

To the Assessment Manager,
Douglas Shire Council,
64-66 Front Street,
Mossman Qld 4877

28 February 2025

Sent by email:

enquiries@douglas.qld.gov.com.au

Dear Ms Elphinstone,

28th February 2025

Good afternoon,

Re: Council Application Number MCUI 2024_5682

RE: CANCELLATION ENVIRONMENTAL AUTHORITY P-EA-100727892

RELATING TO APPLICATION NUMBER A-EA-NEW100727877 FOR LOT 1/RP893855 BONNIE
DOON RD, KILLALOE, 4877.

Further to my email of 24 February 2024 I hereby request this communication and attachments be included as part of my properly made submission to Council opposing the Development Application lodged by the RPS Group on behalf of NQ Asphalt P/L.

In my email to you on of 24 February 2025, I advised of the cancellation of Environmental Authority(EA) permit number: P-EA-100727892 and application number for the EA A-EA-NEW-

100727877 see below:

Environmental Protection Act 1994 Public Register

> Registered suitable operators

> EA applications

> Environmental authorities

> Historic environmental authorities

> Annual returns

> PRCP applications

> Progressive rehabilitation and
closure plans

> Temporary emissions licences

> Estimated rehabilitation cost

> Environmental Impact Statement

> Plan of operations

> Enforcement actions

> Frequently asked questions

EA Applications

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Details of application: A-EA-NEW-100727877

Application Action: New
Principal Applicant: NQ ASPHALT PTY LTD
Application Status: Decided
Received Date: 23/09/2024
Related Permit: P-EA-100727892
Permit Version: 1
Permit Effective Date: Not Available
Permit Status: Cancelled

Activity	Location
ERA 16 - Extraction and Screening 2(a) - Extracting, other than by dredging, in a year, the following quantity of material - 5,000t to 100,000t	Lot 1/RP693855 DOUGLAS SHIR

Related documents

For records which are not currently available online, submit a [public register information request](#). If you identify an error in the Portal or require further assistance, including how to submit an information request, please contact the department by:

- Email: public.register@des.qld.gov.au
- Phone: 1300 130 372 (option 4) in business hours

Related environmental authorities

To view other information holdings which may be related to the Environmental Authority, select the associated permit number below.

Reference	Permit Type	Permit Holder(s)	Effective date	Status
P-EA-100727892	Prescribed ERA	NQ ASPHALT PTY LTD	No Date	Cancelled

Environmental Protection Act 1994 Public Register

> Registered suitable operators

> EA applications

> Environmental authorities

> Historic environmental authorities

> Annual returns

> PRCP applications

> Progressive rehabilitation and
closure plans

> Temporary emissions licences

> Estimated rehabilitation cost

> Environmental Impact Statement

> Plan of operations

> Enforcement actions

> Frequently asked questions

Environmental authority

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Details of permit P-EA-100727892

Permit type: Prescribed ERA
Industry: Industry and Development
Status: Cancelled
Condition type: Standard
Permit holder(s): NQ ASPHALT PTY LTD

Activity	Location
ERA 16 - Extraction and Screening 2(a) - Extracting, other than by dredging, in a year, the following quantity of material - 5,000t to 100,000t	Lot 1/RP693855 DOUGLAS SHIRE

Related documents

For records which are not currently available online, submit a [public register information request](#). If you identify an error in the Portal or require further assistance, including how to submit an information request, please contact the department by:

- Email: public.register@des.qld.gov.au
- Phone: 1300 130 372 (option 4) in business hours

Related EA Applications

Application Number	Received Date	Application Status
A-EA-NEW-100727877	23/09/2024	Decided

Since forwarding this communication, to my utter dismay and shock I have become aware of the following.

When RPS AAP Consulting Pty Ltd on behalf of NQ Asphalt Pty Ltd, prepared and lodged with the Department of the Environment, Tourism, Science and Innovation (DETSI) its Environmental Assessment Report (EAR) and Site Based Management Plan (SBMP) supporting the standard application for ERA-16 (2a), the author/s provided information that is, in part, totally different from the information provided to the Douglas Shire Council (DSC) forming part of the Town Planning Report (TPR) lodged 16/10/2024.

In this regard, please note the discrepancies as follows.

My grave concern was that the Environmental Protection Authority (EPA) criteria for a standard permit with standard conditions for an Environmental Authority (EA) ERA 16 –(2A) for extracting material provided that the activity was not too be within 1000 metres of a dwelling.

The Town Planning Report (TPR) lodged by RPS AAP Consulting Pty Ltd for NQ Asphalt Pty Ltd in support of the DA provided for a buffer of only 50 metres from ■■■■■ residence, in direct contravention of the EPA criteria for a standard permit.

Scrupulously comparing the Environmental Assessment Reports (EAR) and Site Based Management Plan (SBMP) that were lodged with DETSI and the DSC I was absolutely shocked to read the applicant had omitted ■■■■■ home from both the EAR and SBMP that was submitted to DETSI.

Below are the comparisons of the EAR and SBMP that was submitted to DETSI on the 23rd September 2024 and the DSC on the 16th October 2024.

Environmental Assessment Reports comparison:

2.6 of the Environmental Assessment Report lodged with DETSI provides as follows:

2.6 Existing Land Use and Sensitive Receptors

The existing land use is for agricultural purposes, however, due to the landform, cane farming cannot occur.

Compared to the Environmental Assessment Report 2.6 lodged with the Douglas Shire Council in support of the DA:

REPORT

2.6 Existing Land Use and Sensitive Receptors

The existing land use is for agricultural purposes, however, due to the landform, cane farming cannot occur. Nuisance sensitive receptors (i.e. dwellings) are present 15 metres to the north of the proposed extraction site (refer to Figure 5). A buffer of 50 metres from the extraction site to the neighbouring property is proposed to manage the sensitive receptor, refer to Figure 6 above.



Figure 5 Sensitive Receptor location on site location



Figure 6 Proposed buffer

No aerial images were provided to DETSI of my house and its location.

Furthermore, Page 1 of the EAR report, 1.2 Proposed Extraction Activity provides for screening of materials in the information provided to DETSI. There is no such referral to the screening of materials in the EAS provided to council in support of the DA.

Provided to DETSI

Page 1, Environmental Assessment Report, Lodged with DETSI 23rd September 2024:

1.2 Proposed Extraction Activity

The proposed sand extraction activities will include the removal and storage of topsoil in earthen bunds, the extraction of the sand resource, and screening of the material into stockpiles prior to the distribution of the sand resource throughout the region. Once the sand is extracted, the site is to be rehabilitated by backfilling the voids, followed by the resspreading of topsoil, and the recommencement of the agricultural use of the land as the site is situated in a rural area with surrounding agricultural land uses.

The proposed sand extraction and screening activities will be undertaken in accordance with the SBMP.

Infrastructure on site will include:

- Earthmoving equipment (front end loader and tipper truck for removal and transport of material);
- Loading area;
- Erosion and sediment controls.

Topsoil will be striped prior to extraction and stockpiled in small windrows. Sand will be extracted by excavator and loaded directly into vehicles for transport offsite.

The maximum depth of extraction is likely to be one to three metres from the existing surface profile which is a mound across the site. Once extracted, the site will be backfilled with the stripped topsoil and then used for agricultural purposes such as growing crops similar to the adjoining area.

Compared to EAR lodged with Council:

1.2 Proposed Extraction Activity

The proposed sand extraction activities will include the removal and storage of topsoil in earthen bunds, the extraction of the sand resource into stockpiles prior to the distribution of the sand resource throughout the region. Once the sand is extracted, the site is to be rehabilitated by backfilling the voids, followed by the resspreading of topsoil, and the recommencement of the agricultural use of the land as the site is situated in a rural area with surrounding agricultural land uses.

The proposed sand extraction activities will be undertaken in accordance with the SBMP.

Infrastructure on site will include:

- Earthmoving equipment (front end loader and tipper truck for removal and transport of material);
- Loading area;
- Erosion and sediment controls.

Topsoil will be striped prior to extraction and stockpiled in small windrows. Sand will be extracted by excavator and loaded directly into vehicles for transport offsite.

The maximum depth of extraction is likely to be one to three metres from the existing surface profile which is a mound across the site. Once extracted, the site will be backfilled with the stripped topsoil and then used for agricultural purposes such as growing crops similar to the adjoining area.

On the 26th November 2024 Owen Caddick-King the Principal of RPS in response to the Assessment Managers request for further information omitted to include that the EAR lodged with DETSI did provide for screening of material.

- The sand extraction activity is not expected to require the screening of the extracted material on-site;

Page 6, Information Request Response, DSC, Development Application Website.

Despite this information the Town Planning Report submitted with DSC provides in part, “ the sand extracting activity is not expected to require the screening of the extracted material on-site”.



A Sand Screener (Image taken from Northern Sands Smithfield Google + page, credit Anne Gould)

Site Based Management Plan comparison:

There have been further omissions made by the applicant in the SBMP submitted DETSI compared to the one submitted to the DSC.

Under the heading:

2. PROJECT DESCRIPTION,

2.2 SURROUNDING LAND USE AND SENSITIVE RECEPTORS (SBMP PAGE 5).

The Author states in the SBMP lodged with DETSI as follows:

2.2 Surrounding Land Use and Sensitive Receptors

The land surrounding the site is mapped as cropping (cane) and marsh welland. The closest sensitive receptors of the site would be the marsh directly north east of the site which is mapped as major (tidal) as well as the residential properties situated along the Captain Cook Highway refer to **Figure 1** below.

REPORT

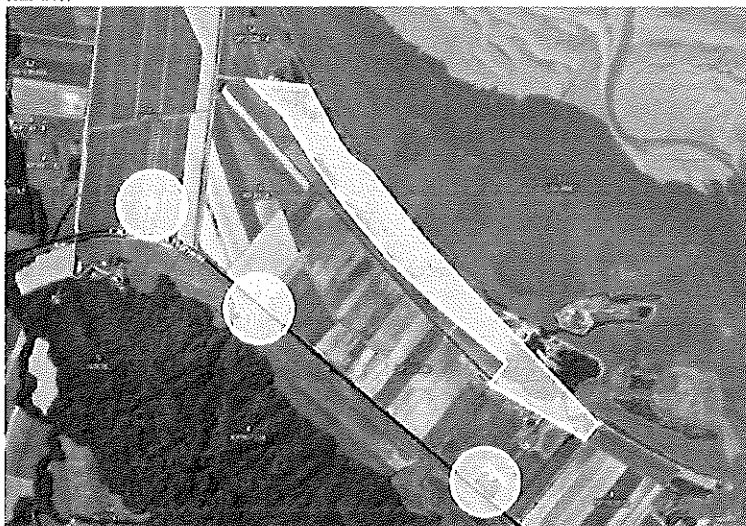


Figure 1 Surrounding land use and sensitive receptors



Figure 2 Environmental values surrounding the site

2024/2025 | Strategic Environmental Assessment | 2024/2025
tetratech.com

The description in the SBMP lodged with the DSC in support of the DA is as follows:

2.2 Surrounding Land Use and Sensitive Receptors

The land surrounding the site is mapped as cropping (cano) and marsh wetland. The closest sensitive receptor to the site is the residential property next door (12m to the north) of the site. A 50m buffer from this property to the end of the extraction area has been proposed to manage this sensitive receptor. The other sensitive receptors includes the marsh directly south east of the site which is mapped as major (tidal) as well as the residential properties situated along the Captain Cook Highway refer to Figure 1 below.

REPORT

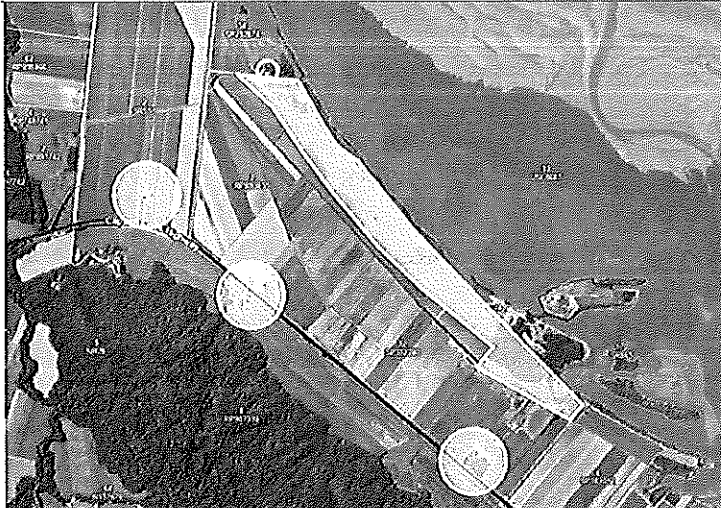


Figure 1 Surrounding land use and sensitive receptors

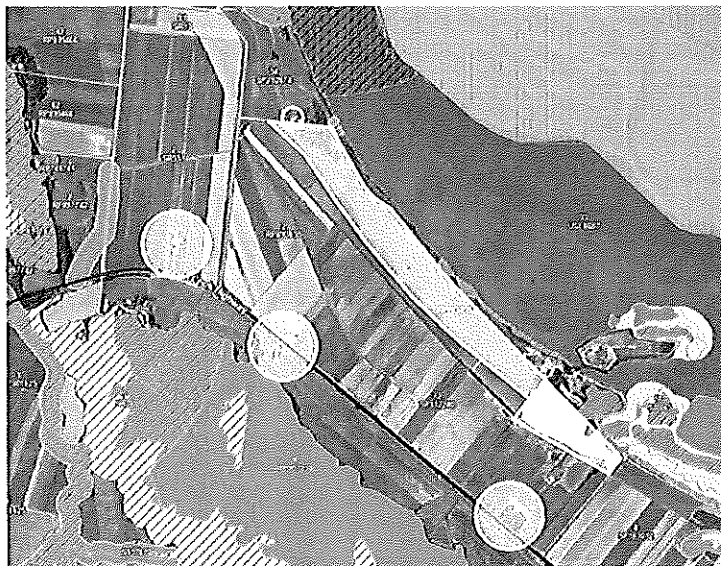


Figure 2 Environmental values surrounding the site

AM04263-001 | Site Based Management Plan | 22 August 2024 |
totratech.com

Page 6

Note the removal of the small circle on the Northern Boundary omitting my residence. Notably the author made these subtle changes to Figure 1 and Figure 2 as well as the descriptions for 2.2 Surrounding Land Use and Sensitive Receptors on the same day 22 August 2024 as can be seen by the date on the bottom of the page.

For your information I am attaching the new application for a site specific permit that has been lodged with DETSI by the applicant. At this stage the matter is still under assessment.

[Queensland Government home](#)
[For Queenslanders](#)
[Environment, land and water](#)
[Environment and pollution management](#)
[Licences and permits](#)
[Environmental Protection Act 1994 Public Register](#)
[EA Application](#)

Environmental Protection Act 1994 Public Register

- Registered suitable operators
- EA Applications**
- Environmental authorities
- Historic environmental authorities
- Annual returns
- PRCP applications
- Progressive rehabilitation and closure plans
- Temporary emissions licences
- Estimated rehabilitation cost
- Environmental Impact Statement
- Plan of operations
- Enforcement actions
- Frequently asked questions

EA Applications

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Details of application: A-EA-NEW-100750082

Application Action:	New
Principal Applicant:	NQ ASPHALT PTY LTD
Application Status:	Assessment
Received Date:	31/10/2024
Related Permit:	Not Available
Permit Version:	Not Available
Permit Effective Date:	Not Available
Permit Status:	Not Available

Activity	Location
ERA 16 - Extraction and Screening	Lot 1/RP893855
2(a) - Extracting, other than by dredging, in a year, the following quantity of material - 5,000t to 100,000t	DOUGLAS SHIR

Related documents

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- Email: public.register@des.qld.gov.au
- Phone: 1300 130 372 (option 4) in business hours

The application for the cancelled Environmental Authority was presumably prepared by Megan Davis, Environmental Consultant on behalf of NQ Asphalt Pty Ltd. The declaration is signed by Megan Davis declaring that information provided in support of the new Environmental Authority is true and correct and further the author understands that it is an **offence** under the **Environmental Protection Act 1994** to give information that is known, to be false, misleading or incomplete.

From the information I have dissected and provided above it clearly indicates that Megan Davis and/ or her client NQ Asphalt Pty Ltd has breached compliance with the EPA 1994. See below taken from APPLICATION NUMBER A-EA-NEW100727877 (Page 4)

Declaration

I declare that the information I have provided is true and correct. I understand that it is an offence under the *Environmental Protection Act 1994* to give information that I know is false, misleading or incomplete.

I/The holders will comply with all conditions on my/the holders' environmental authority, as well as any relevant provisions in the *Environmental Protection Act 1994*.

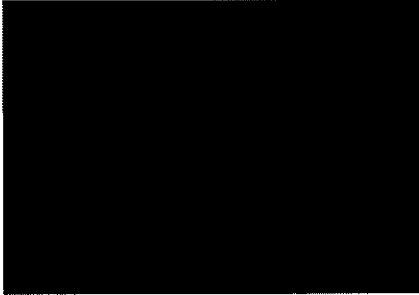
I/The holders understand that I am /the holders are responsible for managing the environmental impacts of these activities, and that approval of this application is not an endorsement by the administering authority of the effectiveness of the management practices proposed or implemented.

NAME OF SIGNATORY: Megan Davis
 POSITION OF SIGNATORY: Environmental Consultant
 DATE: 23-Sep-2024

Please acknowledge receipt of this email together with attachments and further confirm this email has been included in my submission opposing the DA.

I await your early response to my very urgent concerns.

Yours faithfully,



Application for a new environmental authority - A-EA-NEW-100727877**General Information**

Application Type: Environmental Authority
Application Action: NEW
Application Stage: Application
Application Status: Closed
Submitted Date: 23-Sep-2024
Application Fee: \$729.00

Applicants

NQ ASPHALT PTY LTD

Application Contact

NAME: Megan Davis
POSITION: Environmental Consultant
MAIN PHONE: 0411440356
EMAIL: megan.davis1@rpsconsulting.com
CONTACT ROLE: Application Contact
Preferred Method of Communication: Phone

Site Contact

NAME: Megan Davis
POSITION: Environmental Consultant
MAIN PHONE: 0411440356
EMAIL: megan.davis1@rpsconsulting.com
CONTACT ROLE: Site Contact
Preferred Method of Communication: Phone

Activities and Locations Details

Activities	Location	Comply with Eligibility Criteria	Comply with Std. Conditions
ERA 16 - Extraction and Screening - 2(a) - Extracting, other than by dredging, in a year, the following quantity of material - 5,000t to 100,000t	1/RP893855	Yes	Yes

Development Permit / Application Number	Development Permit / Application Name	Assessment Manager	Date of Application or Approval	Expiry Date
TBA	Development approval under the Planning Act 2016			

Application Questions

Other related approvals

Are you required to obtain any of the following approvals to conduct the ERA/s?

A development approval from your Local Government Authority (for ERA/s which may trigger within the local planning scheme the need for an approval under the Planning Act 2016)	
---	--

Coordinator-General's conditions

Are any of the activities proposed part of a coordinated project under the State Development and Public Works Organisation Act 1971?

No	
----	--

Matters of National Environmental Significance (MNES)

Would the carrying out of the proposed activity/activities be likely to have a significant impact on a MNES?

No	
----	--

Documents Uploaded

Document Name	Document Type	Document Reference
Decision Notice	Decision Notice	100727895
EA Permit	Authority	100727894
Environmental Assessment Report	Application Supporting Documentation	100727885
Environmental Management Plan	Application Supporting Documentation	100727884

Effective Date

Pending Development Approval:

Privacy Statement:

The Department of Environment and Science (the Department) and the Department of Agriculture and Fisheries are collecting the information on this form in accordance with and as authorised by Chapter 5 of the *Environmental Protection Act 1994* (EP Act).

Pursuant to section 540 of the EP Act, the Department is required to maintain a register of certain documents and information authorised under the EP Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able to take extracts or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the EP Act. There is no general discretion allowing the Department to withhold documents or information required to be kept on the public register. For more information on the Department's public register, search 'public register' at www.qld.gov.au.

For queries about privacy matters, please email privacy@des.qld.gov.au or telephone: 13 74 68.

Declaration

I declare that the information I have provided is true and correct. I understand that it is an offence under the *Environmental Protection Act 1994* to give information that I know is false, misleading or incomplete.

I/The holders will comply with all conditions on my/the holders' environmental authority, as well as any relevant provisions in the *Environmental Protection Act 1994*.

I/The holders understand that I am /the holders are responsible for managing the environmental impacts of these activities, and that approval of this application is not an endorsement by the administering authority of the effectiveness of the management practices proposed or implemented.

NAME OF SIGNATORY: Megan Davis
POSITION OF SIGNATORY: Environmental Consultant
DATE: 23-Sep-2024


SITE BASED MANAGEMENT PLAN

NQ Asphalt

AU012859.001
22 August 2024

REPORT

Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
0	Site Base Management Plan	M. Palmer	M. Davis	M. Davis	22 Aug 24

Approval for issue		
Megan Davis		22 08 2024

This report was prepared by RPS within the terms of RPS’ engagement with its client and in direct response to a scope of services. This report is supplied for the sole and specific purpose for use by RPS’ client. The report does not account for any changes relating the subject matter of the report, or any legislative or regulatory changes that have occurred since the report was produced and that may affect the report. RPS does not accept any responsibility or liability for loss whatsoever to any third party caused by, related to or arising out of any use or reliance on the report.

Prepared by:	Prepared for:
RPS	NQ Asphalt Pty Ltd
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T 4031 1336 E monique.palmer@rpsconsulting.com	T 4062 2600 E ckoppen@koppens.com.au

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1 INTRODUCTION

NQ Asphalt Pty Ltd have identified fine sand resources across Lot 1 on RP893855 (herein referred to as “the site”) on Bonnie Doon Road, as shown on the Proposed Sands Extraction Plan, refer to **Appendix A**.

As a result, NQ Asphalt Pty Ltd have engaged RPS AAP Consulting Pty Ltd (RPS) to prepare a Site Based Management Plan to identify environmental values of the project site, assess potential environmental impacts and describe management measures to minimise the risk for the proposed Environmentally Relevant Activities of:

- **ERA 16 - 2 (a)** Extracting, in a year, the following quantity of material – 10,000t to 100,000t

The purpose of the SBMP is to ensure:

- Environmental risks associated with the project are appropriately managed; and
- Compliance with Local, State and Commonwealth legislation.

1.1 Objectives

The objectives of this SBMP are to:

- Identify environmental values of the project site and surrounds;
- Determine the potential risk of adverse environmental impacts associated with the reprocessing of waste
- Describe measures to minimise the risk of environmental harm;
- To ensure all environmental safeguards are implemented correctly;
- Provide a mechanism for review and continual improvement of environmental performance; and
- Provide a reporting, monitoring and training schedule.

1.2 Implementation

NQ Asphalt is responsible for implementing the SBMP for the project and ensuring compliance with the nominated requirements. NQ Asphalt is also responsible for ensuring appropriate corrective actions arising from a failure to meet stated performance requirements are implemented.

Where contracts are entered into for work associated with this project, NQ Asphalt shall:

- Induct the employees on the requirements of the SBMP and NQ Asphalt expectations;
- Ensure that all employees comply with the requirements of the SBMP;
- Require the employees and its contractors report non-conformances with the SBMP; and
- Monitor and measure the performance of employees and its contractor against the requirements of the SBMP.

2 PROJECT DESCRIPTION

2.1 Site Description and Proposed Extraction Activity

The site is located on Lot 1RP893855 off the Captain Cook Highway on Bonnie Doon Road between Port Douglas and Cooya Beach. The proposed sand extraction activities will include the removal and storage of topsoil in earthen bunds, the extraction of the sand resource, and placement into stockpiles prior to the distribution of the sand resource throughout the region. Once the sand is extracted, the site is to be rehabilitated by backfilling the voids, followed by the resspreading of topsoil, and the recommencement of the agricultural use of the land as the site is situated in a rural area with surrounding agricultural land uses.

The proposed sand extraction activities will be undertaken in accordance with the SBMP.

Infrastructure on site will include:

- Earthmoving equipment (loaders, and trucks for removal and transport of material);
- Loading area;
- Erosion and sediment controls.

Topsoil will be striped prior to extraction and stockpiled in small windrows. Sand will be extracted by excavator and loaded directly into vehicles for transport offsite.

The maximum depth of extraction is likely to be one to three metres from the existing surface profile which is a mound across the site. Once extracted, the site will be backfilled with the stripped topsoil and then used for agricultural purposes such as growing crops similar to the adjoining area.

No blasting or crushing is to occur as part of the process. Rehabilitation works will be undertaken progressively and in tandem with the extraction program. Profiling of the final landform will be undertaken to facilitate drainage.

Proposed work hours for the site are 7am to 6pm, Monday to Saturday.

2.2 Surrounding Land Use and Sensitive Receptors

The land surrounding the site is mapped as cropping (cane) and marsh wetland. The closest sensitive receptors of the site would be the marsh directly north east of the site which is mapped as major (tidal) as well as the residential properties situated along the Captain Cook Highway refer to **Figure 1** below.

2.3 Environmental Values Surrounding the Site

The site is located within the Wet Tropics Bioregion, in the Daintree - Bloomfield Subregion, within the Mossman catchment area. The Queensland Globe mapping shows that the lot is predominately cleared (Category X vegetation). There is a small area of Category C – High Value Regrowth vegetation to the south of the site which will be avoided, refer to **Figure 2** below.



Figure 1 Surrounding land use and sensitive receptors



Figure 2 Environmental values surrounding the site

3 LEGISLATIVE REQUIREMENTS, PERMITS AND APPROVALS

Licences, permits and approvals required for this project are summarised in **Table 1** below. NQ Asphalt will ensure that any licences, permits and approvals are obtained prior to work commencing.

Table 1 Summary of licences, legislation, permits and approvals

Regulatory Authority	Licence / Permit / Approval Type	Status	Summary of Key Conditions and Monitoring Required
Department of Environment, Science and Innovation	Environmental Authority	Underway	Refer to EA once granted and summary of conditions through this plan.
Douglas Shire Council	Development Approval	Lodged	To be issued

3.1 Application

This SBMP applies to all personnel (staff and contractors) and activities associated with the operation of the facility.

NQ Asphalt management is responsible for authorising this SBMP and monitoring its implementation at the site. The Site Manager is responsible for implementation of the SBMP and shall ensure that all persons employed or sub-contracted to the project are made aware of their environmental responsibilities as determined by this SBMP and as legislated by the *Environmental Protection Act 1994* (EP Act).

Environmental duties of all personnel include the following:

- General Environmental Duty – whereby a person in the performance of their duties shall not do so in a manner which will cause, or is likely to cause, environmental harm unless the person takes all reasonable and practical measures to prevent or minimise the harm; and
- Duty to Notify Environmental Harm – whereby if a person in the performance of their duties becomes aware that serious or material environmental harm is caused or threatened, then the person must immediately contact the Site Manager who in turn must immediately notify the relevant authorities.

4 ENVIRONMENTAL COMMITMENTS

SBMP accepts the responsibility for environmental protection which is integral to the conduct of its commercial operations.

SBMP is committed to:

- Operating practices which seek to minimise impacts, prevent pollution and minimise the likelihood of environmental harm through work and management practices, continual improvement, training and the use of new technology.
- Compliance with all applicable environmental laws and regulations and Codes of Practice in existing operations, new developments and upgrades.
- Management review of environmental objectives and targets.
- Waste management to minimise wastes, develop viable recycling opportunities, and ensure proper handling and disposal methods.
- Product development which seeks to combine commercial viability and efficient use and conservation of resources.
- Environmental assessment of new projects, asset purchases, sales and existing operations.
- Environmental Incident Response – contingency plans to minimise health, safety and environmental risks.
- Rehabilitation of areas affected by business operations.
- Striving to meet Community Expectations through consultation with community groups and neighbours about environmental matters of common concern.
- Water management, which is integral to achieving sustainability, balancing today's needs with those of the future.
- Energy management which is integral to managing greenhouse gas emissions from our operations and therefore abating the impact of our business on the climate.

SBMP will encourage concern and respect for the environment and will emphasise every employee's responsibility for environmental performance.

5 ROLES AND RESPONSIBILITIES

Roles and responsibilities for NQ Asphalt staff are detailed below.

5.1 Operations Manager

The Operations Manager is responsible for promoting and maintaining good environmental management. The Operations Manager is to ensure that this SBMP is effectively implemented. The Operations Manager is required to support the Site Supervisor and hold them accountable for their specific responsibilities. The Operations Manager is responsible for taking prompt remedial action to eliminate any non-compliance or environmentally risky conditions. The Operations Manager must investigate and address complaints and incidents.

The Operations Manager is responsible for taking all practical measures to ensure the site is operating according to this SBMP, and without risks to the environment. The Operations Manager is responsible for detecting any non-compliance or environmentally risky conditions by undertaking regular inspections.

5.2 Site Supervisor

The Site Supervisor is responsible for inducting all workers and subcontractors and directing site activities in accordance with this SBMP.

The Site Supervisor is responsible for taking all practical measures to ensure the site is operating according to this SBMP, and without risks to the environment. The Site Supervisor is responsible for detecting any non-compliance or environmentally risky conditions by undertaking regular inspections. If the Site Supervisor does not have the necessary authority to fix a problem, they are responsible for reporting the matter promptly and recommending remedial action to the Senior Site Supervisor.

5.3 All workers

All workers are required to attend site inductions and follow this SBMP. All workers must undertake site works and comply with the general environmental duty as outlined within Section 319 of the Environmental Protection Act 1994 and a duty to notify of environmental harm as outlined within Section 320 of the Environmental Protection Act 1994. Workers must undertake activities in accordance with this SBMP and report all incidents, spills or non-conformances.

5.4 Subcontractors

All subcontractors engaged to perform work for NQ Asphalt are required, as part of their contract, to comply with this SBMP and to comply with directions from the company's designated officers. Failure to comply will be considered a breach of the contract and sufficient grounds for termination of the contract.

5.5 Environmental Reporting Structure

The responsibilities and reporting structure for key environmental management roles at the site have been broadly described in **Table 2** below.

Table 2 Site Reporting Structure

Role	Role Responsibilities	Reports To
NQ Asphalt Executive Management (includes Operations Manager)	<ul style="list-style-type: none"> Provision of sufficient resources to manage the environment. Ensure appropriate training is undertaken by all personnel. Maintenance of correct permits and approvals. Commission third party audits and investigation as required. Review of monitoring outcomes and ensure corporate compliance. Review SBMP effectiveness (including for continuous improvement). 	DESI and other administrating government authorities

Site Manager	<ul style="list-style-type: none"> • Management of personnel present at site. • Ensure personnel receive training to develop skills required. • Undertake site inductions and orientation. • Work with the NQ Asphalt Management to address complainants, community groups and other stakeholders. • Perform regular inspections of the site e.g. the plant, equipment, maintenance schedules, security fences, etc. • Implement the SBMP for all environmental matters on site, with authority to direct compliance with the SBMP. • Undertake or coordinate scheduled and non-scheduled internal environmental audits. • Undertake or coordinate environmental monitoring events. • Maintain complaints register and works to address improvements for the site. • Ensure measures to prevent unauthorised site access are in place, including gates at the main entrance which are to be closed outside of operation hours. • Supervise persons entering the site. • Ensure any hazardous waste is dealt with as per Environmental Protection (Waste Management) Policy 2000. • Ensure the SBMP is made available and communicated to all staff. • Allocate resources for environmental management, staff training and SBMP duties. 	NQ Asphalt Management
Environmental Advisor/ Consultant	<ul style="list-style-type: none"> • Undertake requested monitoring and reporting. • Undertake requested audits and technical assessments. 	Site Manager, NQ Asphalt
All Site Staff	<ul style="list-style-type: none"> • Undertake site works as instructed by the Site Manager. • Undertake site works with a duty of care under the Environmental Protection Act and Regulations 1994. • Undertake activities in compliance with this SBMP. • Report all incidents, spills, or environmental non-compliances with the SBMP to the Site Manager. 	Site Manager, NQ Asphalt

6 ENVIRONMENTAL VALUES AND RISK ASSESSMENT

RPS has undertaken a detailed desktop assessment to identify potential environmental values that may be impacted on by sand extraction. The following sections provide a brief overview of the environmental values within and adjacent to the site. An assessment of the potential impacts to these values is provided, with detailed management measures to be implemented to minimise the risk of environmental harm provided in Section 6 – Environmental Management Measures.

6.1 Environmental Values

An assessment of potential environmental values is summarised in **Table 3**.

Table 3 Environmental Values

Environmental Value	Description	Risk Assessment Required
Air	Air quality is an environmental value of the surrounding environment that must be protected.	Yes
Water	The receiving water environment has community and ecological environmental values that must be protected.	Yes
Groundwater	The receiving groundwater environment has community and ecological environmental values that must be protected.	Yes
Noise	Noise is a potential impact to nearby sensitive receptors.	Yes
Waste	Current and proposed operations will produce waste.	Yes
Land	Land values of native vegetation, wildlife habitat, soil quality and natural landforms exist on the site and will be impacted by current and proposed activities.	Yes

6.2 Environmental Impacts and Risks

The following section describes risks to environmental values and likely magnitude of the impacts generated by the existing operations and proposed expansion.

6.2.1 Risk Assessment Synopsis

The risk assessment adopted is a qualitative risk-based approach designed to assess risk based on the likelihood of an environmental impact or event occurring (refer to Table 4– Definitions of Likelihood), and the consequences of the occurrence on the surrounding environmental values (Table 5– Definitions of Consequence). The likelihood and consequences are scored between 1 and 5 for each potential impact or event. The risk assessment has been formulated considering potential for impact without control measures put in place to manage potential risk.

Table 4 Definitions of Likelihood

Rating	Descriptor	Score
Rare	May occur only in exceptional circumstances	1
Unlikely	Could occur but doubtful	2
Possible	Might occur at some point in the future	3
Likely	Will probably occur	4
Almost Certain	Is expected to occur in most circumstances	5

Table 5 Definitions of Consequences

Rating	Descriptor	Score
Negligible	Impacts not requiring any treatment or management action	1
Minor	Nuisance or insignificant environmental harm requiring minor management actions	2
Moderate	Serious environmental impacts, readily manageable at low cost	3
Major	Substantial environmental impacts, manageable but at considerable cost and some disruption	4
Catastrophic	Severe environmental impacts with major consequent disruption and heavy cost	5

Table 6 Risk Assessment Matrix

		Consequence of Said Impact				
Likelihood of an Environmental Impact		Negligible	Minor	Moderate	Major	Catastrophic
		1	2	3	4	5
Almost Certain	5	5 Medium	10 High	15 High	20 Extreme	25 Extreme
Likely	4	4 Low	8 Medium	12 High	16 High	20 Extreme
Possible	3	3 Low	6 Medium	9 Medium	12 High	15 High
Unlikely	2	2 Low	4 Low	6 Medium	8 Medium	10 High
Rare	1	1 Low	2 Low	3 Low	4 Low	5 Medium

The consequence and likelihood scores are then plotted on the risk assessment matrix. The final risk level assigned is thus a product of the likelihood and consequence scores. The higher the risk score, the higher the priority is for management.

Table 7 Indicative Management Option for Risk Assessment Ratings

Risk Rating	Risk Rating Scores	Indicative Management Option
Extreme	16 - 25	Manage by implementing site management and emergency procedures, plant design controls and regular monitoring.
High	10 - 15	Manage by implementing site management procedures, specific monitoring, and may require some operation/plant design controls.
Medium	5 - 9	Manage by implementing specific monitoring or response procedures.
Low	1 - 4	Manage by routine procedures, unlikely to need specific application of resources.

6.2.2 Potential Environmental Impacts

Activities associated with the existing quarries and proposed expansion which have the potential to cause environmental harm and/or nuisance have been outlined in Table 6.

REPORT

Table 8 Identification of Potential Impacts from Site Activities on Environmental Values

Activity	Potential Impacts Environmental Values Impacted					
	Air	Water	Noise	Land	Waste	Flora and Fauna
Clearing and grubbing	✓	✓	✓	✓		✓
Extraction of material	✓	✓	✓	✓		✓
Stockpiling	✓	✓	✓	✓		✓
Heavy machinery movement	✓		✓	✓		✓
Light vehicle movement	✓		✓	✓		✓
Waste storage		✓		✓	✓	
Fuel/ chemical storage	✓	✓		✓		✓

Site activities have been tabulated against environmental values to determine the risk and likely magnitude of impacts and to provide a focus for management strategies, refer to Table 7 below.

Table 9 Assessment of Environmental Impacts

Activity	Potential Impacts Environmental Values Impacted					
	Air	Water	Noise	Land	Waste	Flora and Fauna
Clearing and grubbing	3 x 2 = 6	4 x 3 = 12	4 x 3 = 12	3 x 2 = 6	NA	4 x 3 = 12
Extraction of material	3 x 2 = 6	4 x 3 = 12	4 x 3 = 12	4 x 2 = 8	NA	3 x 1 = 3
Stockpiling	4 x 3 = 12	4 x 3 = 12	4 x 3 = 12	4 x 2 = 8	NA	3 x 1 = 3
Heavy machinery movement including haul trucks	3 x 1 = 3	NA	4 x 3 = 12	4 x 2 = 8	NA	3 x 1 = 3
Light vehicle movement	2 x 1 = 2	NA	2 x 3 = 6	2 x 3 = 6	NA	2 x 1 = 2
Waste storage	NA	3 x 1 = 3	NA	2 x 3 = 6	4 x 2 = 8	NA
Fuel/ chemical storage	4 x 3 = 12	4 x 4 = 16	NA	4 x 4 = 16	NA	4 x 4 = 16

7 ENVIRONMENTAL MANAGEMENT MEASURES

The following environmental management activities, mitigation and control measures will be adopted to prevent or minimise environmental impacts:

7.1 Air

Aim		
No environmental nuisance is caused by the release of noxious or offensive airborne odours or contaminants (e.g. sulphur dioxide, dust) resulting from site activity.		
Success Criteria		
<ul style="list-style-type: none"> Dust deposition does not exceed 120 mg/m²/day at a nuisance sensitive or commercial place, and dust less than 10 micrometres (PM₁₀) suspended in the air does not exceed 150 µg/m³ over a 24-hour average downwind of site at a nuisance sensitive or commercial place. Both monitoring methods are to be in accordance with the Australian Standard AS (3580.9.6 of 2003) or more recent edition. No dust and/or odour complaints received from adjoining operations, nearby sensitive places or from statutory authorities. 		
Management Actions	Responsibility	Frequency
Adhere to 40km/h speed limit across site.	All staff	At All Times
Report any dusty conditions to Site Manager.	All staff	As Required
Cover or keep moist all long term (greater than 3 months) stockpiles.	Site Manager	As Required
Increase frequency of water cart use on internal roads and stockpile areas as required to suppress dust.	Site Manager	As Required
Routine Monitoring Program	Responsibility	Frequency
Visually inspect site, operations and effectiveness of dust controls.	Site Manager	Daily
Proactive dust deposition monitoring.	Site Manager	Monthly
Complaint Response Monitoring		
<p>When requested by the administering authority, dust and particulate monitoring must be undertaken to investigate any complaints of environmental nuisance caused by dust and/or particulate matter. The results of monitoring are to be passed to Department of Environment, Science and Innovation (DESI) within 14 days of completing the monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites and must include:</p> <ol style="list-style-type: none"> For a complaint alleging dust nuisance, dust deposition monitoring shall be in accordance with AS3580.10.1 2003 (or more recent editions). For a complaint alleging adverse health effects caused by dust, the PM₁₀ concentration suspended in the atmosphere over a 24hr averaging time shall be monitored in accordance with AS3580.9.6 2003 (or more recent editions). <p>NQ Asphalt is responsible for engaging a suitably qualified and experienced air quality consultant to undertake monitoring. All monitoring equipment used must be calibrated and appropriately operated and maintained.</p> <p>In the event of an odour complaint being submitted, measures must be undertaken as soon as practicable to minimise the release of the odour beyond the boundaries of the licensed place.</p>		
Corrective Actions		
<p>If success criteria are not met, examples of corrective actions may include:</p> <ol style="list-style-type: none"> Ensure tracks and stockpile area is dust suppressed (water cart) every morning and as required throughout the day. Cease operating air polluting machinery and undertake maintenance. 		
Reporting	Responsibility	Frequency
Record inspection notes, observations, actions and notifications from	Site Manager	As Required

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staff in diary.		
Dust deposition monitoring report.	Consultant	Monthly
Results from complaint monitoring shall be forwarded to the administering authority.	Site Manager	As Required

7.2 Noise

Aim		
No environmental nuisance is caused by noise from site activity at a noise sensitive or commercial place.		
Success Criteria		
<ul style="list-style-type: none">Noise emissions do not cause nuisance at any sensitive receptors.No noise complaint/s have been received.		
Management Actions	Responsibility	Frequency
No unnecessary use of horns or other audible signals on mobile plant or equipment. Use of directional low frequency reversing beepers.	All staff	At all Times
Machinery and equipment will be maintained in good working order and maintained as required. Where required, noise suppressors will be installed.	Site Manager to schedule equipment maintenance.	As per manufacturers specifications
Work will take place during nominated work hours only (7am until 6pm, 6 days per week).	All Staff	At all Times
Operators to report faulty equipment.	As per manufacturers specifications	At all Times
Routine Monitoring Program	Responsibility	Frequency
Inspect site in relation to noise emissions, noise controls and operations.	Site Manager	Daily
Corrective Actions		
Corrective actions may include: <ol style="list-style-type: none">Review the use of any audible signals.Investigate feasible additional noise attenuation devices for plant or equipment.		
Reporting	Responsibility	Frequency
Record inspection notes, observations, actions and notifications from staff in diary.	Site Manager	As Required
Results from complaint monitoring shall be forwarded to the administering authority.		

7.3 Water

Aim

To minimise the risk of adverse impacts to surface or groundwater quality by implementing appropriate water pollution controls at the site.

Success Criteria

- No adverse impacts to existing surface water quality from site operations.
- Oil spills and product spills are contained within 1 hour of the event and cleaned within 24 hours.
- Spill kits are available and maintained.
- No visual signs of erosion occurring onsite.
- No wastewater discharge to the environment.

Management Actions	Responsibility	Frequency
<ul style="list-style-type: none"> • Equipment – Equipment will be relocated above flood levels and checked for oil and hydraulic leaks – complete urgent & minor repairs using temporary bunding as required to prevent potential stormwater contamination. • Waste - all generated waste into skip bins and ensure regularly emptied. • Fuel Storage – install and maintain bunded storage area to AS1940 above flood levels. • Offices/minor services – locate above flood levels. 	Site Manager	At all Times
Implement the site's Erosion and Sediment Control Plan.	Site Manager	At all Times
Erosion and sediment control structures maintained at all times during operation and checked, repaired or replaced as required after each rain event.	Site Manager	As Required
Machinery maintenance activities on site include limited/small repairs of light vehicles; regular servicing and major repairs of heavy vehicles/rebuild on a sealed bunded pad in the machinery shed.	Site Manager	At all Times
Spill kits, oil collection trolley or containers, mobile drip trays shall be available and in place during servicing to contain any leaks or spills.	All staff	As Required
Chemicals and fuels in containers greater than 15L to be stored within a secondary containment system.	All Staff	At all Times
All spills shall be reported and cleaned up to minimise land or water contamination. Preference to dry methods of cleaning up spills to be given where possible.	All Staff	At all Times
Routine Monitoring Program	Responsibility	Frequency
Visually inspect site, operations and effectiveness of erosion and sediment controls.	Site Manager	Daily

Corrective Actions

Corrective actions may include:

1. Ensure wash down and maintenance activities are undertaken in contained areas to minimise the risk of water or land contamination.
2. Employ rock mulching or graveling to reduce erosion occurring onsite.
3. Identify sources of sediment and adjust erosion controls.

Reporting	Responsibility	Frequency
Record inspection notes, observations, actions and notifications in diary.	Site Manager	Daily as Required
Record all uncontrolled spills and water quality sampling results.	Site Manager	As Required
Keep site vehicle maintenance records.	Site Operators	As Required

7.4 Waste

Aim

All solid and liquid wastes are handled and transferred in a proper and efficient manner to minimise the risk of release to the environment.

Success Criteria

- No improper storage, transport or disposal of wastes.
- All reasonable and practical measures are taken to contain litter.

Management Actions	Responsibility	Frequency
All waste oils/fuels or other liquid waste will be stored in a sealed bunded area according to AS 1940 – Storage and Handling of Flammable and Combustible Liquids (bund volume to exceed volume of largest container plus 10%).	Site Operators	At all Times
Appropriate space will be provided for the temporary storage of general refuse, recyclable and compostable waste to ensure separation of waste products.	Site Operators	At all Times
Waste will be managed in the preferred order of avoid, re-use, recycle, recover, treat and dispose within the <i>Waste Reduction and Recycling Act 2011</i> (Qld).	Site Operators	At all Times
If litter is blown or washed off site, it is to be retrieved and ensure it is disposed of in the appropriate manner and additional measures to prevent a recurrence (e.g. litter screens) are to be undertaken.	All Staff	At all Times
Maintain spill kits and ensure clean up equipment is available at site office (240L wheelie bin with mobile kits in each vehicle) with annual inspection of spill kits.	Site Manager	Replenish as required following use.
Burning of waste is not to occur on site.	Site Manager	As Required
Monitor waste storage, handling and disposal practices.	Site Manager	Daily
Daily inspections to ensure the site is free of uncontrolled rubbish, tidy and all wastes are appropriately stored and managed.	Site Manager	At all Times
Routine Monitoring Program	Responsibility	Frequency
Monitor waste storage, handling and disposal practices.	Site Manager	Daily
Daily inspections to ensure the site is free of uncontrolled rubbish, tidy and all wastes are appropriately stored and managed.	Site Manager	At all Times

Corrective Actions

Corrective actions may include:

1. Retrain staff in correct waste management and disposal procedures.
2. Ensure appropriate storage facilities are available for regulated and general waste.
3. Investigate incidents and incorporate findings into training and management resources to achieve continual improvement.

Reporting	Responsibility	Frequency
Record site observations, actions and notifications in daily diary.	Site Manager	As Required

7.5 Land and Rehabilitation Management

Aim		
To return the site to a stable landform once extractive operations have ceased.		
Success Criteria		
<ul style="list-style-type: none"> Extracted areas are progressively rehabilitated as works are staged and new extraction areas commence. Potential impacts from extraction are avoided, mitigated, or managed. 		
Management Actions	Responsibility	Frequency
Earthen surfaces must be established with suitable species of vegetation for the location.	Site Manager	As Required
The potential for erosion should be minimised through staged development and the progressive rehabilitation of backfilled extraction pits.	Site Manager	As Required
The quality of water released from the site must not cause environmental harm.	Consultant/Site Manager	Monthly
Water quality of any residual water body must not have the potential to cause environmental harm.	Consultant/Site Manager	Monthly
The final landform of the site overall must be stable to ensure the protection of the public's safety.	Site Manager	As Required
Routine Monitoring Program	Responsibility	Frequency
Record site observations, actions and notifications in diary.	Site Manager	Daily as Required
Retain records of progressive rehabilitation and actions performed.	Site Manager	As Required
Include a site development plan and documentation of progressive rehabilitation in the annual return.	Site Manager	Annually
Reporting	Responsibility	Frequency
Record site observations, actions and notifications in diary.	Site Manager	Daily as Required
Retain records of progressive rehabilitation and actions performed.	Site Manager	As Required
Include a site development plan and documentation of progressive rehabilitation in the annual return.	Site Manager	Annually

8 COMPLAINTS

The following details must be recorded for all complaints received:

1. Time, date, name and contact details of the complainant;
2. Reasons for complaint;
3. Any investigations undertaken;
4. Conclusions formed; and
5. Any actions taken.

Complaint is recieved by personnel (written, verbal, email, telephone, fax, etc)



Complaint is imediately forwarded to the Site Supervisor



Site Supervisor investigates the complaint



Site Supervisor to identify and implement any required corrective actions.



Site Supervisor to record all nessary details on the complaints log.



Site Supervisor to notify the complainant of the results of the investigation and any corrective actions implemented.

9 EMERGENCY RESPONSE

This section provides an overview of response requirements for environmental emergencies that could occur on site during.

9.1 Spill Response

A chemical spill has the potential to threaten the safety or health of people, create a fire hazard or cause serious environmental harm. Where a chemical spill occurs, consult the MSDS for spill procedures. If the MSDS indicates a requirement for containment and clean up, then the following steps should also be considered.

Stop the source and spread of the spill if safe to do so:

- Check for danger;
- Prevent the spill from getting larger (turn off valves, block damaged tanks or pipes); and
- Use any suitable material or equipment to confine the spill by “damming it off” (e.g. use available spill response equipment such as booms or absorbent or if unavailable then use soil or other suitable material).

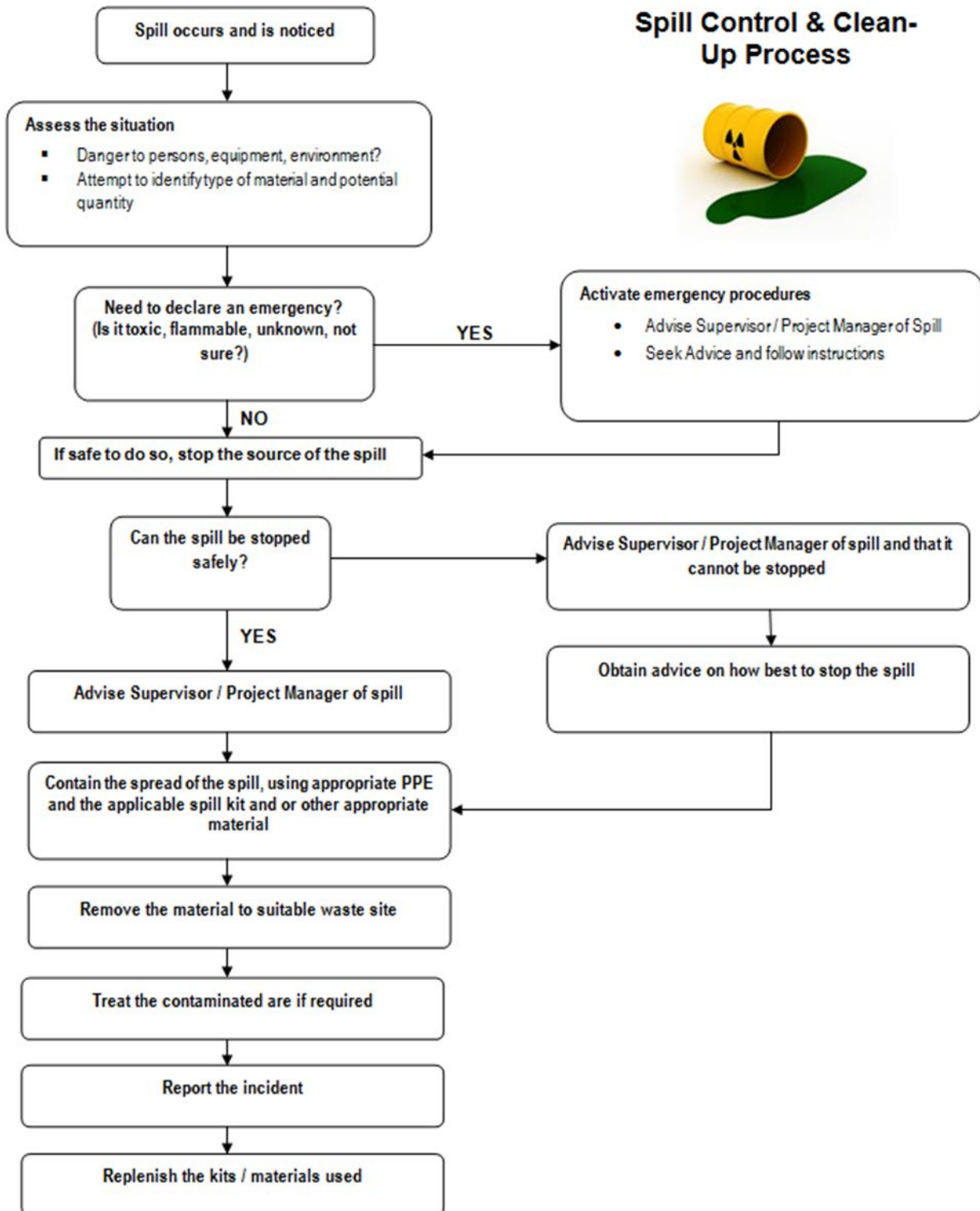
Clean up the spill:

- Once the spill has been contained, retrieve as much of the spilled liquid as possible and place in an appropriate container (e.g. 20 L drum or 1000 L pod).
 - If the liquid cannot be reused it shall be disposed of at an offsite waste facility capable of handling the waste. A regulated waste contractor shall be engaged to transport any regulated wastes;
 - Absorb remaining spill with absorbent material and place used absorbent in the appropriate waste bin; and
 - Replenish equipment used from Spill Response Kit.
4. Report the spill:
- Report and investigate all spills in accordance with the incident management procedure.

9.1.1 Spill Kits

Spill Kits and/or spill clean-up equipment are available on mobile equipment.

Location	Responsible Person
Mobile spill kits to be carried on all field service vehicles or refuelling vehicles	Site Supervisor



9.2 Flooding and Stormwater Management

To reduce the potential offsite impacts the following strategies shall be employed at all times:

- Potential contaminants at the site such as fuels, lubricants and waste oils shall be stored in a manner that prevents contact with incident rainfall and/or stormwater flows;
- Erosion and sediment control measures shall be implemented at all times; and

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- No washing or servicing of vehicles or plant at locations where contaminants can be released to any waters.

If heavy rainfall or flooding is forecast for the area, the BQC Site Supervisor shall prepare the site by

- Removing potential contaminants from site or ensuring that potential contaminants are protected from rainfall or stormwater flows; and
- Ensuring all erosion and sediment control measures have been maintained and are in place.

9.3 Fire Management

9.3.1 Potential Sources

Fire scenarios on the site could potentially arise from:

- Electrical failures;
- Refuelling incidents; and
- Waste combustion.

9.3.2 Fire Risk Mitigation

To minimise these risks the following measures shall be implemented:

- Monitor extreme weather forecasts;
- A water truck for dust control shall be available on site at all times and may also be used as a fire fighting resource;
- No unauthorised burning at the site;
- No stockpiling of any vegetation waste at the site; and
- Fire extinguisher located on all mobile equipment.

9.3.3 Fire Response

In the event of a small fire at the site that can be safely managed with onsite resources a portable fire extinguisher or the water truck shall be used to attempt extinguish the fire.

If the initial response to a fire is unsuccessful or if there are any doubts as to the capability of the onsite fire fighting resources, the Queensland Fire and Rescue Service shall be contacted immediately.



9.4 Cyclone Management

It is recommended that staff remain in contact with each other during times of extreme weather events and plan accordingly, eliminating the possibility of staff being caught out in extreme weather events.

9.4.1 Minimising Cyclone Damage

To minimise the potential damage caused by cyclones the following measures are to be adopted:

- Ensure buildings are built to cyclone standards of local council.
- Eliminate loose objects on site that can act as projectiles during cyclones.

9.4.2 Cyclone Issued Warnings

When a cyclone warning is issued the progress of the cyclone is to be monitored and if requested by local authorities or Site Manager the site is to be evacuated.

All work is to cease, and erosion and sediment controls to be implemented to prevent loss of any stockpiled material.

Waste temporarily stored onsite must be removed from the site to a facility licensed to accept such wastes.

Under the circumstances, if the site is unable to be evacuated the following measures are to be undertaken:

- Park vehicles under shelter;
- All loose items to be secured;
- Tape or board up windows;
- Remain indoors until advised it's safe;
- Disconnect electrical appliances; and
- Be aware of radio updates.

Any injuries obtained should be noted and treated. If injuries are outside the scope of medical expertise of personnel present, contact 000 or the local hospital directly.

9.5 Emergency Contact Numbers

Project Contact Details	
Emergency Services	
Ambulance, Fire or Police	000
Poisons Information	13 11 26
Utilities	
Water	132 203
Electricity	132 090
Gas	131 388
Telephone	131 909
Dial Before You Dig	1100
DESI (24-hour pollution line)	1300 130 372 or email: pollutionhotline@des.qld.gov.au
Site Manager	
Callum Koppen	Office: 4052 2600
	Mobile: 0488 074 144

10 INCIDENT MANAGEMENT

10.1 What is an incident?

An incident is any non-compliance with this SBMP. This may include but is not limited to:

- Spills from vehicle maintenance or refuelling outside bunded areas.
- Complaints regarding the facility.
- Contaminated water leaving the site during high rainfall events/floods.
- Spilling of products.
- Damage to site bunds or chemical storage infrastructure.
- Damage to stormwater diversions and ESC.
- Dusty, odorous or noisy conditions.
- Unauthorised waste disposal.

10.2 Incident Investigation

All incidents shall be investigated by the Site Manager to determine:

- Nature, type, location and extent of the incident and the affected area.
- Actual and/or potential environmental impacts of the incident (see below).
- Suspected cause of the incident.
- Measures required to mitigate any further environmental harm.
- Remedial measures required to correct any environmental harm.
- Measures to be implemented to prevent a recurrence of the incident

The requirements for the environmental assessment of impacts of an incident shall be determined by an Environmental Consultant. The assessment may include environmental monitoring of contaminant releases in relation to land, water, noise, air and light (in addition to routine monitoring requirements). Based on the nature and type of the incident, the Environmental Consultant shall determine:

- Sampling and analytical requirements.
- Applicable guidelines or levels to apply to data for assessing compliance and level of impact.
- Reporting requirements.

Any monitoring shall be undertaken by a competent person and all monitoring equipment shall be appropriately maintained, calibrated and operated. Monitoring will be designed in consultation with NQ Asphalt and DESI.

10.3 Incident Reporting

In accordance with the Environmental Protection Act 1994 (EP Act), serious or material environmental harm (Material harm defined as greater than \$5,000 to clean up and/or restore environment, Serious harm defined as greater than \$50,000 to clean up and/or restore environment) shall be reported by NQ Asphalt to the DESI within 24 hours of becoming aware of the event in accordance with the Duty to Notify (refer to Section 320 of the EP Act). Minor incidents (e.g. hydraulic oil leaks less than 20L) are to be reported in the site diary and cleaned up / remediated.



All personnel are responsible for reporting all incidents to the Site Manager. All incidents are to be recorded on the Incident Report Form provided in **Appendix B**.

The Site Manager shall telephone DESI as soon as practical after becoming aware of any release of contaminants not in accordance with the EA. Following this, a written notice detailing the following information must be provided to within 14 days of the initial notification:

- The name of the operator, including their approval / registration number.

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- The name and telephone number of a designated contact person.
- Quantity and substance released.
- Vehicle and registration details
- Person/s involved (driver and any others).
- The location and time of the release.
- The suspected cause of the release.
- A description of the effects of the release.
- The results of any sampling performed in relation to the release.
- Actions taken to mitigate any environmental harm caused by the release.
- Proposed actions to prevent a recurrence of the release.

	DEPARTMENT OF ENVIRONMENT, SCIENCE AND INNOVATION Environmental Services and Regulation Northern Region 5B Sheridan Street Cairns QLD 4870 PO Box 937 Cairns QLD 4870 PHONE: 13 1304
	POLLUTION HOTLINE 1300 130 372

10.4 Incident Prevention

- To increase site safety the appropriate personal protective equipment is required at all times.
- Analysis of past incidents and potential future incidents is required to identify and minimise reoccurrences.
- Training and environmental awareness information.
- Liaison with environmental consultants and DESI officers

11 TRAINING, RECORDS AND REVIEW

11.1 Training

All NQ Asphalt staff employed on the site to have completed a site induction by the Site Manager. The induction training will include the following:

- Familiarisation with the requirements of this SBMP.
- Familiarisation with site environmental controls.
- Process for management of environmental incidents.
- Legislations applicable to the waste collection and recycling facility for plastics plant industry such as permits, approvals, and licences.
- Environmental duty of care and duty to notify.
- Cultural heritage duty of care and duty to notify.
- Operational requirements to meet design specifications.
- Spill kit use and response.
- Guidelines on waste management and chemicals.
- Identification and source separation of recyclable materials.
- Equipment, maintenance, refuelling procedures.
- Dust control measures.
- Stormwater management measures.

11.2 Records Management

A copy of the SBMP will be kept in the NQ Asphalt site office at all times.

Any record or document required as an outcome of this SBMP or requested by a regulatory authority must be kept at the site for a period of 5 years.

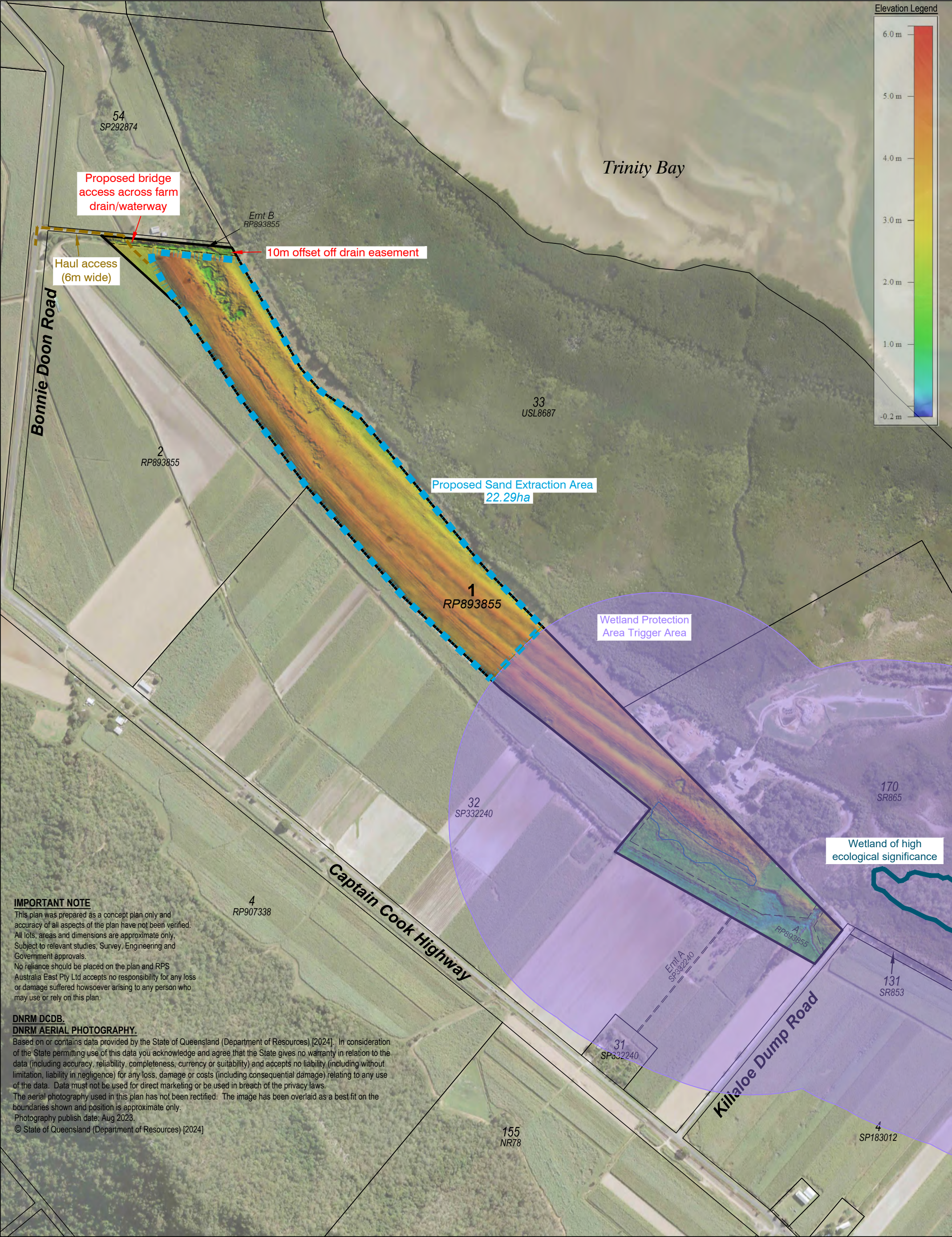
Records must be kept of the key environmental performance indicators, monitoring results, corrective actions, environmental incidents and complaints, reports to management, and any records required by law such as regulated waste tracking.

The records collected are to be made available upon request of administering authority. A Weekly Inspection Checklist has been provided as **Appendix C**.

11.3 Review and Continual Improvement

The SBMP shall be reviewed annually and updated where necessary.

Appendix A Sand Extraction Area



IMPORTANT NOTE
This plan was prepared as a concept plan only and accuracy of all aspects of the plan have not been verified. All lots, areas and dimensions are approximate only. Subject to relevant studies, Survey, Engineering and Government approvals. No reliance should be placed on the plan and RPS Australia East Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this plan.

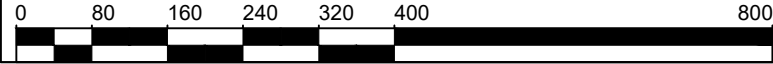
DNRM DCDB. DNRM AERIAL PHOTOGRAPHY.
Based on or contains data provided by the State of Queensland (Department of Resources) [2024]. In consideration of the State permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws. The aerial photography used in this plan has not been rectified. The image has been overlaid as a best fit on the boundaries shown and position is approximate only. Photography publish date: Aug 2023.
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NQ Asphalt Pty Ltd

Lot 1 on RP893855

Site Plan - Proposed Sand Extraction



Datum: MGA2020 Z55 | Scale: 1:8,000 @ A3 | Date: 26-08-2024 | Drawing: AU015874-2

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Appendix B Incident Report Form

REPORT

1. Project No & Name:		Log No:	
2. Location		Date	Time
3. Type of Incident	<input type="checkbox"/> Near Miss	<input type="checkbox"/> First Aid Injury	<input type="checkbox"/> Dangerous Event
	<input type="checkbox"/> Environmental	<input type="checkbox"/> Lost Time Injury	<input type="checkbox"/> Medical Treatment Injury
	<input type="checkbox"/> Damage to Equipment	<input type="checkbox"/> Hazard	<input type="checkbox"/> Complaint
	<input type="checkbox"/> Other _____	<input type="checkbox"/> Restricted Duties Injury	
4. Incident Details (attach additional pages if required)			
5. Details of person(s) involved	Name: _____		<input type="checkbox"/> Male <input type="checkbox"/> Female
	Date of Birth: _____		Contact No: _____
	Residential Address: _____		
6. Employment Basis	<input type="checkbox"/> Full-time	<input type="checkbox"/> Part-time	<input type="checkbox"/> Sub-Contractor
	<input type="checkbox"/> Casual	<input type="checkbox"/> Other _____	
7. Employment Type	<input type="checkbox"/> Admin	<input type="checkbox"/> Professional	<input type="checkbox"/> Apprentice/Trainee
	<input type="checkbox"/> Tradesperson	<input type="checkbox"/> Labourers & related workers	<input type="checkbox"/> Plant & Machine Operators/Drivers
	<input type="checkbox"/> Other: _____		
8. Medical Treatment Taken	Did injury occur <input type="checkbox"/> Yes <input type="checkbox"/> No		
	Was first aid treatment given <input type="checkbox"/> Yes <input type="checkbox"/> No		
9. Equipment/ Machinery Details	Make and Model: _____		Plant/Rego No: _____
	Was the equipment/machinery <input type="checkbox"/> repaired? <input type="checkbox"/> returned to service?		
	<input type="checkbox"/> written off? <input type="checkbox"/> other _____		
10. Witnesses (attach statements)	1. Printed Name _____		2. Printed Name _____
	Position _____		Position _____
	3. Printed Name _____		4. Printed Name _____
	Position _____		Position _____
11. Report Raised By	_____		
	Printed Name _____		Signature _____
	Position _____		Date _____
12. Manager Review	_____		
	Printed Name _____		Signature _____
	Position _____		Date _____
13. HSE Advisor	Is further investigation required? <input type="checkbox"/> Yes <input type="checkbox"/> No		Related First/Aid Incident
	Report No: _____		

Appendix C Weekly Inspection Checklist

Environmental Management Plan Weekly Checklist

SBMP ELEMENT	Yes/No/NA	Date	Initial
SURFACE AND GROUNDWATERS			
Are stabilised entry and exit points provided during construction? Is any soil being transported onto public roads or highways?			
Are bunds in place to segregate clean and dirty water? Are drainage structures stabilised to minimise erosion?			
CONTAMINATED LAND			
Are vehicles and plant in good operating condition (i.e. no oil or fuel leaks?)			
Are controls in place for refuelling or maintenance to prevent soil or water contamination from spills or leaks?			
Are chemicals stored in a covered and bunded impervious area?			
Is there evidence of any spills greater than 20 L at the site?			
Is any imported fill certified as clean (free of hazardous contaminants and not ASS)?			
Has any contaminated soil been encountered at the site?			
NOISE/DUST IMPACTS			
No unnecessary use of horns or other audible signals on mobile plant or equipment.			
No unnecessary revving or idling of engines on mobile and stationary machines.			
Site kept neat and tidy?			
Dust reduction measures implemented and adequate for conditions?			
WASTE MANAGEMENT			
General wastes stored in covered bins?			
Recyclable materials segregated for recycling?			
Regulated wastes (i.e. waste oil) only removed from site by a regulated waste contractor? Are waste tracking documents available?			
Have any wastes been disposed of on site?			
Wastes protected from rainfall and stormwater contact?			
DOCUMENTATION			
Is a copy of the SBMP readily available?			
Sight evidence of waste tracking paperwork, certification of fill, weed hygiene declarations and disposal receipts.			
Incident reporting and procedures - have all incidents have been documented on the "Incident Report Form" and correctly reported and investigated?			
Sight evidence of vehicle and equipment maintenance has been undertaken as per the manufacturer's instructions.			
Review site manager has records of daily site observations, actions and notifications in diary.			
Sight evidence of staff induction training.			
Have any complaints been received? Have incident reports been completed for complaints?			

Record non-compliances as an incident and address accordingly.

Inspected by:

Print Name

Signature

Date

Acknowledged by:

Print Name

Signature

Date

Print Name

Signature

Date

ENVIRONMENTAL ASSESSMENT REPORT

NQ Asphalt



AU213012859.001
19 Sep 2024

REPORT

Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
0	Environmental Assessment	Rasharna Blanco-Burns	Megan Davis	Megan Davis	20/08/2024
1	Revised to include change to layout	Megan Davis	Megan Davis	Megan Davis	19/09/2024

Approval for issue		
Megan Davis		19/09/2024

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1 INTRODUCTION

NQ Asphalt Pty Ltd have identified fine sand resources across Lot 1 on RP893855 (herein referred to as “the site”) on Bonnie Doon Road, as shown on the Site Layout Plan, refer to **Appendix A**.

As a result, NQ Asphalt Pty Ltd have engaged RPS AAP Consulting Pty Ltd (RPS) to prepare an Environmental Assessment Report (EAR) to assess potential environmental impacts for the proposed Environmentally Relevant Activities of ERA 16 2 (a) Extracting, in a year, the following quantity of material – 10,000t to 100,000t.

1.1 Purpose

The purpose of this Environmental Assessment Report (EAR) is to provide an overview of the proposed EA application, incorporating information addressing the additional proposed area of extraction, while addressing the minimum application requirements prescribed under **Section 125 (1)(I)** of the *Environmental Protection Act 1994* (EP Act), which are as follows:

- An assessment of the likely impact of each relevant activity on the environmental values, including:
 - A description of the environmental values likely to be affected by the proposed amendment;
 - Details of emissions or releases likely to be generated by the proposed amendment;
 - 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; and
 - Details of how the land the subject of the application will be rehabilitated after each relevant activity ends.
- Include a description of the proposed measures for minimising and managing waste generated by amendments to the relevant activity; and
- Include details of any site management plan or environmental protection order that relates to the land the subject of the application.

A Site Based Management Plan which outlines the work practices addressing the specified regulatory requirements to minimise the risk of environmental harm and nuisance resulting from the extractive operations is included in Appendix B.

1.2 Proposed Extraction Activity

The proposed sand extraction activities will include the removal and storage of topsoil in earthen bunds, the extraction of the sand resource, and screening of the material into stockpiles prior to the distribution of the sand resource throughout the region. Once the sand is extracted, the site is to be rehabilitated by backfilling the voids, followed by the resspreading of topsoil, and the recommencement of the agricultural use of the land as the site is situated in a rural area with surrounding agricultural land uses.

The proposed sand extraction and screening activities will be undertaken in accordance with the SBMP.

Infrastructure on site will include:

- Earthmoving equipment (front end loader and tipper truck for removal and transport of material);
- Loading area;
- Erosion and sediment controls.

Topsoil will be striped prior to extraction and stockpiled in small windrows. Sand will be extracted by excavator and loaded directly into vehicles for transport offsite.

The maximum depth of extraction is likely to be one to three metres from the existing surface profile which is a mound across the site. Once extracted, the site will be backfilled with the stripped topsoil and then used for agricultural purposes such as growing crops similar to the adjoining area.

REPORT

No blasting or crushing is to occur as part of the process. Rehabilitation works will be undertaken progressively and in tandem with the extraction program. Profiling of the final landform will be undertaken to facilitate drainage.

Proposed work hours for the site are 7am to 6pm, Monday to Saturday.

The following sections will now outline and discuss the minimum application requirements prescribed under the EP Act.

2 ENVIRONMENTAL VALUES

This section will provide a description of the existing environment, its values, and how they are likely to be affected by the proposed amendment.

2.1 Regional Climate

The subject land is located approximately 1 km south of Cooya Beach, Mossman. The region is subject to relatively warm temperatures throughout the year with a short pronounced dry season of approximately five (5) to six (6) months, and a wet season, with rainfall usually occurring in November to April.

There is a Bureau of Meteorology weather station located at Poer Douglas (Warner Station). Review of the records confirms that approximately 80% of the annual rainfall falls between November to April.

The driest month is August, and the annual mean rainfall is 23.3mm. Mean monthly maximum temperatures are highest in January and December at 30.3°C and lowest in July at 24.6°C. A summary of the regional climatic statistics has been provided below in **Table 1**.

Table 1: Summary of Regional Climate Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Rainfall (mm)													
Mean	395.8	422.0	429.4	203.3	72.8	47.7	26.4	23.3	32.1	53.1	106.1	213.5	2026.5
Temperature °C													Average
Mean Min	23.7	23.5	22.8	21.5	19.5	17.7	16.8	17.1	18.6	20.8	22.3	23.3	20.6
Mean Max	30.3	30.1	29.5	28.3	26.7	25.1	24.6	25.3	26.7	28.3	29.5	30.3	27.9

Sourced from Bureau of Meteorology 2017, Mareeba QWRC (Station No.031052)

2.2 Topography, Drainage, and Waterways

2.2.1 Surface Water



Figure 1 Waterway Mapping (Qld Globe)

2.2.2 Groundwater

Groundwater bore data from the Australian Groundwater Explorer, accessed on 13th of August 2024 has been summarised in **Table 2** below.

Table 2: Summary of Groundwater Bore Data

Bore Reference	Date Measured	GPS Location (Decimal Degrees)	Proximity to Site	Groundwater Depth (m)	Electrical Conductivity (µS/cm)
126322A	Functional	-16.479447 145.405277	0.72km	45	ND
10900019A	Functional	-16.483454 145.411058	0.58km	14.4	ND
157324A	Functional	-16.488179 145.417979	0.39km	22	ND
10900020A	Decommissioned	-16.49251 145.421636	0.69km	19.8	ND
10900018A	Functional	-16.465803 145.4060013	0.56km	12.9	ND

REPORT

10900017A	Decommissioned	-16.465372 145.399474	0.99km	30.5	ND
10900011A	Functional	-16.481797 145.391721	2.13km	23.2.	ND

ND: No Data

There are six (6) groundwater monitoring bores within close proximity to the proposed site, the closest bore with data identified as bore 157324A, located 0.39km away to the southwest of the site. The most recent groundwater monitoring undertaken at this bore was in 2013 and suggests that the depth of the groundwater was approximately 22m from the top of the bore with no electrical conductivity recorded.

2.3 Geology and Soils

The site is located approximately 3.7km south west of Mossman and is described as soils of metamorphic rock origin, and soils formed on beach regions.

Erosion Risk for the region based on monthly average rainfall depth is shown below in **Table 3**.

Table 3 Erosion Risk

Erosion Risk	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	E	E	E	H	H	M	VL	L	M	M	H	E

E = Extreme, H = High, M = Medium, L = Low, VL = Very Low

Source: IECA, Best Practice Erosion & Sediment Control, Book 1, November 2008, Table 4.4.5 – Erosion risk based on average monthly rainfall depth

2.4 Flooding

The desktop assessment using Queensland Globe flood mapping shows that the proposed site is in a rapid hazard assessment. It is highly likely that the site will be subject to any flood impacts and localised rainfall impacts that are proposed to be managed in accordance with the erosion and sediment control plan, refer to Section 4.4 below for further detail.

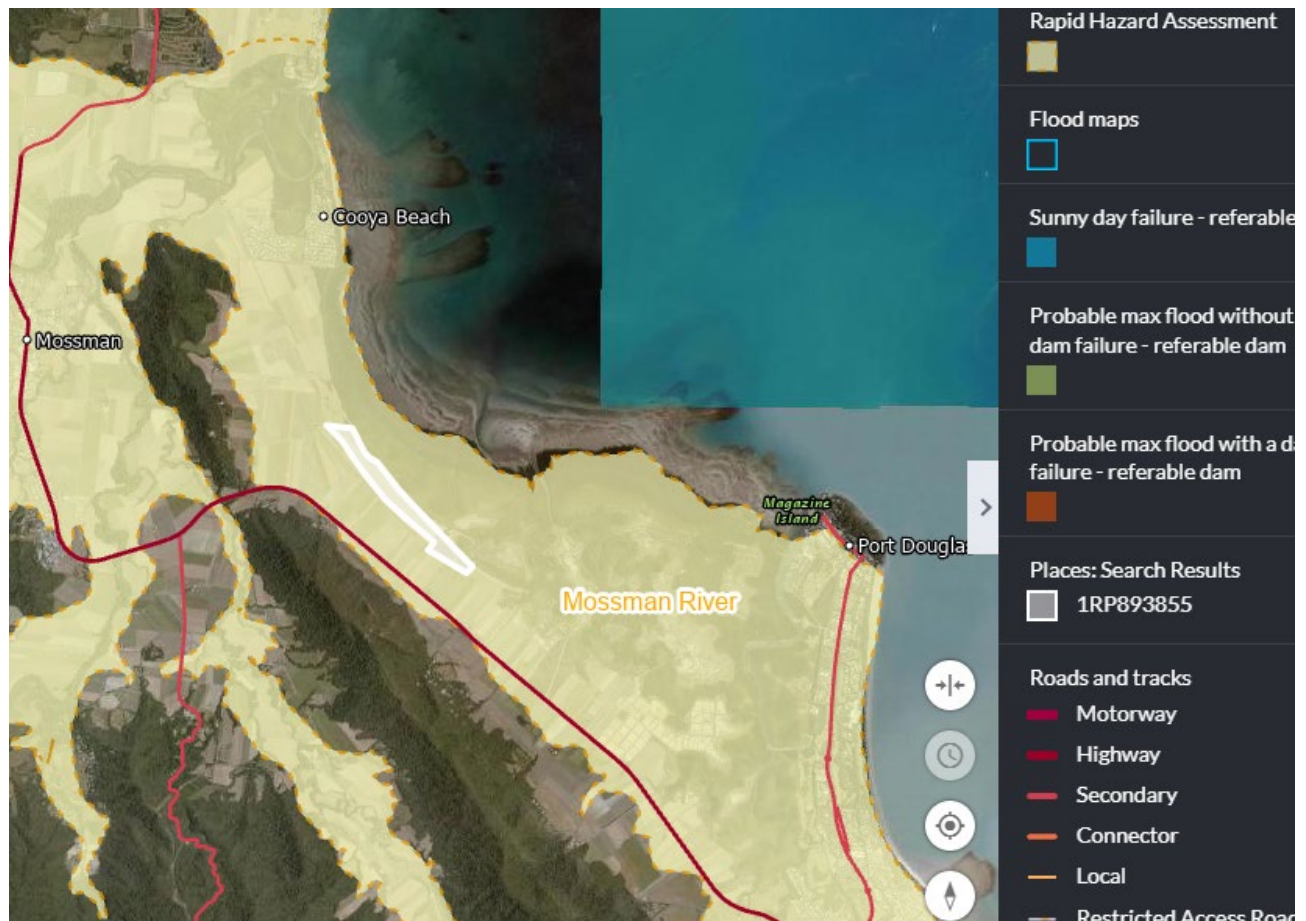


Figure 2 Queensland Globe Flood Mapping

2.5 Regional Ecosystem and Matters of State Environmental Significance

2.5.1 MSES

Lot 1 on RP893855 is located within the Wet Tropics Bioregion, in the Daintree - Bloomfield Subregion, within the Mossman catchment area, refer to the Matters of State Environmental Significance Reports attached as **Appendix C**.

The Matters of State Environmental Significance Report (MSES) indicates that there are matters of state environmental significance on the site, refer to Figure 3 below.

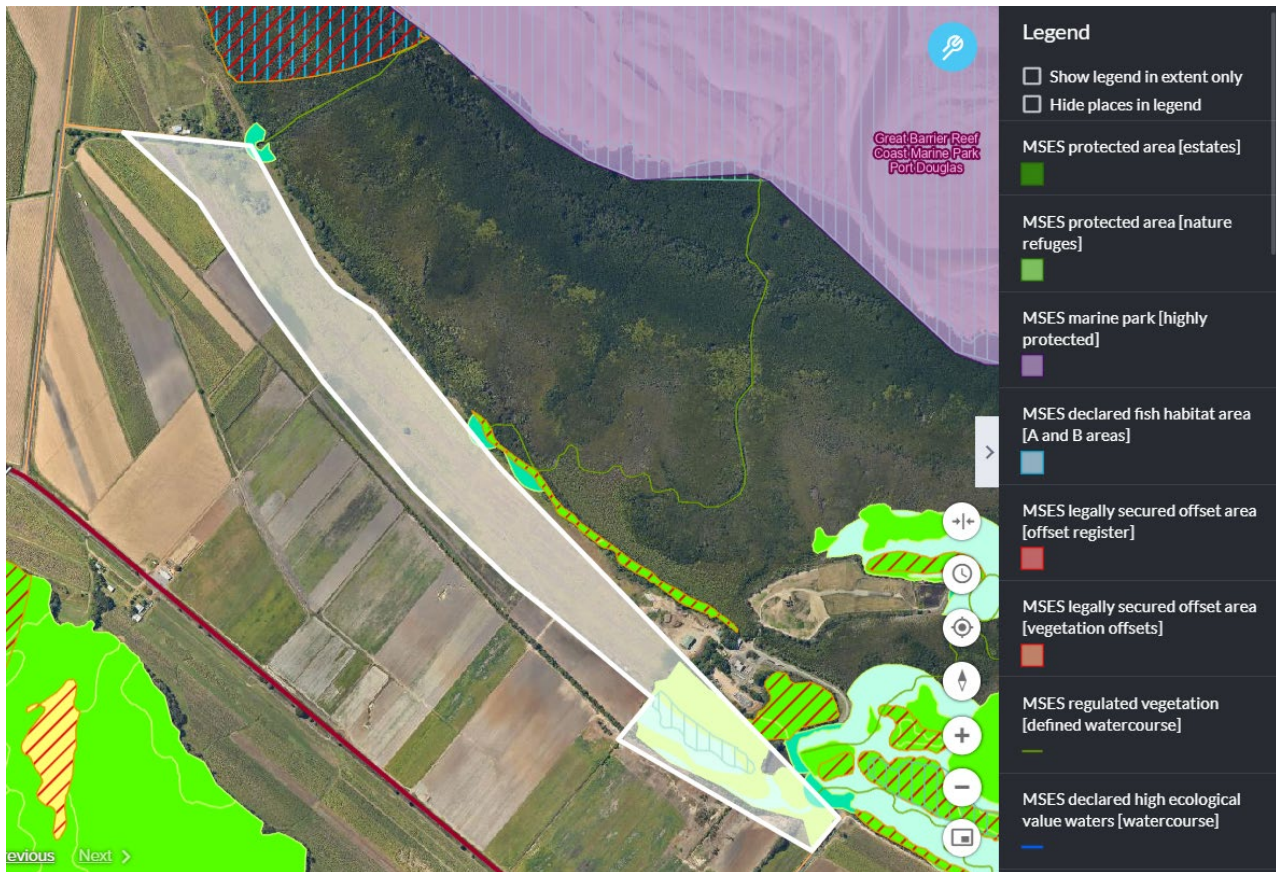


Figure 3 Site Location and Mapped MSES (Qld Globe, 2024)

2.5.2 Regional Ecosystem and Protected Plants

The Queensland Globe mapping shows that the lot is predominately cleared (Category X vegetation). There is a small area of Category C – High Value Regrowth vegetation to the south of the site which will be avoided, refer to Figure 4 and **Appendix D** for the Vegetation Management Report.

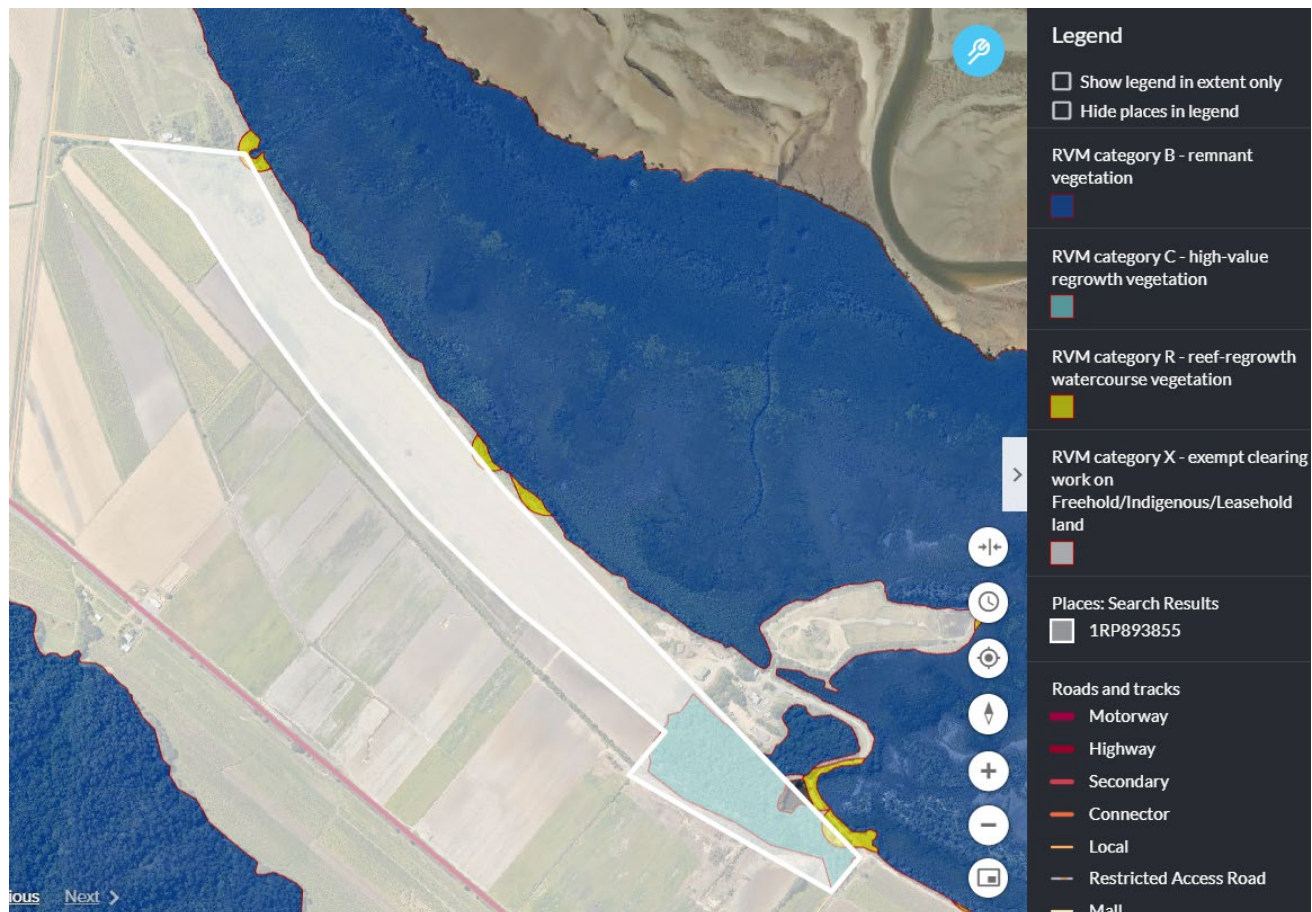


Figure 4 Site Location and Remnant Vegetation (Qld Globe, 2024)

The proposed sand extraction area is within a mapped Category X cleared area.

The Vegetation Management Report indicates that there was no protected flora species present on site, refer to **Appendix D**.

2.6 Existing Land Use and Sensitive Receptors

The existing land use is for agricultural purposes, however, due to the landform, cane farming cannot occur.

2.7 Cultural Heritage

A cultural heritage search was undertaken on the State Government Aboriginal and Torres Strait Islander cultural heritage search register. No points were identified within the proposed extraction area.

2.8 Air Quality

The ambient air quality for the area is influenced primarily by agricultural and horticultural activities which occur immediately to the west and north and the waste transfer station to the south,

Given the small volumes and buffers from sensitive receptors, and agricultural and industrial purposes surrounding the site, the proposed sand extraction is unlikely to have an impact on sensitive receptors.

2.9 Noise

The ambient noise quality for the area is influenced primarily by agricultural and horticultural activities which occur immediately to the west and north, the waste transfer station to the south, and the Bruce Highway to the west and Boonie Doon Road.

Given the small extraction volumes and buffers from sensitive receptors, and agricultural and industrial purposes surrounding the site, the proposed sand extraction is unlikely to have an impact on sensitive receptors.

2.10 Contaminated Land Register and Environmental Management Register

An EMR/CLR search was completed on 20 August 2024, refer to **Appendix E**. The site is NOT listed on the EMR or CLR.

3 ENVIRONMENTAL VALUES RISK ASSESSMENT

The following section describes risks to environmental values and likely magnitude of the impacts generated by the proposed extraction activities.

3.1 Risk Assessment Synopsis

The risk assessment adopted is a qualitative risk-based approach designed to assess risk based on the likelihood of an environmental impact or event occurring (refer to **Table 4** – Definitions of Likelihood), and the consequences of the occurrence on the surrounding environmental values (**Table 5** – Definitions of Consequence). The likelihood and consequences are scored between 1 and 5 for each potential impact or event. The risk assessment has been formulated considering potential for impact without control measures put in place to manage potential risk.

Table 4: Definitions of Likelihood

Rating	Descriptor	Score
Rare	May occur only in exceptional circumstances	1
Unlikely	Could occur but doubtful	2
Possible	Might occur at some point in the future	3
Likely	Will probably occur	4
Almost Certain	Is expected to occur in most circumstances	5

Table 5: Definitions of Consequences

Rating	Descriptor	Score
Negligible	Impacts not requiring any treatment or management action	1
Minor	Nuisance or insignificant environmental harm requiring minor management actions	2
Moderate	Serious environmental impacts, readily manageable at low cost	3
Major	Substantial environmental impacts, manageable but at considerable cost and some disruption	4
Catastrophic	Severe environmental impacts with major consequent disruption and heavy cost	5

The consequence and likelihood scores are then plotted on the risk assessment matrix, refer to **Table 6** below. The final risk level assigned is thus a product of the likelihood and consequence scores. The higher the risk score, the higher the priority is for management.

3.2 Potential Environmental Impacts

Activities associated with the proposed activity which have the potential to cause environmental harm and/or nuisance have been outlined in **Table 8** below.

This risk assessment is limited to the potential for the activity to impact upon the existing environmental values and does not consider any pre-existing approved impacts taken place on the site.

Table 6: Risk Assessment Matrix

Likelihood of an Environmental Impact	Consequence of Said Impact				
	Negligible	Minor	Moderate	Major	Catastrophic
	1	2	3	4	5

Consequence of Said Impact						
Almost Certain	5	5 Medium	10 High	15 High	20 Extreme	25 Extreme
Likely	4	4 Low	8 Medium	12 High	16 High	20 Extreme
Possible	3	3 Low	6 Medium	9 Medium	12 High	15 High
Unlikely	2	2 Low	4 Low	6 Medium	8 Medium	10 High
Rare	1	1 Low	2 Low	3 Low	4 Low	5 Medium

Table 7 describes the possible actions required for each risk assessment rating.

Table 7: Indicative Management Option for Risk Assessment Ratings

Risk Rating	Risk Rating Scores	Indicative Management Option
Extreme	16 - 25	Manage by implementing site management and emergency procedures, plant design controls and regular monitoring.
High	10 - 15	Manage by implementing site management procedures, specific monitoring, and may require some operation/plant design controls.
Medium	5 – 9	Manage by implementing specific monitoring or response procedures.
Low	1 - 4	Manage by routine procedures, unlikely to need specific application of resources.

Site activities have been tabulated against environmental values to determine the risk.

Table 8: Identification of Potential Impacts from Extractive Industry on Environmental Values

Activity	Potential Impacts Environmental Values Impacted				
	Air	Water	Noise	Land	Waste
Extraction and stockpiling of topsoil	✓	✓	✓		
Extraction of sand	✓	✓	✓	✓	
Heavy machinery movement	✓	✓	✓	✓	
Light vehicle movement	✓	✓	✓	✓	
Chemical storage		✓		✓	✓
Waste storage		✓		✓	✓

4 ENVIRONMENTAL OBJECTIVE ASSESSMENT

4.1 Air

The Environmental Objective for Air detailed within Schedule 5, Part 3, Table 1 of the EP Reg states:

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

Performance outcomes for Air as detailed in the EP Reg include:

2. There is no discharge to air of contaminants that may cause an adverse effect on the environment from the operation of the activity.
3. 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; and
 - c. Releases of contaminants to the atmosphere for dispersion will be managed to prevent or minimise adverse effects on environmental values.

The *Environmental Protection (Air) Policy 2008* (EPP (Air)) prescribes the environmental values that are to be protected or enhanced, which are:

- a. The qualities of the air environment that are conducive to protecting the health and biodiversity of ecosystems;
- b. The qualities of the air environment that are conducive to human health and wellbeing;
- 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.

No measurement or monitoring of the background air quality has been carried out for the purpose of this application. However, it is expected that air quality would be typical of the pre-existing agricultural activities and adjacent land uses (e.g. rural, residential, and agricultural). In the absence of background air quality to qualify the environmental values, fugitive emissions from storage, handling, processing, and transporting of sand within the site will be prevented or minimised as detailed within the Site Based Management Plan, Section 6.1, refer to **Appendix B**.

Specific measures to prevent or minimise impacts to air quality include use of the water truck when required, undertaking progressive rehabilitation to limit exposed extraction areas, covering (i.e. with grass or mulch) or keeping moist all long-term topsoil stockpiles to prevent wind erosion, and enforcing an internal road speed limit of 40km/hr.

4.2 Noise

The Environmental Objective for Noise detailed within Schedule 5, Part 3, Table 1 of the EP Reg states:

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

Performance Outcomes for Noise as detailed in the EP Reg include:

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

5. 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.

No measurement or monitoring of the background noise level has been carried out for the purpose of this application.

In the absence of background, the *Environmental Protection (Noise) Policy 2008* (EPP (Noise)) prescribes the environmental values that are to be protected or enhanced, which are:

- a. The qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems
- 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; or
 - iii. Involved in recreation, including relaxation and conversation.
- c. The qualities of the acoustic environment that are conducive to protecting the amenity of the community.

It is proposed that the release of sound to the environment from the activity is managed so that adverse effects on environmental values are prevented or minimised as detailed within the Site Based Management Plan, section 6.2, refer to **Appendix B**.

Specific measures to prevent or minimise impacts to the acoustic environment include maintaining equipment in good working order, installing noise suppressors on equipment where required, limiting operational hours to approved hours of 7am until 6pm, Monday - Saturday, and operating machinery with squawkers rather than reversing beepers.

4.3 Land

The Environmental Objective for Land detailed within Schedule 5, Part 3, Table 1 of the EP Reg states:

"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 for Land as detailed in the EP Reg include:

6. There is no actual or potential disturbance or adverse effect to the environmental values of land as part of carrying out the activity.
7. 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 minimise 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;
 - ii. Non-polluting;
 - 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; and
- 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.

Given the proposed extraction will disturb land, soils, subsoils, landforms, a detailed land rehabilitation plan will be prepared. This will ensure that areas disturbed will be rehabilitated or restored to a condition that is safe for humans and wildlife, is non-polluted, and has the stability, and the ability to sustain agricultural pursuits after rehabilitation, refer to Section 6.5 of the Site Based Management Plan (**Appendix B**).

As the site is not within an area of conservation value, special significance, an assessment against the environmental objective for land use assessment will need to be undertaken.

4.4 Waste

The Environmental Objective for Waste detailed within Schedule 5, Part 3, Table 1 of the EP Reg states:

“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 for Waste as detailed in the EP Reg include:

- 8. 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* (WRRRA); and
 - b. If waste is disposed of, it is disposed of in a way that prevents or minimises adverse effects on environmental values.

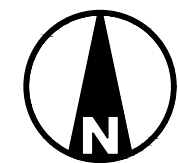
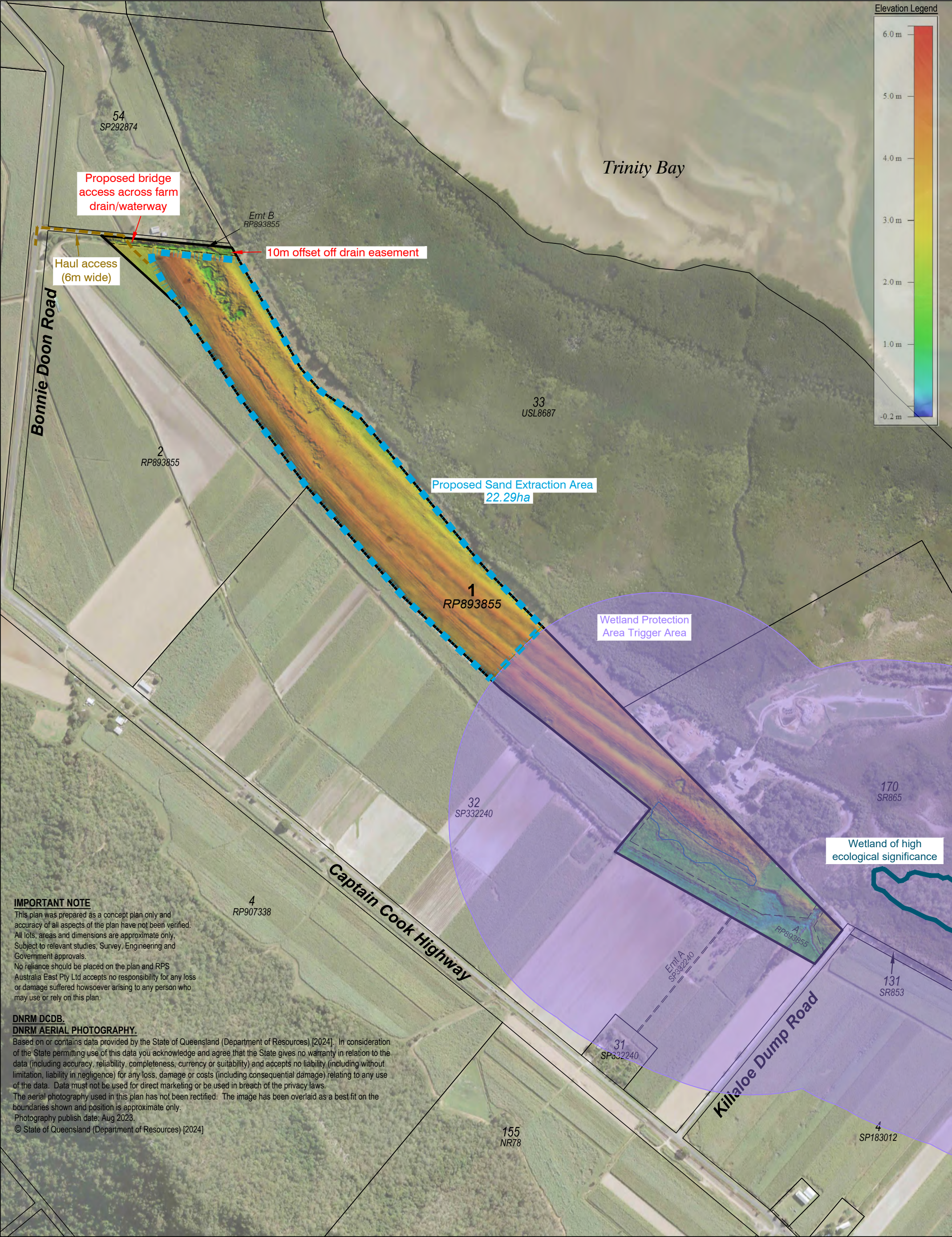
It is proposed that any waste likely to be generated, transported, or received as a result of the proposed extraction will be managed in accordance with the waste and resource management hierarchy as detailed within the WRRRA, refer to Section 6.4 of the Site Based Management Plan, refer to **Appendix B**.

5 CONCLUSION

This Environmental Assessment Report has been prepared to support the application for the proposed extractive operations within the boundaries of Lot 1 on RP893855. This report addresses the environmental values and risk of potential environmental impacts.

The risk assessment has determined that the potential environmental risks resulting from the proposed extractive industry will be effectively regulated through adoption of the Model Operating Conditions for ERA 16, and the effective implementation of environmental monitoring and management practices to avoid potential environmental impacts as detailed within the Site Based Management Plan (**Appendix B**).

Appendix A – Site Layout Plan



NQ Asphalt Pty Ltd
Lot 1 on RP893855
Site Plan - Proposed Sand Extraction



Datum: MGA2020 Z55 | Scale: 1:8,000 @ A3 | Date: 26-08-2024 | Drawing: AU015874-2

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Appendix B – Site Based Management Plan

Appendix C – MSES Report



Queensland Government

Department of Environment, Science and Innovation

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest

Lot: 1 Plan: RP893855

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 a field survey may be required to validate values on the ground.

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

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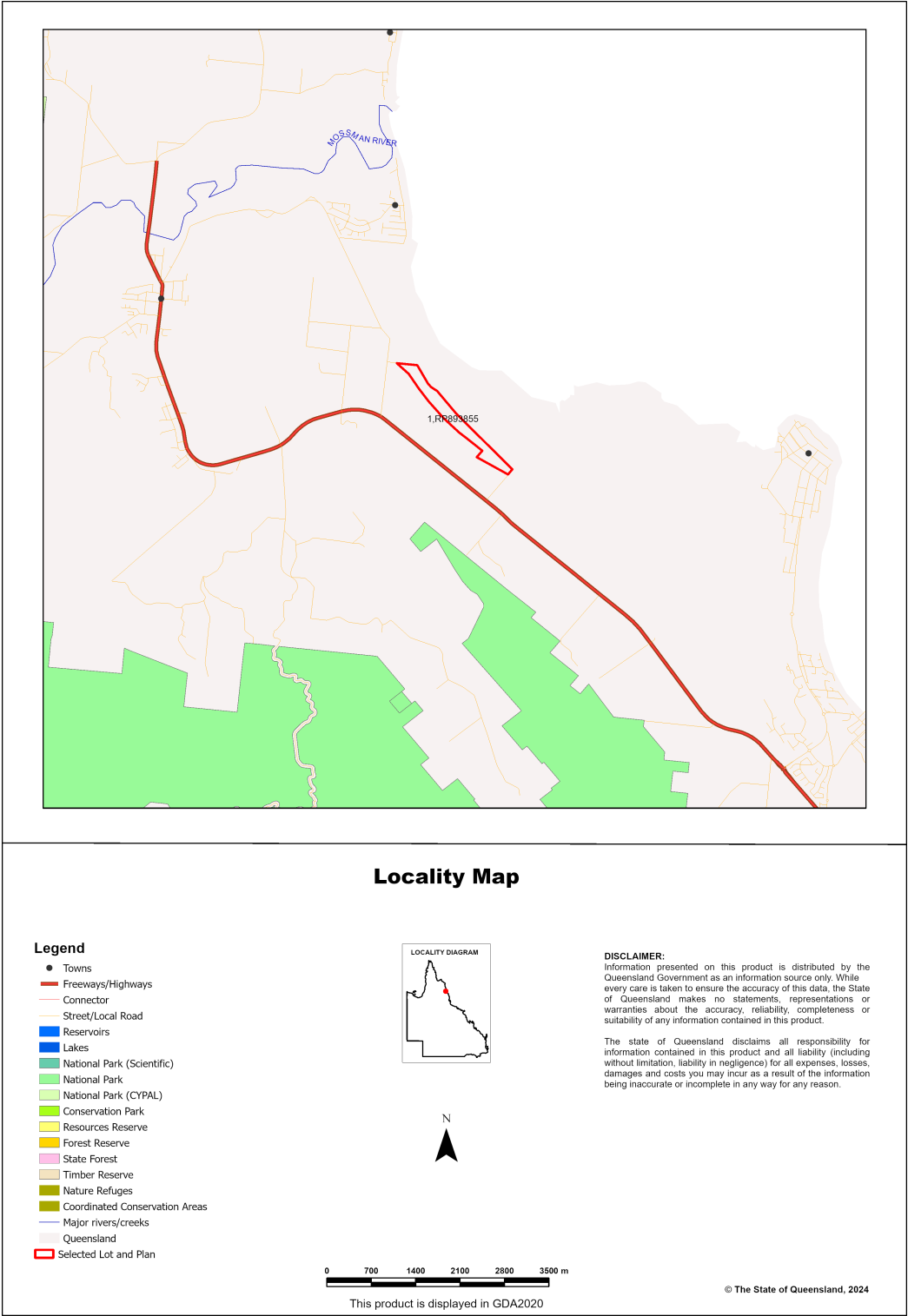
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Assessment Area Details

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: RP893855, with area 40.48 ha

Local Government(s)	Catchment(s)	Bioregion(s)	Subregion(s)
Douglas Shire	Mossman	Wet Tropics	Daintree - Bloomfield



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 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.

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

1a Protected Areas- estates	0 ha	0.0%
1b Protected Areas- nature refuges	0 ha	0.0%
1c Protected Areas- special wildlife reserves	0 ha	0.0%
2 State Marine Parks- highly protected zones	0 ha	0.0%
3 Fish habitat areas (A and B areas)	0 ha	0.0%
4 Strategic Environmental Areas (SEA)	0 ha	0.0%
5 High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values	1.28 ha	3.2%
6a High Ecological Value (HEV) wetlands	0 ha	0.0%
6b High Ecological Value (HEV) waterways	0 km	Not applicable
7a Threatened (endangered or vulnerable) wildlife	0 ha	0.0%
7b Special least concern animals	0 ha	0.0%
7c i Koala habitat area - core (SEQ)	0 ha	0.0%
7c ii Koala habitat area - locally refined (SEQ)	0 ha	0.0%
7d Sea turtle nesting areas	0 km	Not applicable
8a Regulated Vegetation - Endangered/Of concern in Category B (remnant)	0 ha	0.0%
8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth)	4.89 ha	12.1%
8c Regulated Vegetation - Category R (GBR riverine regrowth)	0.25 ha	0.6%
8d Regulated Vegetation - Essential habitat	0 ha	0.0%
8e Regulated Vegetation - intersecting a watercourse	0 km	Not applicable
8f Regulated Vegetation - within 100m of a Vegetation Management Wetland	7.69 ha	19.0%
9a Legally secured offset areas- offset register areas	0 ha	0.0%
9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation	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)

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

Natural wetlands that are 'High Ecological Significance' (HES) on the Map of Queensland Wetland Environmental Values are present.

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**

Values are present

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
<i>Boronia keysii</i>	Keys boronia	V	None
<i>Calyptorhynchus lathamii</i>	Glossy black cockatoo	V	None
<i>Casuarius casuarius johnsonii</i>	Sthn population cassowary	E	Core
<i>Crinia tinnula</i>	Wallum froglet	V	None
<i>Denisonia maculata</i>	Ornamental snake	V	None
<i>Euastacus bindal</i>	Mount Elliot crayfish	CR	None
<i>Euastacus binzayedii</i>		CR	None
<i>Euastacus eungella</i>		E	None
<i>Euastacus hystricosus</i>		E	None
<i>Euastacus jagara</i>	Jagara hairy crayfish	CR	None
<i>Euastacus maidae</i>		CR	None
<i>Euastacus monteithorum</i>		E	None
<i>Euastacus robertsi</i>		E	None
<i>Taudactylus pleione</i>	Kroombit tinkerfrog	E	None
<i>Litoria freycineti</i>	Wallum rocketfrog	V	None
<i>Litoria olongburensis</i>	Wallum sedgefrog	V	None
<i>Macadamia integrifolia</i>		V	None
<i>Melaleuca irbyana</i>	swamp tea-tree	E	None
<i>Macadamia ternifolia</i>		V	None
<i>Macadamia tetraphylla</i>	bopple nut	V	None
<i>Petrogale penicillata</i>	brush-tailed rock-wallaby	V	None
<i>Petrogale coenensis</i>	Cape York rock-wallaby	V	None
<i>Petrogale purpureicollis</i>	purple-necked rock-wallaby	V	None
<i>Petrogale sharmani</i>	Sharmans rock-wallaby	V	None
<i>Petrogale xanthopus celeris</i>	yellow-footed rock-wallaby (Qld subspecies)	V	None
<i>Petaurus gracilis</i>	Mahogany Glider	E	None
<i>Petrogale persephone</i>	Proserpine rock-wallaby	E	None
<i>Phascolarctos cinereus</i>	Koala - outside SEQ*	E	None
<i>Pezoporus wallicus wallicus</i>	Eastern ground parrot	V	None
<i>Xeromys myoides</i>	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** and **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.qld.gov.au/regional-ecosystems/>

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

Regional ecosystem	Vegetation management polygon	Vegetation management status
7.2.8	O-dom	rem_oc

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

Regional ecosystem	Vegetation management polygon	Vegetation management status
7.1.2a	O-dom	hvr_oc
7.2.2a	O-dom	hvr_oc
7.2.4a	O-dom	hvr_oc
7.2.8	O-dom	hvr_oc

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

Regulated vegetation map category	Map number
R	7965

8d. Regulated Vegetation - Essential habitat

Values are present

8e. Regulated Vegetation - intersecting a watercourse**

Not applicable

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

Regulated vegetation map category	Map number
B	7965
C	7965
R	7965

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

MSES - Offsets**9a. Legally secured offset areas - offset register areas**

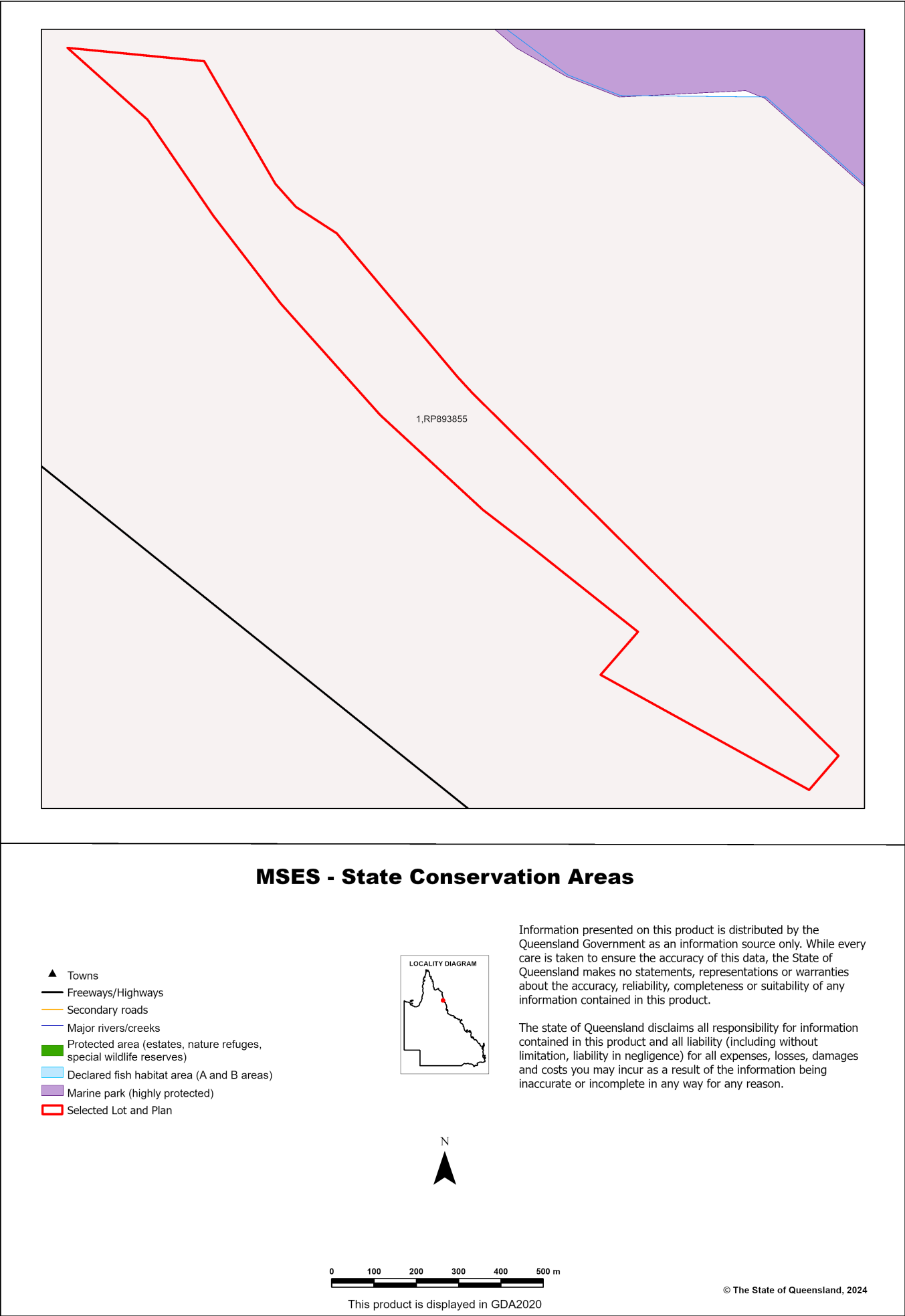
(No results)

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

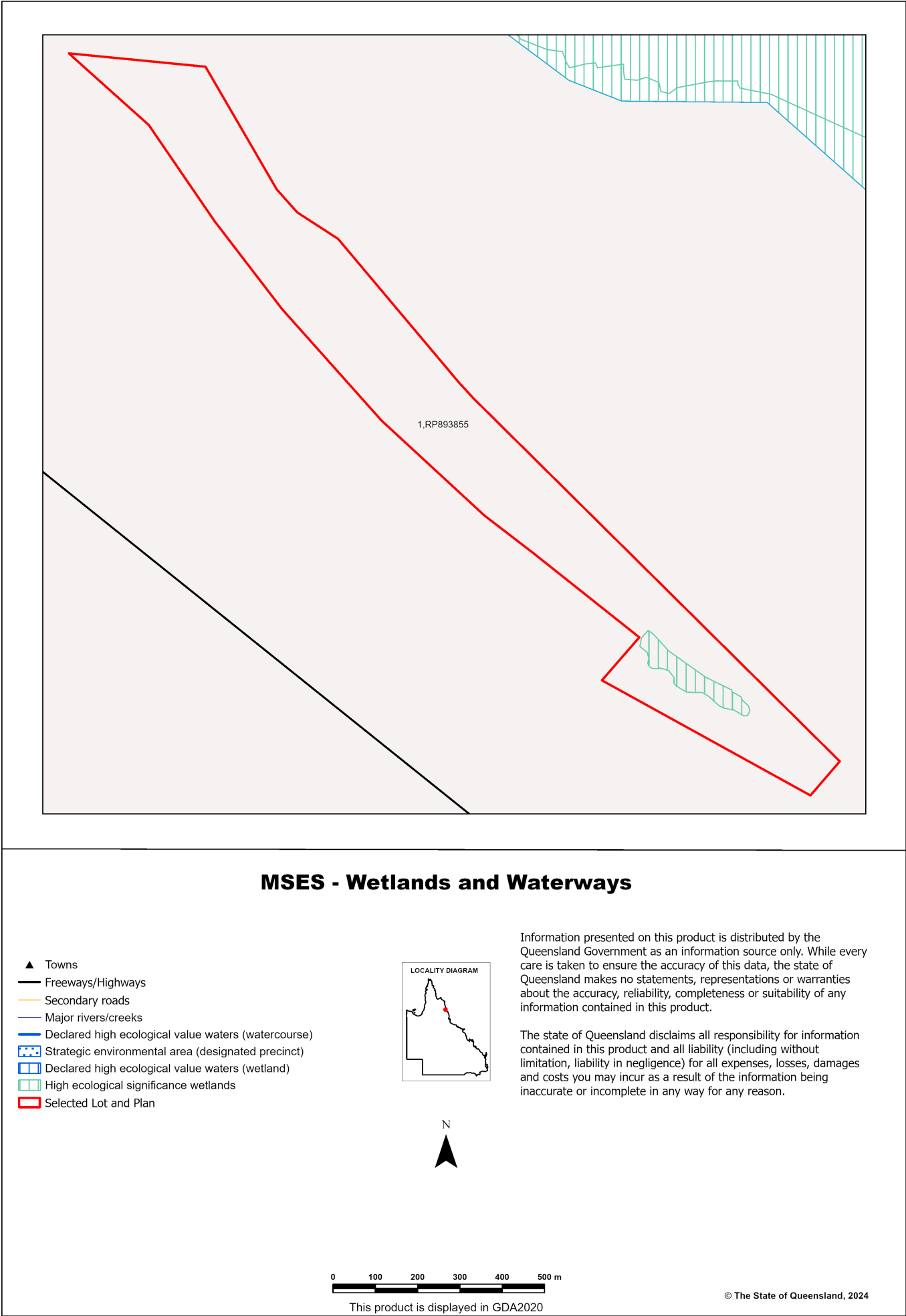
(No results)

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

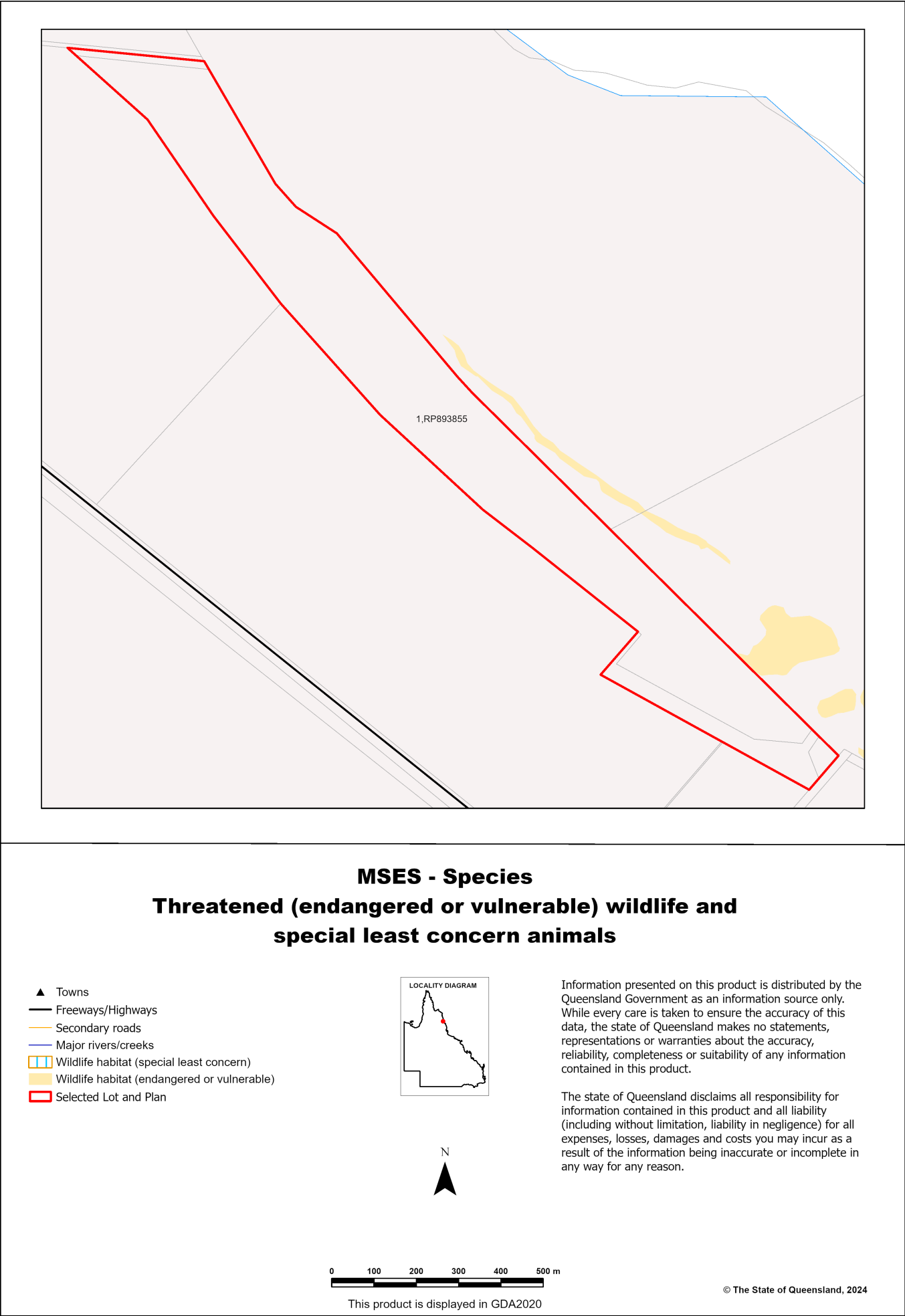
Map 1 - MSES - State Conservation Areas



Map 2 - MSES - Wetlands and Waterways



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



MSES - Species Koala habitat area (SEQ)

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Koala habitat area (core)
- Koala habitat area (locally refined)
- Selected Lot and Plan

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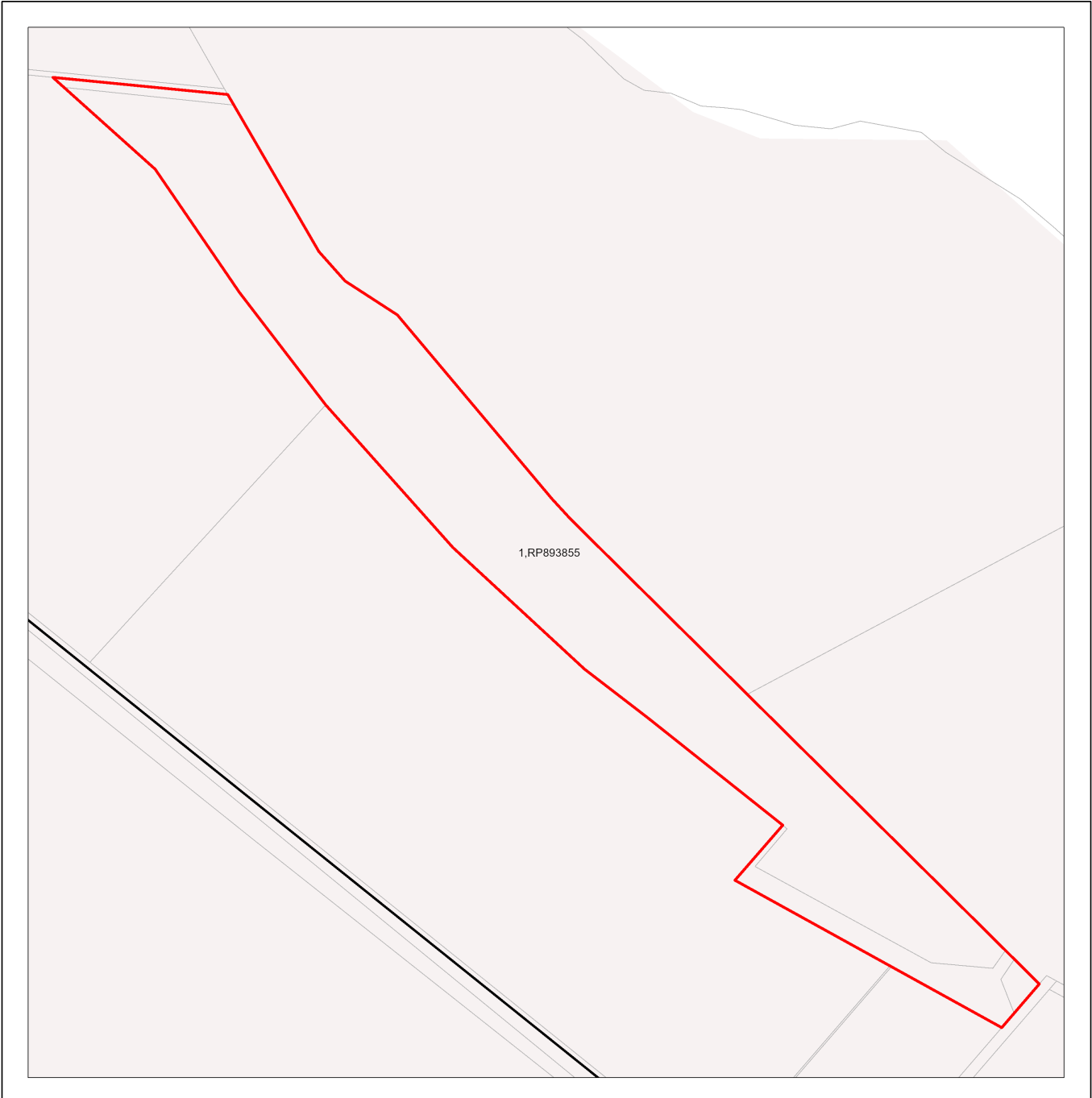
The represented layers for SEQ 'koala habitat area-core' and 'koala habitat area- locally refined' in MSES are sourced directly from the regulatory mapping under the Nature Conservation (Koala) Conservation Plan 2017. Whilst every effort is made to ensure the information remains current, there may be delays between updating versions. Please refer to the original mapping for the most recent version. See <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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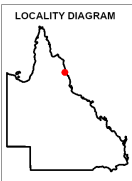
This product is displayed in GDA2020

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



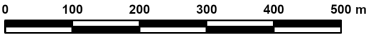
MSES - Wildlife habitat (sea turtle nesting areas)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (sea turtle nesting areas)
- Selected Lot and Plan

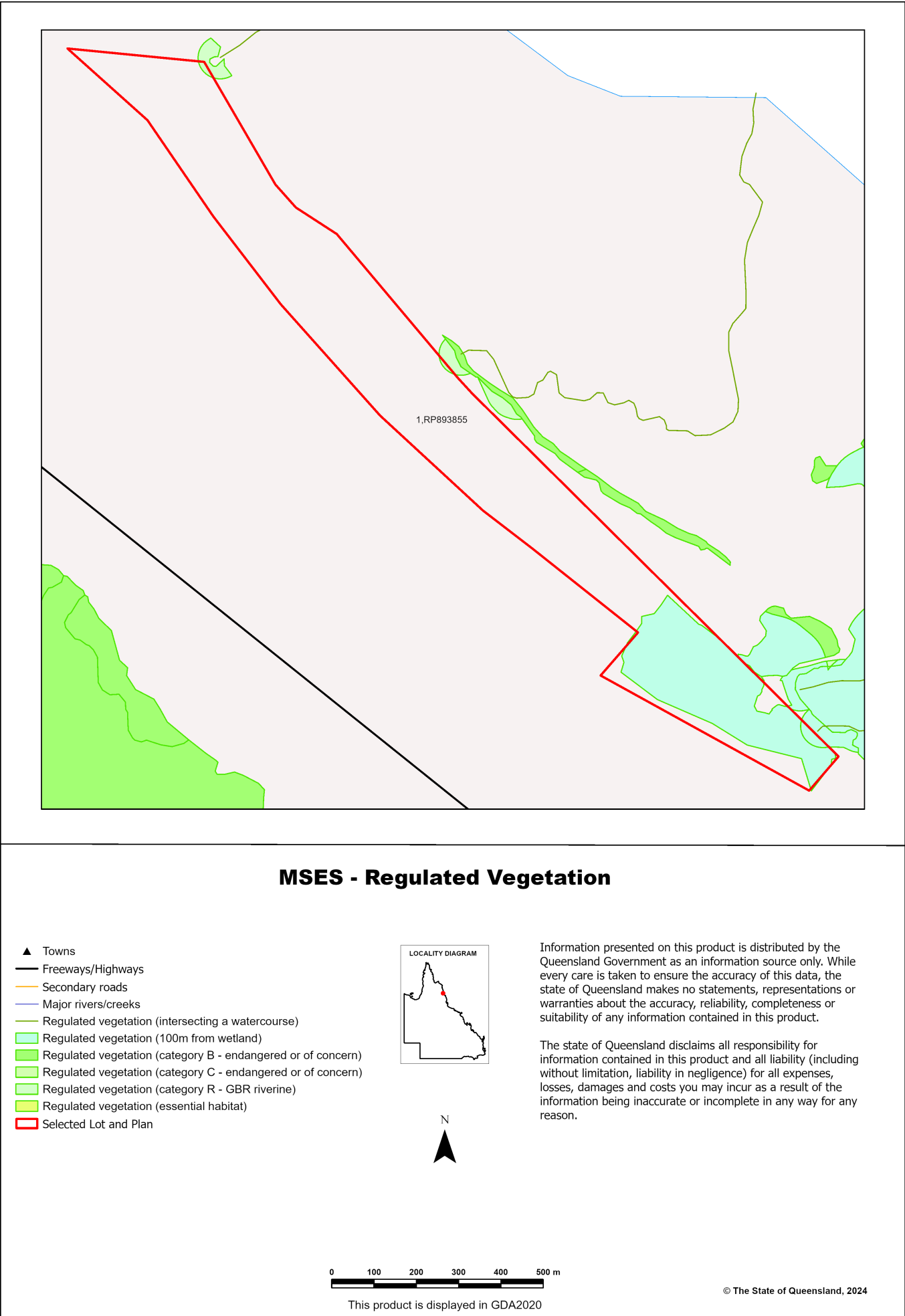


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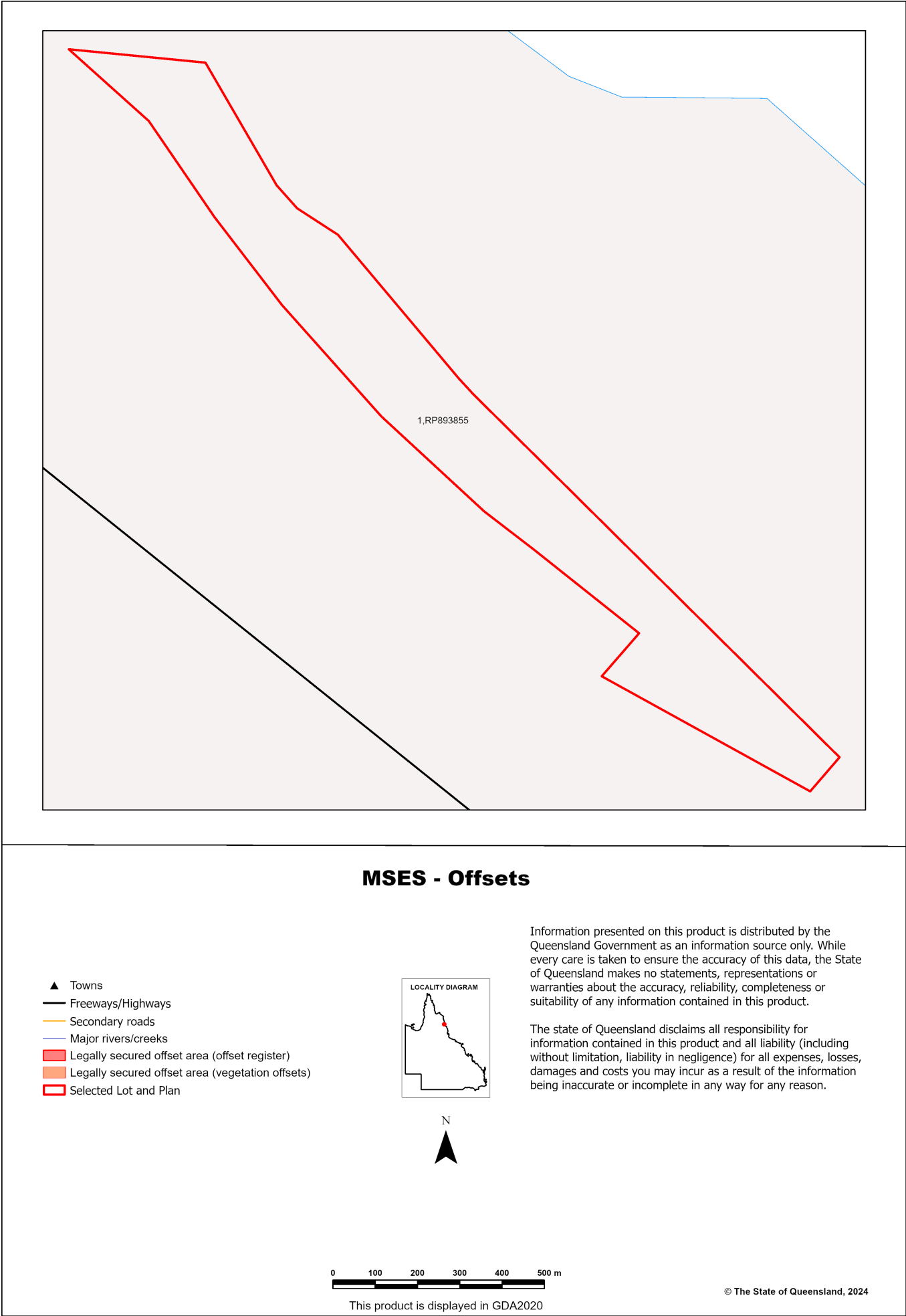
MSES mapping of sea turtle nesting areas identifies beaches where the recorded number of turtle nests are over 1% of the turtle species or genetic stock. The linework is also deliberately extended along nearby rocky coastlines and headlands to recognise that significant numbers of nesting adults and hatchlings can become disoriented by light pollution from development on rocky coastlines and headlands while navigating offshore from nesting beaches.



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). Its primary purpose is to support implementation of the SPP biodiversity policy.

MSES mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

MSES mapping does not determine whether state or local development assessment is required. For state assessment triggers refer to the Development Assessment Mapping System (DAMS). For local assessment triggers, refer to the relevant local planning scheme.

The Queensland Government's "Method for mapping - matters of state environmental significance 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
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
DESI	- Department of Environment, Science and Innovation
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 D – Regional Ecosystem Report



Queensland Government

Department of Environment, Science and Innovation

Environmental Reports

Regional Ecosystems

Biodiversity Status

For the selected area of interest

Lot: 1 Plan: RP893855

Environmental Reports - General Information

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Figures in tables may be affected by rounding.

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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.

Important Note to User

Information presented in this report is based upon the Queensland Herbarium & Biodiversity Science's Regional Ecosystem framework. The Biodiversity Status has been used to depict the extent of "Endangered", "Of Concern" and "No Concern at Present" regional ecosystems in all cases, rather than the classes used for the purposes of the *Vegetation Management Act 1999* (VMA). Mapping and figures presented in this document reflect the Queensland Herbarium & Biodiversity Science's Remnant and Pre-clearing Regional Ecosystem Datasets, and not the certified mapping used for the purpose of the VMA.

For matters relevant to vegetation management under the VMA, please refer to the Department of Resources website <https://www.resources.qld.gov.au/>

Please direct queries about these reports to: Queensland.Herbarium@qld.gov.au

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Summary Information

The following table provides an overview of the AOI with respect to selected topographic and environmental themes. Refer to **Map 1** for locality information.

Table 1: Details for area of interest:
Lot: 1 Plan: RP893855, with area 40.48 ha

Local Government(s)	Catchment(s)	Bioregion(s)	Subregion(s)
Douglas Shire	Mossman	Wet Tropics	Daintree - Bloomfield

The table below summarizes the extent of remnant vegetation classed as "Endangered", "Of concern" and "No concern at present" regional ecosystems classified by Biodiversity Status within the area of interest (AOI).

Table 2: Summary table, biodiversity status of regional ecosystems within the AOI

Biodiversity Status	Area (Ha)	% of AOI
Endangered	less than 0.01	less than 0.01
Of concern	0.00	0.00
No concern at present	0.00	0.00
Total remnant vegetation	less than 0.01	less than 0.01

Refer to **Map 2** for further information.

Regional Ecosystems

1. Introduction

Regional ecosystems are vegetation communities in a bioregion that are consistently associated with particular combinations of geology, landform and soil (Sattler and Williams 1999). Descriptions of Queensland's Regional ecosystems are available online from the Regional Ecosystem Description Database (REDD). Descriptions are compiled from a broad range of information sources including vegetation, land system and geology survey and mapping and detailed vegetation site data. The regional ecosystem classification and descriptions are reviewed as new information becomes available. A number of vegetation communities may form a single regional ecosystem and may be distinguished by differences in structure or sub-dominant species in the ecologically dominant layer. Vegetation communities with different dominant species in the ecologically dominant layer may be amalgamated into a regional ecosystem if they are not mappable and predictable in the landscape at 1:100 000 scale. Vegetation communities may be mappable at a scale larger than 1:100 000. Vegetation communities within a regional ecosystem are denoted by a letter following the regional ecosystem code (e.g. a, b, c). Vegetation communities and regional ecosystems are amalgamated into a higher level classification of broad vegetation groups (BVGs).

A published methodology for survey and mapping of regional ecosystems across Queensland (Neldner et al 2023) provides further details on regional ecosystem concepts and terminology.

This report provides information on the type, status, and extent of vegetation communities, regional ecosystems and broad vegetation groups present within a user specified area of interest. Please note, for the purpose of this report, the Biodiversity Status is used. This report has not been developed for application of the *Vegetation Management Act 1999* (VMA). Additionally, information generated in this report has been derived from the Queensland Herbarium & Biodiversity Science's Regional Ecosystem Mapping, and not the regulated mapping certified for the purposes of the VMA. If your interest/matter relates to regional ecosystems and the VMA, users should refer to the Department of Resources website <https://www.resources.qld.gov.au/>.

With respect to the Queensland Biodiversity Status,

"Endangered" regional ecosystems are described as those where:

- remnant vegetation is less than 10 per cent of its pre-clearing extent across the bioregion; or 10-30% of its pre-clearing extent remains and the remnant vegetation is less than 10,000 hectares, or
- less than 10 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss*, or
- 10-30 percent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss and the remnant vegetation is less than 10,000 hectares; or
- it is a rare** regional ecosystem subject to a threatening process.***

"Of concern" regional ecosystems are described as those where:

- the degradation criteria listed above for 'Endangered' regional ecosystems are not met and,
- remnant vegetation is 10-30 per cent of its pre-clearing extent across the bioregion; or more than 20 per cent of its pre-clearing extent remains and the remnant extent is less than 10,000 hectares, or
- 10-30 percent of its pre-clearing extent remains unaffected by moderate degradation and/or biodiversity loss.****

and "No concern at present" regional ecosystems are described as those where:

- remnant vegetation is over 30 percent of its pre-clearing extent across the bioregion, and the remnant area is greater than 10,000 hectares, and
- the degradation criteria listed above for 'Endangered' or 'Of concern' regional ecosystems are not met.

**Severe degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 50 years even with the removal of threatening processes; or soil surface is severely degraded, for example, by loss of A horizon, surface expression of salinity; surface compaction, loss of organic matter or sheet erosion.*

***Rare regional ecosystem: pre-clearing extent (<1000 ha); or patch size (<100 ha and of limited total extent across its range).*

****Threatening processes are those that are reducing or will reduce the biodiversity and ecological integrity of a regional ecosystem. For example, clearing, weed invasion, fragmentation, inappropriate fire regime or grazing pressure, or infrastructure development.*

*****Moderate degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 20 years even with the removal of threatening processes; or soil surface is moderately degraded.*

2. Remnant Regional Ecosystems

The following table identifies the remnant regional ecosystems and vegetation communities mapped within the AOI and provides their short descriptions, Biodiversity Status, and remnant extent within the selected AOI. Please note, where heterogeneous vegetated patches (mixed patches of remnant vegetation mapped as containing multiple regional ecosystems) occur within the AOI, they have been split and listed as individual regional ecosystems (or vegetation communities where present) for the purposes of the table below. In such instances, associated area figures have been generated based upon the estimated proportion of each regional ecosystem (or vegetation community) predicted to be present within the larger mixed patch.

Table 3: Remnant regional ecosystems, description and status within the AOI

Regional Ecosystem	Short Description	BD Status	Area (Ha)	% of AOI
7.2.8	Melaleuca leucadendra open forest to woodland on sands of beach origin	Endangered	less than 0.01	less than 0.01
non-remnant	None	None	40.23	99.37
water	None	None	0.25	0.62

Refer to **Map 2** for further information. **Map 3** also provides a visual estimate of the distribution of regional ecosystems present before clearing.

Table 4 provides further information in regards to the remnant regional ecosystems present within the AOI. Specifically, the extent of remnant vegetation remaining within the bioregion, the 1:1,000,000 broad vegetation group (BVG) classification, whether the regional ecosystem is identified as a wetland, and extent of representation in Queensland's Protected Area Estate. For a description of the vegetation communities within the AOI and classified according to the 1:1,000,000 BVG, refer to **Table 6**.

Table 4: Remnant regional ecosystems within the AOI, additional information

Regional Ecosystem	Remnant Extent	BVG (1 Million)	Wetland	Representation in protected estate
7.2.8	Pre-clearing 2000 ha; Remnant 2021 1000 ha	22b	Palustrine	High
non-remnant	None	None	None	None
water	None	None	None	None

Representation in Protected Area Estate: High greater than 10% of pre-clearing extent is represented; Medium 4 - 10% is represented; Low less than 4% is represented, No representation.

The distribution of mapped wetland systems within the area of interest is displayed in **Map 6**.

The following table lists known special values associated with a regional ecosystem type.

Table 5: Remnant regional ecosystems within the AOI, special values

Regional Ecosystem	Special Values
7.2.8	7.2.8: Potential habitat for NCA listed species: <i>Nepenthes mirabilis</i> (Bramston Beach), <i>Piper mestonii</i> .
non-remnant	None
water	None

3. Remnant Regional Ecosystems by Broad Vegetation Group

BVGs are a higher-level grouping of vegetation communities. Queensland encompasses a wide variety of landscapes across temperate, wet and dry tropics and semi-arid climatic zones. BVGs provide an overview of vegetation communities across the state or a bioregion and allow comparison with other states. There are three levels of BVGs which reflect the approximate scale at which they are designed to be used: the 1:5,000,000 (national), 1:2,000,000 (state) and 1:1,000,000 (regional) scales.

A comprehensive description of BVGs is available at: <https://publications.qld.gov.au/dataset/redd/resource/>

The following table provides a description of the 1:1,000,000 BVGs present and their associated extent within the AOI.

Table 6: Broad vegetation groups (1 million) within the AOI

BVG (1 Million)	Description	Area (Ha)	% of AOI
None	None	40.48	100.00
22b	Open forests and low open forests dominated by <i>Melaleuca</i> spp. (<i>M. saligna</i> , <i>M. leucadendra</i> (broad-leaved tea-tree), <i>M. clarksonii</i> or <i>M. arcana</i> (winti) in seasonally inundated swamps.	less than 0.01	less than 0.01

Refer to **Map 4** for further information. **Map 5** also provides a representation of the distribution of vegetation communities as per the 1:5,000,000 BVG believed to be present prior to European settlement.

4. Technical and BioCondition Benchmark Descriptions

Technical descriptions provide a detailed description of the full range in structure and floristic composition of regional ecosystems (e.g. 11.3.1) and their component vegetation communities (e.g. 11.3.1a, 11.3.1b). See: <http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/>

The descriptions are compiled using site survey data from the Queensland Herbarium & Biodiversity Science's QBEIS database. Distribution maps, representative images (if available) and the pre-clearing and remnant extent (hectares) of each vegetation community derived from the regional ecosystem mapping data are included. The technical descriptions should be used in conjunction with the fields from the regional ecosystem description database (REDD) for a full description of the regional ecosystem.

Technical descriptions include data on canopy height, canopy cover and native plant species composition of the predominant layer, which are attributes relevant to assessment of the remnant status of vegetation under the *Vegetation Management Act 1999*. However, as technical descriptions reflect the full range in structure and floristic composition across the climatic, natural disturbance and geographic range of the regional ecosystem, local reference sites should be used for remnant assessment where possible (Neldner et al. 2023 (PDF)* section 3.3 of: https://www.qld.gov.au/_data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

The technical descriptions are subject to review and are updated as additional data becomes available.

When conducting a BioCondition assessment, these technical descriptions should be used in conjunction with BioCondition benchmarks for the specific regional ecosystem, or component vegetation community. <http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/>

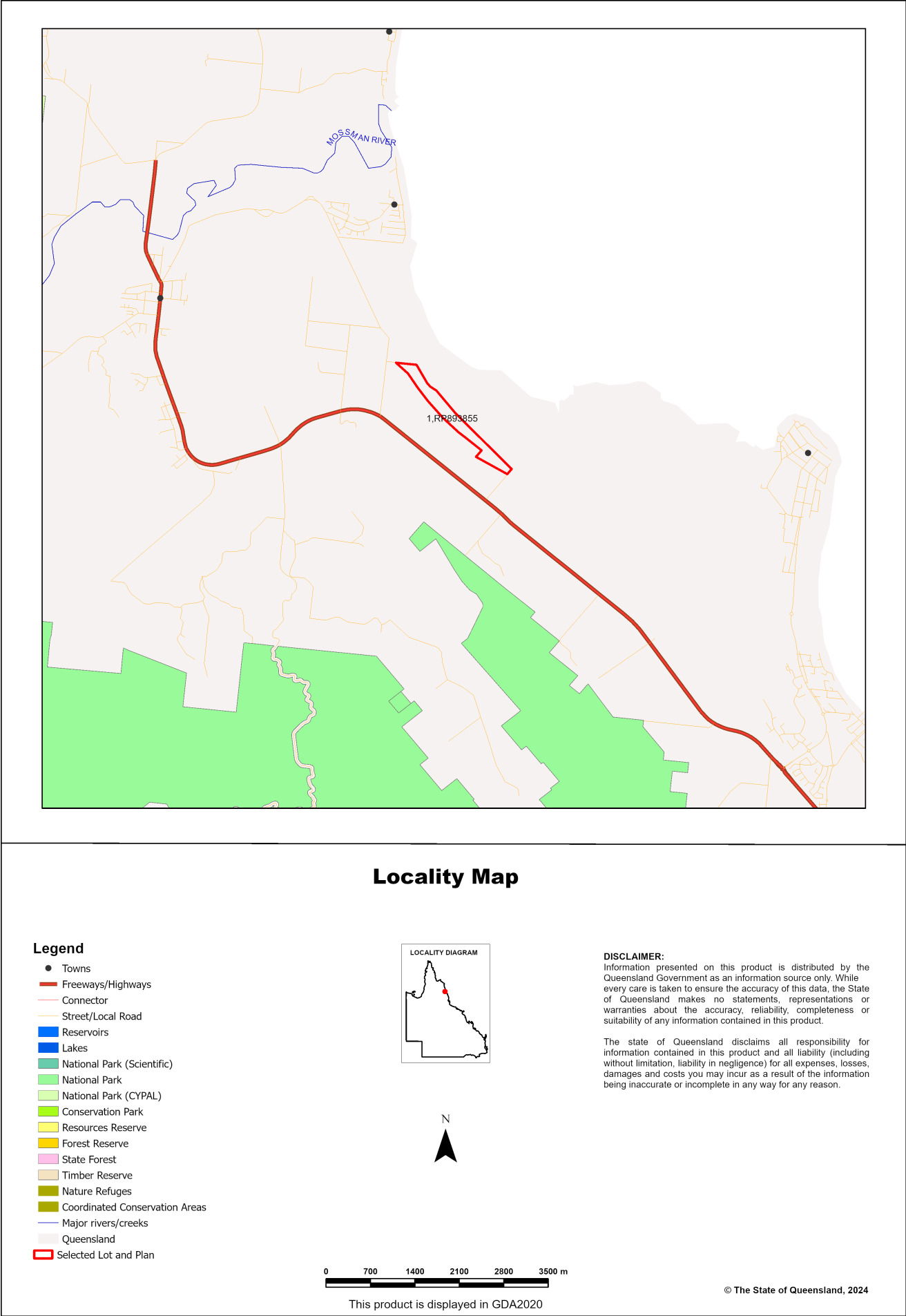
Benchmarks are based on a combination of quantitative and qualitative information and should be used as a guide only. Benchmarks are specific to one regional ecosystem vegetation community, however, the natural variability in structure and floristic composition under a range of climatic and natural disturbance regimes has been considered throughout the geographic extent of the regional ecosystem. Local reference sites should be used for this spatial and temporal (seasonal and annual) variability.

Table 7: List of remnant regional ecosystems within the AOI for which technical and biocondition benchmark descriptions are available

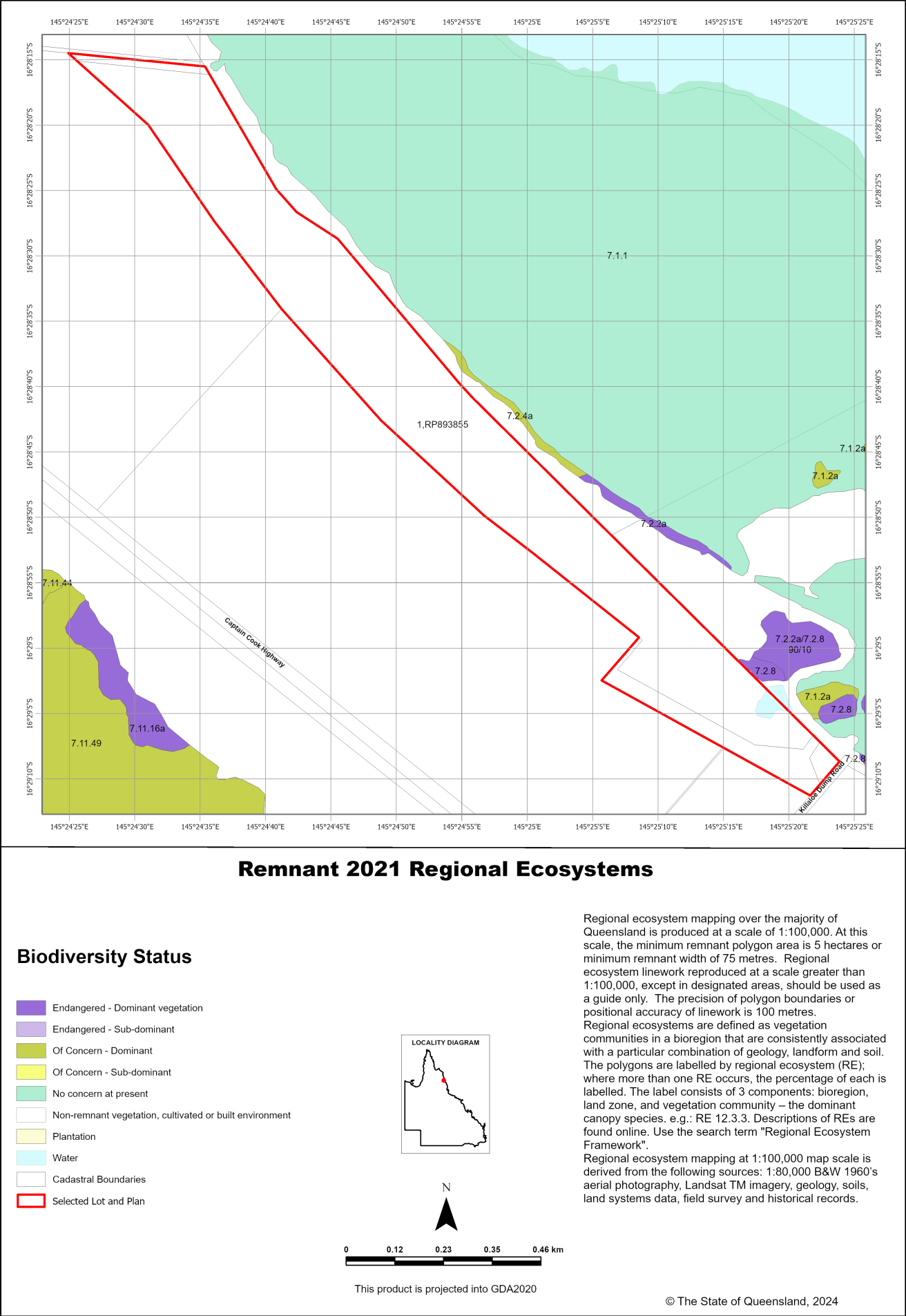
Regional ecosystems mapped as within the AOI	Technical Descriptions	Biocondition Benchmarks
7.2.8	Not currently available	Not currently available
non-remnant	Not currently available	Not currently available
water	Not currently available	Not currently available

Maps

Map 1 - Location

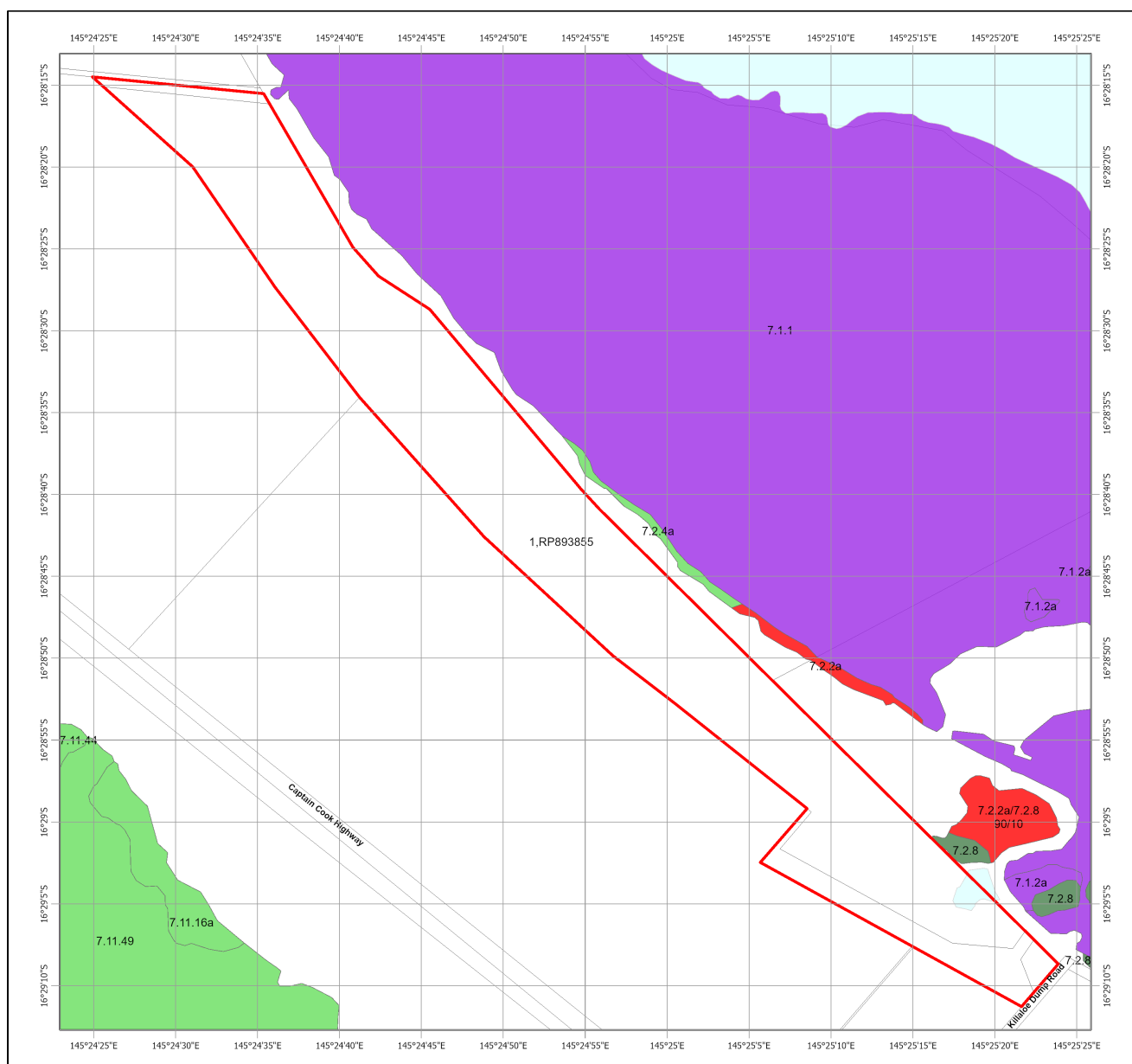


Map 2 - Remnant 2021 regional ecosystems



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Map 4 - Remnant 2021 regional ecosystems by BVG (5M)



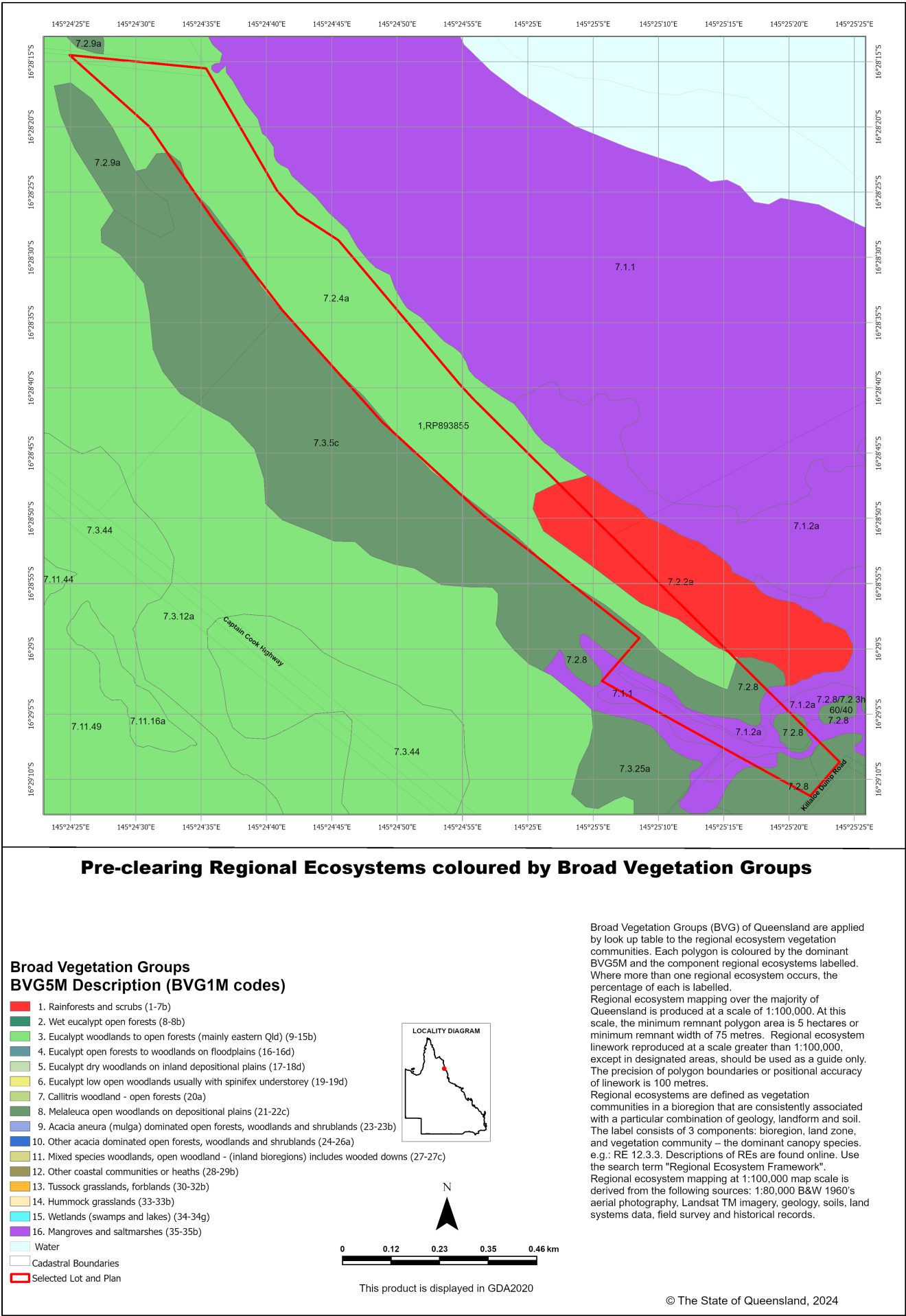
Remnant 2021 Regional Ecosystems coloured by Broad Vegetation Groups

Broad Vegetation Groups
BVG5M Description (BVG1M codes)

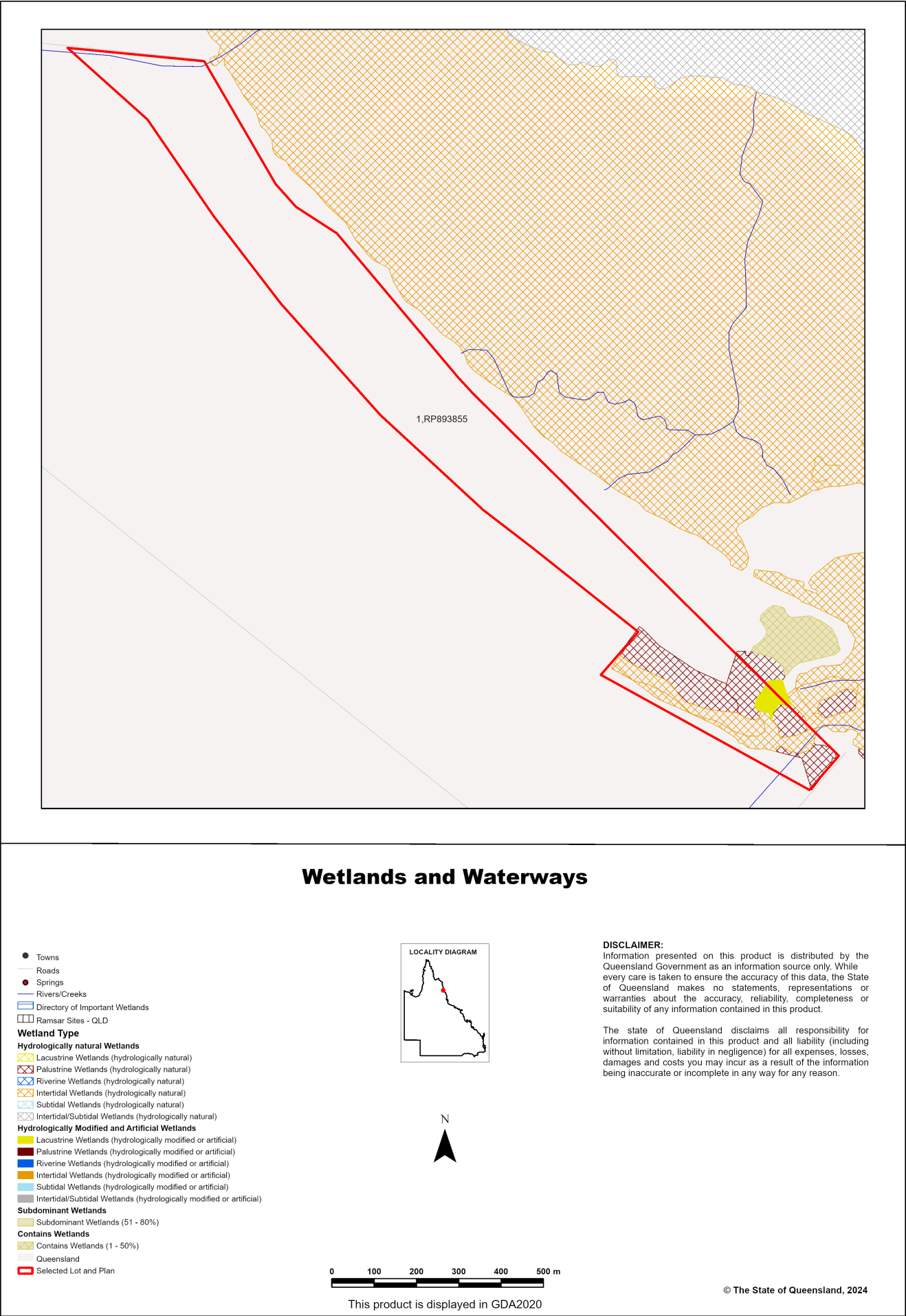
-
1. Rainforests and scrubs (1-7b)
2. Wet eucalypt open forests (8-8b)
3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
4. Eucalypt open forests to woodlands on floodplains (16-16d)
5. Eucalypt dry woodlands on inland depositional plains (17-18d)
6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
7. *Callitris* woodland - open forests (20a)
8. *Melaleuca* open woodlands on depositional plains (21-22c)
9. *Acacia aneura* (mulga) dominated open forests, woodlands and shrublands (23-23b)
10. Other *Acacia* dominated open forests, woodlands and shrublands (24-26a)
11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
12. Other coastal communities or heaths (28-29b)
13. Tussock grasslands, forblands (30-32b)
14. Hummock grasslands (33-33b)
15. Wetlands (swamps and lakes) (34-34g)
16. Mangroves and saltmarshes (35-35b)
- Non-remnant vegetation, cultivated or built environment
- Water
- Cadastral Boundaries
- Selected Lot and Plan
- 0 0.12 0.23
- LOCALITY

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled. Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres. Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species, e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework". Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 BWV 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records. Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy. Non-remnant vegetation includes regrowth and disturbed native vegetation.

Map 5 - Pre-clearing regional ecosystems by BVG (5M)



Map 6 - Wetlands and waterways



Links and Other Information Sources

The Department of Environment, Science and Innovation's Website -

<http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/> provides further information on the regional ecosystem framework, including access to links to the Regional Ecosystem Database, Broad Vegetation Group Definitions, Regional Ecosystem and Land zone descriptions.

Descriptions of the broad vegetation groups of Queensland can be downloaded from:

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/broad-vegetation>

The methodology for mapping regional ecosystems can be downloaded from:

https://www.qld.gov.au/_data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

Technical descriptions for regional ecosystems can be obtained from:

<http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/>

Benchmarks can be obtained from: <http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/>

For further information associated with the remnant regional ecosystem dataset used by this report, refer to the metadata associated with the Biodiversity status of pre-clearing and Remnant Regional Ecosystems of Queensland dataset (version listed in **Appendix 1**) which is available through the Queensland Spatial Catalogue, [Queensland Spatial Catalogue : Queensland Government \(information.qld.gov.au\)](http://www.qld.gov.au/spatial-catalogue)

The Queensland Globe is a mapping and data application. As an interactive online tool, Queensland Globe allows you to view and explore Queensland maps, imagery (including up-to-date satellite images) and other spatial data, including regional ecosystem mapping. To further view and explore regional ecosystems over an area of interest, access the Biota Globe (a component of the Queensland Globe). The Queensland Globe can be accessed via the following link:

<https://qldglobe.information.qld.gov.au/>

References

Neldner, V.J., Niehus, R.E., Wilson, B.A., McDonald, W.J.F., Ford, A.J. and Accad, A. (2023). The Vegetation of Queensland. Descriptions of Broad Vegetation Groups. Version 6.0. Queensland Herbarium, Department of Environment and Science.

<https://publications.qld.gov.au/dataset/redd/resource/78209e74-c7f2-4589-90c1-c33188359086>

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F., Richter, D., Addicott, E.P. and Appelman, C.N. (2023) Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 7.0. Updated December 2023. Queensland Herbarium, Queensland Department of Environment, Science and Innovation, Brisbane.

https://www.qld.gov.au/_data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

Sattler, P.S. and Williams, R.D. (eds) (1999). *The Conservation Status of Queensland's Bioregional Ecosystems*. Environmental Protection Agency, Brisbane.

Appendices

Appendix 1 - Source Data

The dataset listed below is available for download from:

<http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/download/>

- Regional Ecosystem Description Database

The datasets listed below are available for download from:

[Queensland Spatial Catalogue : Queensland Government \(information.qld.gov.au\)](https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/download/)

- Biodiversity status of pre-clearing and 2021 remnant regional ecosystems of Queensland
- Pre-clearing Vegetation Communities and Regional Ecosystems of Queensland
- Queensland Wetland Data Version - Wetland lines
- Queensland Wetland Data Version - Wetland points
- Queensland Wetland Data Version - Wetland areas
- Pre-clearing broad vegetation groups of Queensland
- Remnant 2021 broad vegetation groups of Queensland

Appendix 2 - Acronyms and Abbreviations

AOI	- Area of Interest
GIS	- Geographic Information System
RE	- Regional Ecosystem
REDD	- Regional Ecosystem Description Database
VMA	- <i>Vegetation Management Act 1999</i>

Appendix E EMR/CLR Search Report



Department of Environment, Science and Innovation (DESI)
ABN 46 640 294 485
GPO Box 2454, Brisbane QLD 4001, AUSTRALIA
www.des.qld.gov.au

SEARCH RESPONSE
ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Dye and Durham Terrain
GPO Box 1612
Brisbane QLD 4001

Transaction ID: 50955010 EMR Site Id: 20 August 2024
Cheque Number:
Client Reference:

This response relates to a search request received for the site:

Lot: 1 Plan: RP893855
CAPTAIN COOK HWY
KILLALOE

EMR RESULT

The above site is NOT included on the Environmental Management Register.

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

All search responses include particulars of land listed in the EMR/CLR when the search was generated.
The EMR/CLR does NOT include:-

1. land which is contaminated land (or a complete list of contamination) if DESI has not been notified
2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if DESI has not been notified

If you have any queries in relation to this search please email emr.clr.registry@des.qld.gov.au

Administering Authority