic ecosystems
- Irrigation
- Farm supply
- Stock water
- Aquaculture
- Human consumer
- Primary recreation
- Secondary recreation
- Visual recreation
- Drinking water
- Industrial use
- Cultural and spiritual values

The water quality objectives (WQOs) for Fitzroy River Sub-basin fresh waters (which includes waters in the receiving environment of the subject land) are detailed in Table 2.

Table 2. Water quality objectives for Fitzroy River Sub-basin fresh waters.

Water area/type	Management intent (level of protection)	Water quality objectives to protect aquatic ecosystem EV
Fitzroy River Sub-basin fresh waters	Aquatic ecosystem – moderately disturbed	<ul style="list-style-type: none"> • turbidity: <50 NTU • suspended solids: <85 mg/L • chlorophyll a: <5 µg/L • total nitrogen: <500 µg/L • oxidised N: <60 µg/L • ammonia N: <20 µg/L • organic N: <420 µg/L • total phosphorus: <50 µg/L • filterable reactive phosphorus (FRP): <20 µg/L • dissolved oxygen: 85% – 110% saturation • pH: 6.5 – 8.5 • conductivity (EC) baseflow: <445 µS/cm • sulphate: <25 mg/L

5.3.1.3 Management of potential impacts

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

- Conducting the proposed activity within the confines of a fully enclosed building.
- All precleaning will be conducted in a controlled area that will include control measures such as bunding. Waste fluids will be captured and disposed of in a lawful manner.
- Where necessary, capturing potentially contaminated runoff from the cleaning of feedstock automotive parts and either treating to remove contaminants or disposing of the contaminated waste lawfully.
- 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.

5.3.2 Groundwater

The proposed activity presents a minor risk of potential impact upon the groundwater environment. These risks include:

- Contamination from chemicals in water liberated through the cleaning of feedstock automotive parts and discharge to surface waters, which in turn can recharge groundwater.
- Contamination from chemicals through spills that are permitted to either leach into the ground, or are deposited into bores.

5.3.2.1 Environmental management objectives

Schedule 5, Part 3, Table 1 of the EP Reg 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 5, Part 2, Section 4 of the EP Reg 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.

5.3.2.2 Environmental values of groundwater

The Fitzroy River WQOs/EVs lists the following environmental values for groundwater as necessary to protect:

- Aquatic ecosystems
- Irrigation
- Farm supply/use
- Stock water
- Primary recreation
- Drinking water
- Cultural and spiritual values

5.3.2.3 Management of potential impacts

The potential impacts will be managed/mitigated by:

- Conducting the proposed activity within the confines of a fully enclosed building.
- Where necessary, capturing potentially contaminated runoff from the cleaning of feedstock automotive parts and either treating to remove contaminants or disposing of the contaminated waste lawfully
- 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.

5.3.3 Wetlands

The proposed activity does not present a significant risk of potential impacts on the environmental values of wetlands.

5.3.3.1 Environmental management objectives

Schedule 5, Part 3, Table 1 of the EP Reg 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 5, Part 2, Section 4 of the EP Reg 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.

5.3.4 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

The proposed activity will implement appropriate mitigation strategies to prevent significant impact on surface water. Further, there will be no impact on groundwater as a result of the activity, and no wetlands are in the immediate vicinity of the subject land. Potential impacts will be avoided by conducting the activity within the confines of a fully enclosed building, and by managing potentially contaminated water used to clean feedstock automotive parts. The environmental values 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 Reg Schedule 5, Part 3, Table 1 will be met.

The performance outcome prescribed in item two for the environmental objective for groundwater as prescribed in the EP Reg Schedule 5, Part 3, Table 1 will be met. The proposed activity will be undertaken in such a way that will protect the environmental values of the groundwater environment.

The performance outcome prescribed in item one for the environmental objective for wetlands as prescribed in the EP Reg Schedule 5, Part 3, Table 1 will be met.

5.4 Land

The proposed activity presents possible risk of environmental impacts to the environmental values associated with land, which include:

- Contamination of land by discharging contaminated stormwater offsite.

5.4.1 Environmental management objectives

Schedule 5, Part 3, Table 1 of the EP Reg 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 5, Part 2, Section 4 of the EP Reg 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.

5.4.2 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 environmental values 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.*

5.4.3 Management of potential impacts

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

- Conducting the proposed activity within the confines of a fully enclosed building.
- Where necessary, capturing potentially contaminated runoff from the cleaning of feedstock automotive parts and either treating to remove contaminants or disposing of the contaminated waste lawfully.
- 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.

5.4.4 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 environmental values of land. Potential impacts will be avoided by conducting the proposed activity within the confines of an enclosed building. The only risk to land is associated with land potentially being contaminated by runoff of water used to clean feedstock automotive components. This will be prevented by managing wastewater appropriately and lawfully.

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 land as prescribed in the EP Reg Schedule 5, Part 3, Table 1 will be met.

5.5 Waste

The proposed activity aims to minimise production of waste products wherever possible. However, it is inevitable that some waste products will be produced.

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

Waste packaging will be disposed of through dedicated industrial recycling collection where available, and contaminated waste packaging will strictly be managed as regulated waste where applicable. Regulated waste will be removed only by licensed regulated waste transporters.

5.5.1 Environmental management objectives

Schedule 5, Part 3, Table 1 of the EP Reg 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 5, Part 2, Section 4 of the EP Reg 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.

5.5.2 Management of potential impacts from waste

Bowes Investments Pty Ltd operates an existing metal recovery ERA in accordance with the conditioned requirements of EA EPAEA112012 which is presently administered by RRC. Bowes Investments Pty Ltd is aware of obligations to manage and dispose of waste in an appropriate manner

that meets the prescribed requirements of the metal recovery ERA, and the broader obligations under the EP Act and the Waste Reduction and Recycling Act 2011 (WRR Act).

All waste materials are presently being managed in accordance with the requirements of the local authority (RRC) and DES. This will continue with the implementation of the proposed activity.

Where regulated waste is generated at the site, it will be removed only by licensed regulated waste transporters and transported to a place that can lawfully accept it. Bowes Investments Pty Ltd will maintain appropriate waste records for up to five years or the period prescribed in an EA.

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

Bowes Investments Pty Ltd 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 through conducting its activities. By adhering to lawful practice for waste management as described above, the proposed activity will meet item 1 of the performance outcome for managing waste as described in Schedule 5, Part 3, Table 1 of the EP Reg.

5.6 Matters of State Environmental Significance

A Matters of State Environmental Significance (MSES) report has been generated which identifies the subject land does not contain any MSES (see Appendix C).

6 Environmental Management Procedures

To appropriately manage possible environmental impacts, Bowes Investments Pty Ltd already operates in accordance with written procedures which describe environmental management processes and procedures in relation to the existing approved activities. These written procedures are in the form of environmental management plans which are updated from time to time as necessary. These environmental management plans will be amended where required to apply to the proposed activity, and will include 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 and continual improvement procedures

The management of both the existing licensed metal recovery ERA and the proposed metal foundry ERA will be overseen by the same persons. The environmental management obligations for both activities will be addressed in documentation relevant to all activities undertaken.

7 Conclusion

This document has provided a description and analysis of the environmental risks and impacts that the proposed activity 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 proposed activity will have an insignificant impact on the surrounding receiving environment. The mitigation strategies Bowes Investments Pty Ltd will implement and maintain whilst conducting the activity will achieve highly acceptable environmental outcomes.

8 Appendices

Appendix A – RRC planning scheme zone map for Gracemere Industrial Estate
- Subject lot marked

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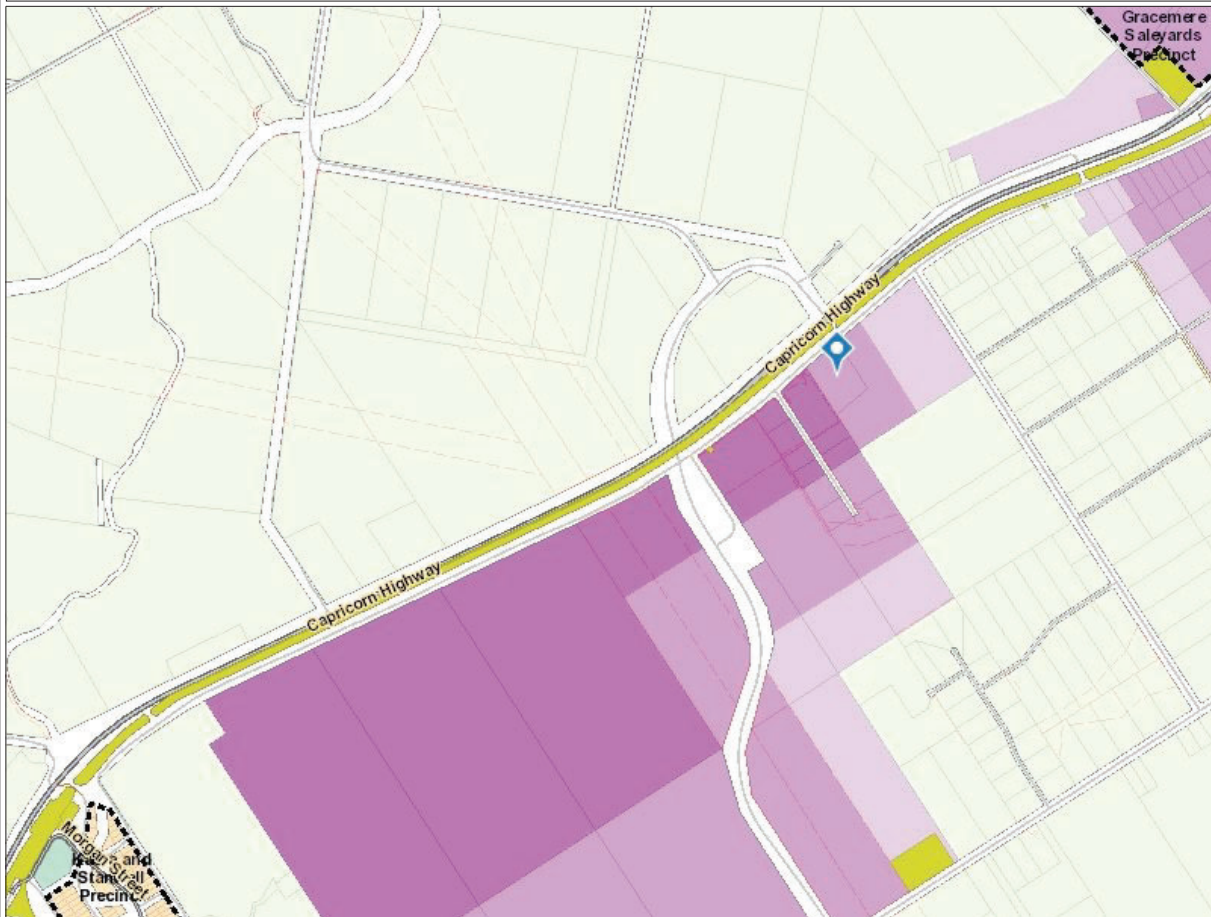


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Legend

- Sub-Precincts
- Precincts
- Priority Development Area
- Strategic Port Land
- Zones**
 - Low density residential
 - Low-Medium density residential
 - High density residential
 - Principal centre
 - Major centre
 - District centre
 - Local centre
 - Neighbourhood centre
 - Sport and recreation
 - Open space
 - Environmental management and conservation
 - Low impact industry
 - Medium impact industry
 - High impact industry
 - Special industry
 - Waterfront and marine industry
 - Community facilities
 - Emerging community
 - Limited development (constrained land)
 - Rural
 - Rural residential
 - Special purpose
 - Specialised centre
 - Township
- Easements
- Property Parcels (Main)



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Appendix B – Site Plan



drawing title:
LOCATION PLAN

drawing no: **SK-001**

project no: **GG-018**



project:
?

location:
227 SOMERSET ROAD,
GRACEMERE, Q.L.D

client:
?

AS DRAWING

NOTED SCALES RELATE TO A3 DRAWINGS

REV

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DESCRIPTION

PRELIMINARY

PRELIMINARY

DATE

2018-04-24

2018-05-01

REVISIONS

DESCRIPTION

DATE

PRELIMINARY

PRELIMINARY

2018-05-01

PRELIMINARY SKETCH PLANS


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PRELIMINARY

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date: MAY 18

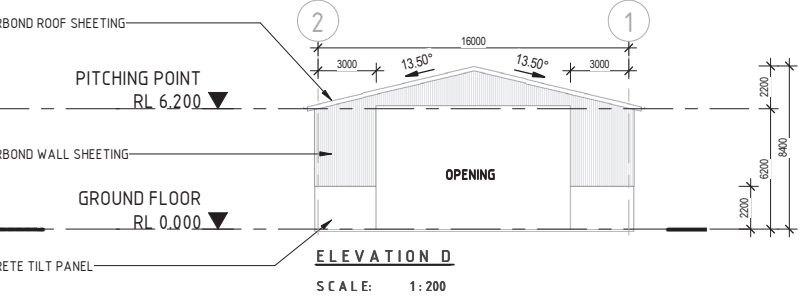
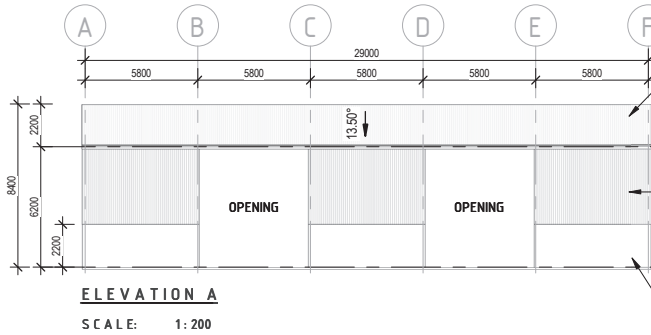
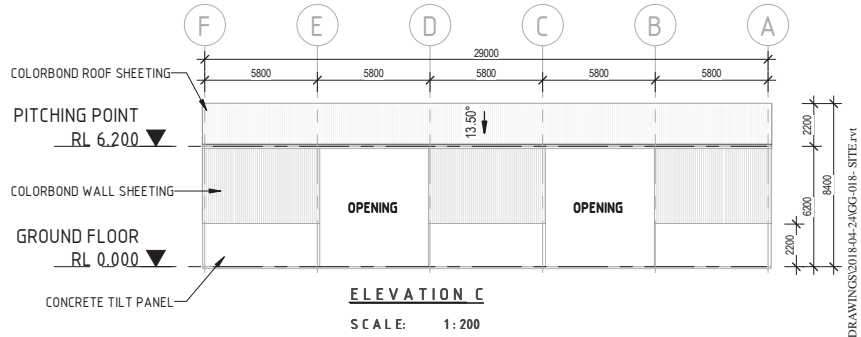
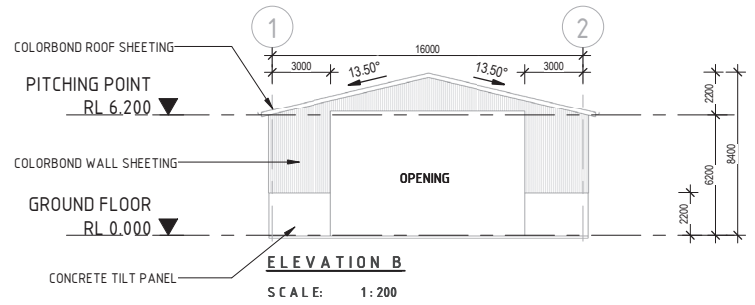
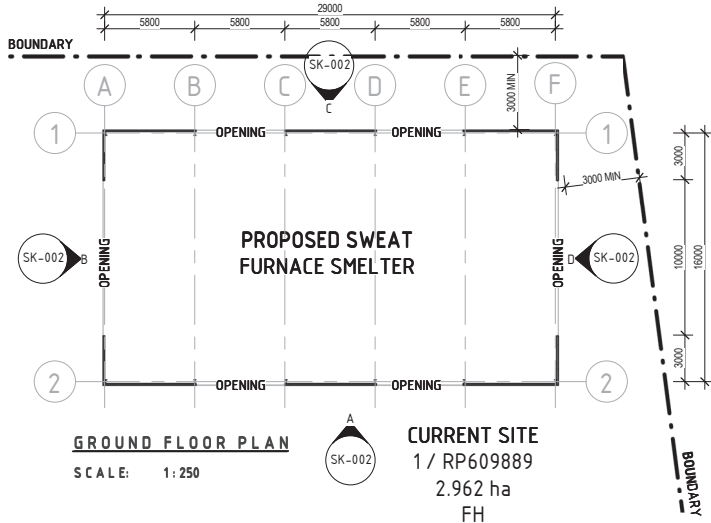
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REV

2

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2 / RP613519 / FH



drawing title:
FLOOR PLAN

drawing no: **SK-002** project no: **GG-018**



project: ?	A3 DRAWING NOTED SCALES RELATE TO A3 DRAWINGS
location: 227 SOMERSET ROAD, GRACEMERE, Q.L.D	client: ?

REV	DESCRIPTION	DATE
2	PRELIMINARY	2018-05-01

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**Appendix C – Matters of State Environmental Significance Report for Lot 1
RP609889**



Queensland Government

Department of Environment and Science

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest
Lot: 1 Plan: RP609889

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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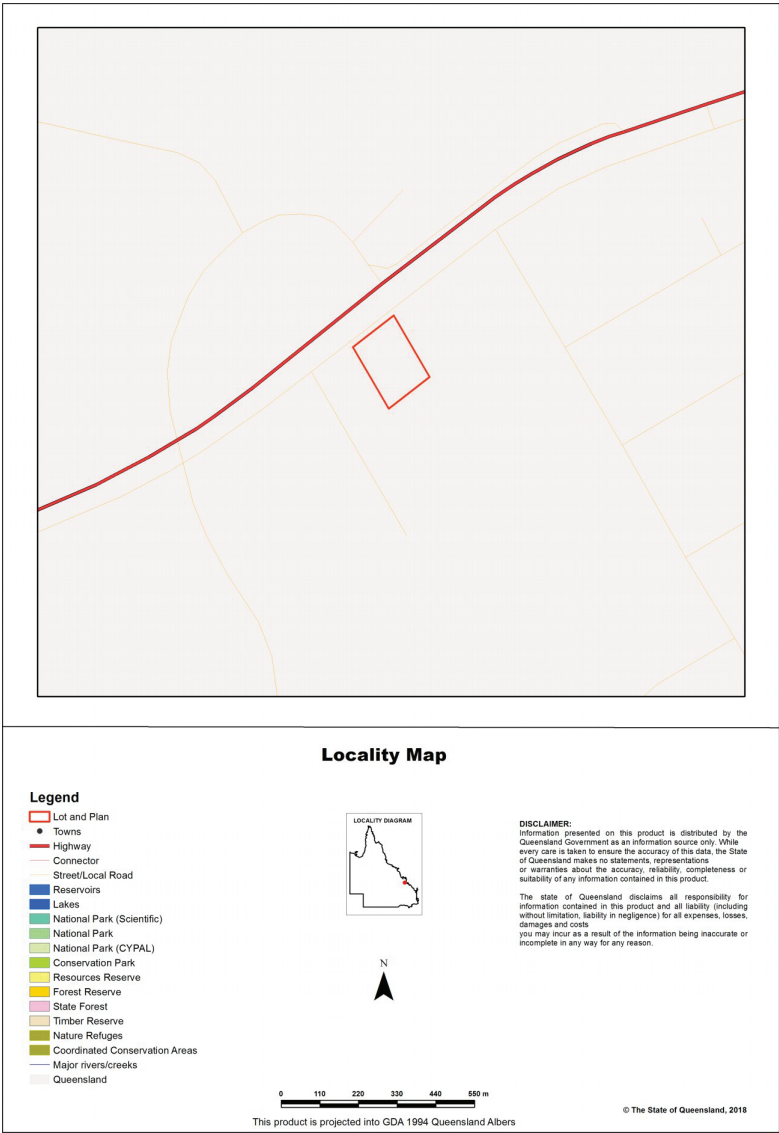
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Assessment Area Details

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: 1 Plan: RP609889

Size (ha)	2.97
Local Government(s)	Rockhampton Regional
Bioregion(s)	Brigalow Belt
Subregion(s)	Mount Morgan Ranges
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 Referable Wetlands under the Environmental Protection Regulation 2008;
- 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

1a Protected Areas- estates	0.0 ha	0.0 %
1b Protected Areas- nature refuges	0.0 ha	0.0 %
2 State Marine Parks- highly protected zones	0.0 ha	0.0 %
3 Fish habitat areas (A and B areas)	0.0 ha	0.0 %
4 Strategic Environmental Areas (SEA)	0.0 ha	0.0 %
5 High Ecological Significance wetlands on the map of Referable Wetlands	0.0 ha	0.0 %
6a High Ecological Value (HEV) wetlands	0.0 ha	0.0 %
6b High Ecological Value (HEV) waterways **	0.0 km	Not applicable
7 Threatened species and Iconic species	0.0 ha	0.0 %
8a Regulated Vegetation - Endangered/Of concern in Category B (remnant)	0.0 ha	0.0 %
8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth)	0.0 ha	0.0 %
8c Regulated Vegetation - Category R (GBR riverine regrowth)	0.0 ha	0.0 %
8d Regulated Vegetation - Essential habitat	0.0 ha	0.0 %
8e Regulated Vegetation - intersecting a watercourse **	0.0 km	Not applicable
8f Regulated Vegetation - within 100m of a Vegetation Management Wetland	0.0 ha	0.0 %
9a Legally secured offset areas- offset register areas	0.0 ha	0.0 %
9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation	0.0 ha	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)

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 Referable Wetlands

(no results)

6a. High Ecological Value (HEV) waters - wetlands

(no results)

6b. High Ecological Value (HEV) waters - waterways

(no results)

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

MSES - Species

7. Threatened wildlife and special least concern animal

(no results)

Threatened and special least concern species records

(no results)

Note: The Threatened and Special Least Concern Animal (7) layer originates from the previous MSES version (4.1, dated at 2014). The layer does not represent all currently listed species and is subject to review.

**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)*

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 3 - MSES - Species** for an overview of the relevant MSES.

MSES - Regulated Vegetation

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

Not applicable

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

Not applicable

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.qld.gov.au/regional-ecosystems/>

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.

MSES - Offsets

9a. Legally secured offset areas - offset register areas

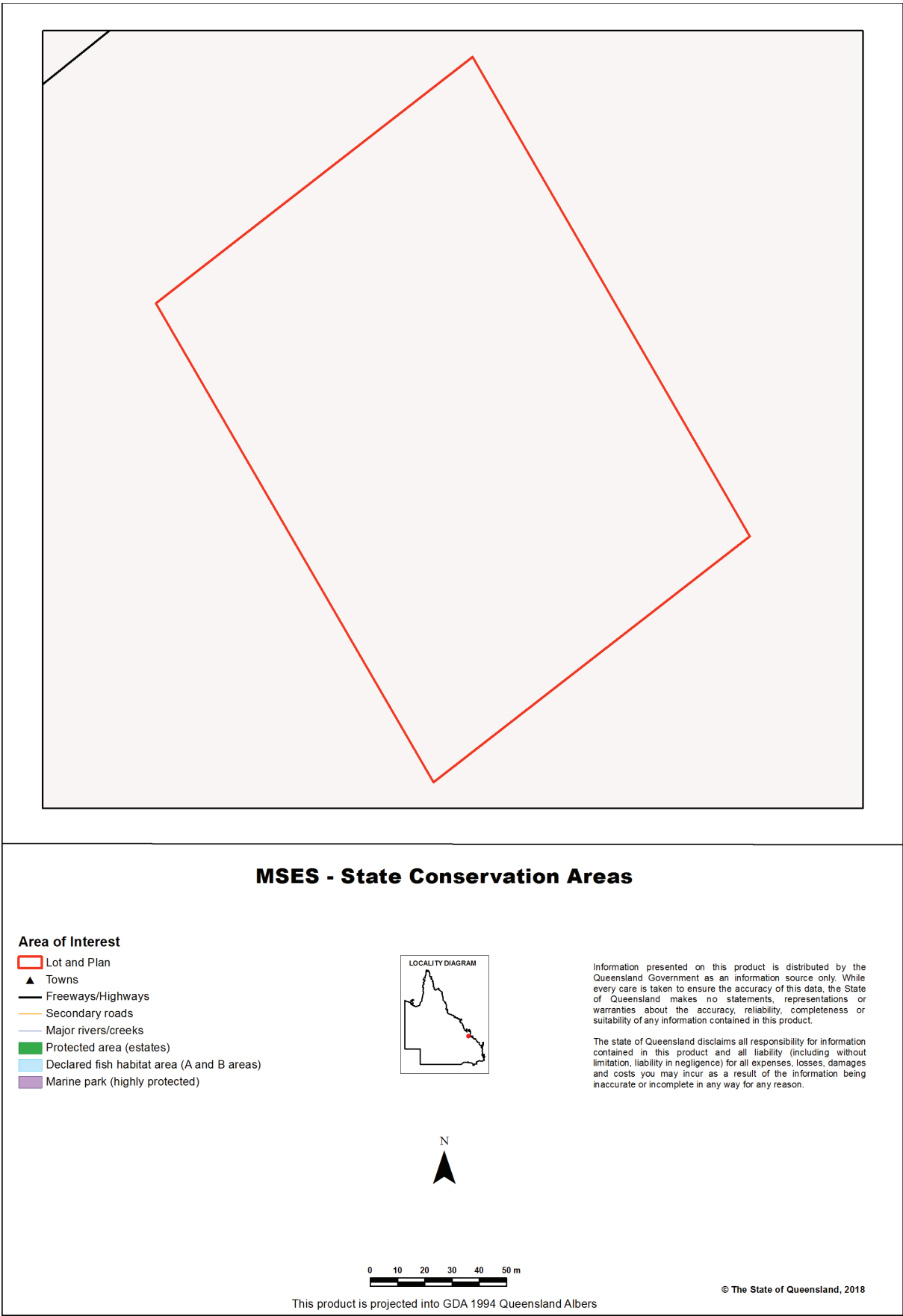
(no results)

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

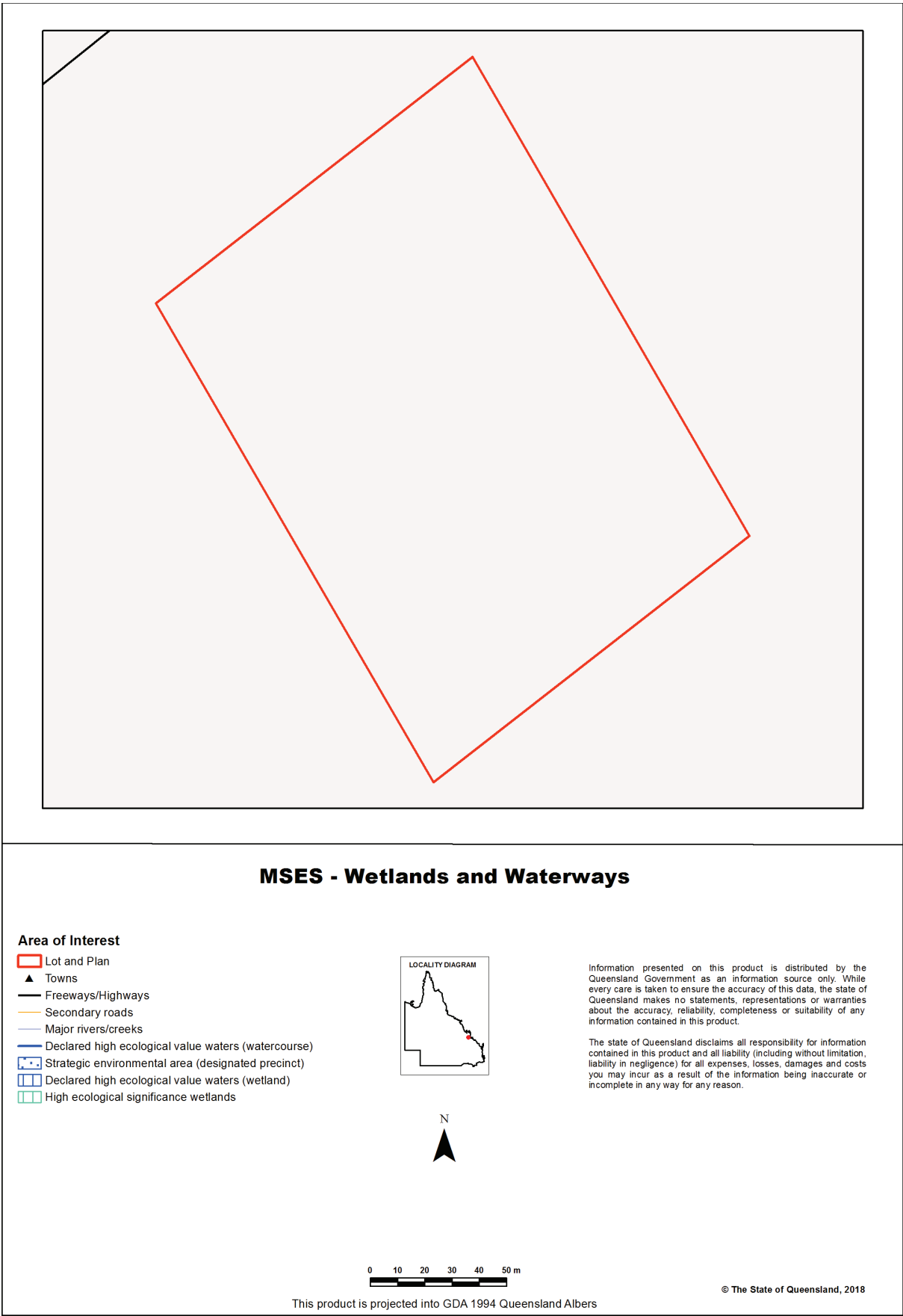
(no results)

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

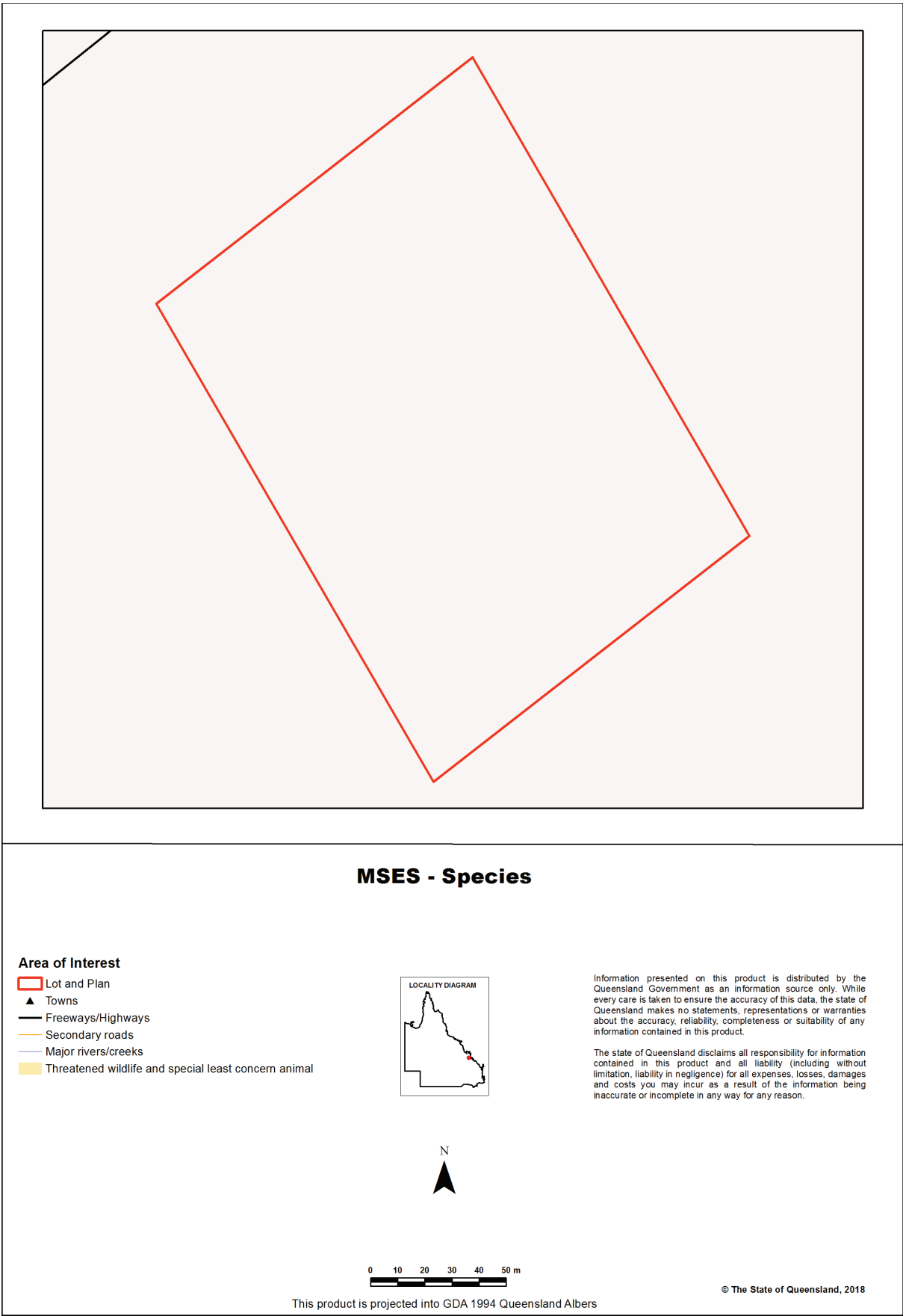
Map 1 - MSES - State Conservation Areas



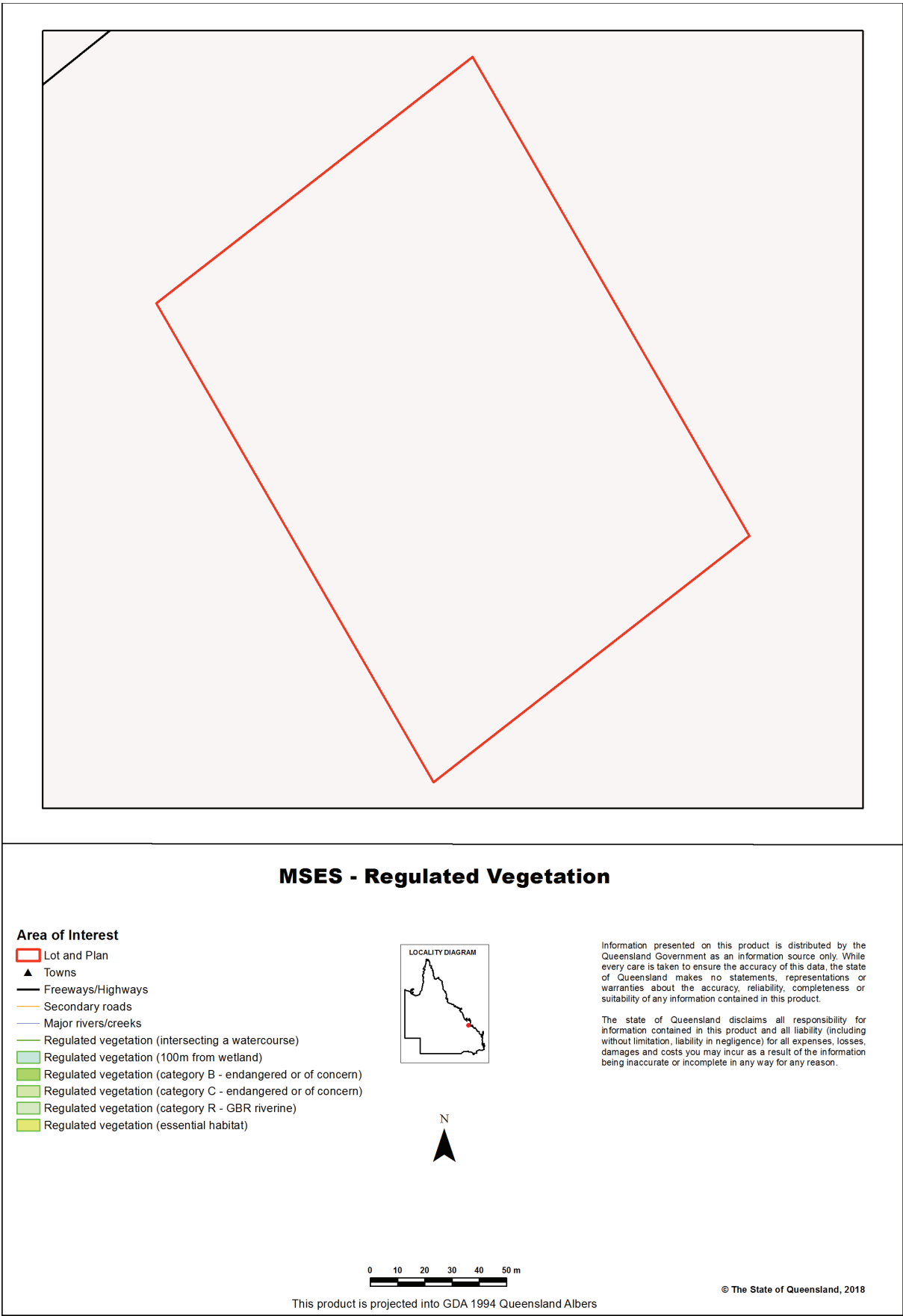
Map 2 - MSES - Wetlands and Waterways



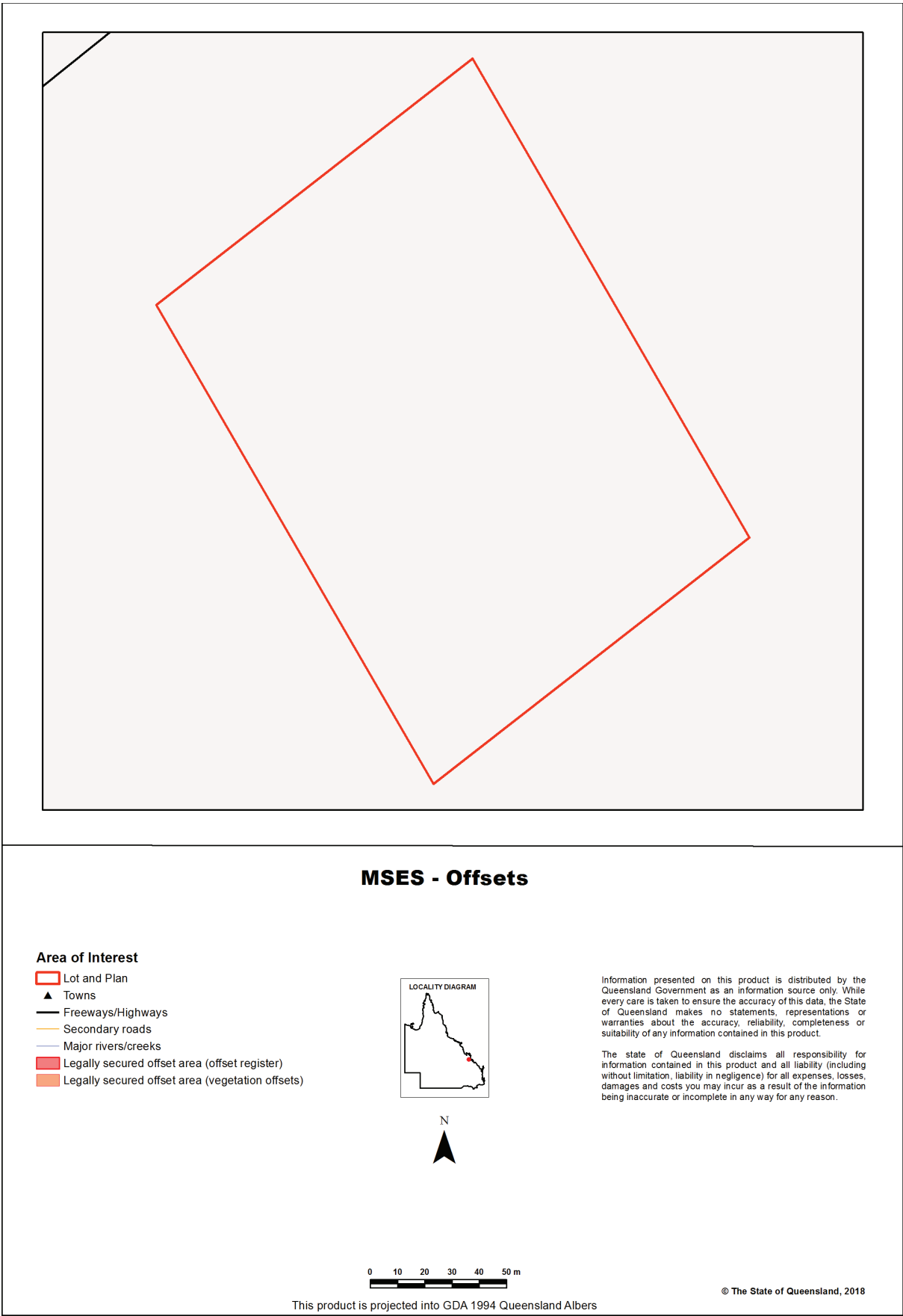
Map 3 - MSES - Species



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 and Nature Refuges	- Protected areas of Queensland - Nature Refuges - 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 Referable Wetland - wetland layers: - Wetland management area wetlands - Wetland protection area wetlands
wetlands in HEV waters	HEV waters: - EPP Water (multiple locations) intent for waters Source Wetlands: - Queensland Wetland Mapping (Current version 4, 2015) Source Watercourses: - Vegetation management watercourse and drainage feature map (1:100000 and 1:250000) - latest version 1.4
Wildlife habitat (threatened and special least concern)	-WildNet database species records - habitat suitability models (various)
VMA regulated regional ecosystems	Vegetation management regional ecosystem and remnant map - latest version 8.0
VMA Essential Habitat	Vegetation management - essential habitat map - latest version 4.41
VMA Wetlands	Vegetation management wetlands map - latest version 2.41
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 - latest version 1.41

Appendix 3 - Acronyms and Abbreviations

AOI	- Area of Interest
DES	- Department of Environment and Science
EP Act	- <i>Environmental Protection Act 1994</i>
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	- <i>Nature Conservation Act 1992</i>
RE	- Regional Ecosystem
SPP	- State Planning Policy
VMA	- <i>Vegetation Management Act 1999</i>