Livingstone
SHIRE COUNCIL

ORDINARY MEETING

AGENDA

17 JULY 2018

Your attendance is required at an Ordinary meeting of Council to be held in the Council Chambers, 4 Lagoon Place, Yeppoon on 17 July 2018 commencing at 9:00am for transaction of the enclosed business.

CHIEF EXECUTIVE OFFICER
18 July 2018

Next Meeting Date: 24.07.18

Please note:

In accordance with the *Local Government Regulation 2012*, please be advised that all discussion held during the meeting is recorded for the purpose of verifying the minutes. This will include any discussion involving a Councillor, staff member or a member of the public.

TABLE OF CONTENTS

ITEM	SUBJECT	PAGE NO
1	OPENING	3
2	ATTENDANCE	3
3	LEAVE OF ABSENCE / APOLOGIES	4
	NIL	4
4	PUBLIC FORUMS/DEPUTATIONS	5
	NIL	5
5	MAYORAL MINUTE	6
	NIL	6
6	CONFIRMATION OF MINUTES OF PREVIOUS MEETING	7
7	DECLARATION OF INTEREST IN MATTERS ON THE AGENDA	8
8	BUSINESS ARISING OR OUTSTANDING FROM PREVIOUS MEETINGS	9
	NIL	9
9	PRESENTATION OF PETITIONS	10
	NIL	10
10	AUDIT, RISK AND BUSINESS IMPROVEMENT COMMITTEE REPORTS	11
	NIL	11
11	COUNCILLOR/DELEGATE REPORTS	12
	NIL	12
12	REPORTS	13
	12.1 AUDIT, RISK AND BUSINESS IMPROVEMENT COMMITTEE - 25 JUNE 2018	13
	12.2 INTERNAL AUDIT PLAN FOR 2018 - 2019	46
	12.3 2018-19 INVESTMENT POLICY	62
	12.4 2018/19 FEES AND CHARGES	70
	12.5 BLACK SPOT FUNDING APPLICATION	73
	12.6 DRAFT FIG TREE CREEK MASTERPLAN	76
	12.7 FLYING FOX ROOST MANAGEMENT - STATEMENT OF MANAGEMENT INTENT	116
	12.8 KEPPEL BAY SAILING CLUB REQUEST FOR TENURE - CAUSEWAY LAKE	125
	12.9 COMMUNITY ORGANISATION LEASE RENEWALS	134
	12.10 MULTICULTURAL DEVELOPMENT AUSTRALIA - SKILLING QUEENSLANDERS FOR WORK PROGRAMME - JACK'S PADDOCK	137

12.11 REQUEST FOR NEGOTIATED INFRASTRUCTURE CHARGES FOR A DEVELOPMENT PERMIT D-159-2017 FOR RECONFIGURING A LOT (ONE LOT INTO FIFTEEN LOTS) 144
12.12 DECISION ASSESSMENT FOR A DEVELOPMENT APPLICATION FOR A DEVELOPMENT PERMIT FOR A MATERIAL CHANGE OF USE FOR A SPECIAL USE (PET CREMATORIUM) AT 410 AND 424 TANBY POST OFFICE ROAD, BONDOOLA 174
12.13 DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK 225
12.14 MONTHLY FINANCIAL REPORT FOR THE PERIOD ENDING 30 JUNE 2018 622

13 QUESTIONS/STATEMENT/MOTIONS ON NOTICE FROM COUNCILLORS 642

NIL 642

14 CLOSED SESSION 643

15.1 CONCEALED LEAK REBATE - 14 WALL STREET, COOEE BAY
15.2 EXCESSIVE WATER USE WITH FAILED WATER METER - 6 - 8 KRISTIE DRIVE, ROCKYVIEW
15.3 DISTRIBUTION OF RECORDS

15 CONFIDENTIAL REPORTS 644

15.1 CONCEALED LEAK REBATE - 14 WALL STREET, COOEE BAY 644
15.2 EXCESSIVE WATER USE WITH FAILED WATER METER - 6 - 8 KRISTIE DRIVE, ROCKYVIEW 645
15.3 DISTRIBUTION OF RECORDS 646

16 URGENT BUSINESS/QUESTIONS 647

17 CLOSURE OF MEETING 648

1 OPENING

2 ATTENDANCE

Members Present:

Mayor, Councillor Bill Ludwig (Chairperson)
Deputy Mayor, Councillor Nigel Hutton
Councillor Adam Belot
Councillor Pat Eastwood
Councillor Jan Kelly
Councillor Glenda Mather
Councillor Tom Wyatt

In Attendance:

Mr Dan Toon – Executive Director Infrastructure and Acting Chief Executive Officer
Mrs Debra Howe – Acting Executive Director Liveability and Wellbeing
Mr Dan Toon – Executive Director Infrastructure
Mrs Andrea Ellis – Chief Financial Officer
Mr Matthew Willcocks - Chief Technology Officer
Mr Shane Weir - Acting Chief Human Resources Officer

3 LEAVE OF ABSENCE / APOLOGIES

Nil

4 PUBLIC FORUMS/DEPUTATIONS

Nil

5 MAYORAL MINUTE

Nil

6 CONFIRMATION OF MINUTES OF PREVIOUS MEETING

Minutes of the Ordinary Meeting held 3 July 2018.

Minutes of the Special Meeting held 10 July 2018.

Minutes of the Special Meeting held 12 July 2018.

7 DECLARATION OF INTEREST IN MATTERS ON THE AGENDA

8 BUSINESS ARISING OR OUTSTANDING FROM PREVIOUS MEETINGS

Nil

9 PRESENTATION OF PETITIONS

Nil

10 AUDIT, RISK AND BUSINESS IMPROVEMENT COMMITTEE REPORTS

Nil

11 COUNCILLOR/DELEGATE REPORTS

Nil

12 REPORTS

12.1 AUDIT, RISK AND BUSINESS IMPROVEMENT COMMITTEE - 25 JUNE 2018

File No:	**GV13.4.2**
Attachments:	**1. ARaBIC Minutes 25 June 2018 - Unconfirmed⇩**
Responsible Officer:	**Scott Williams - Internal Auditor** **Andrea Ellis - Chief Financial Officer**
Author:	**Tanya Callaghan - Support Services Officer**

SUMMARY

The Audit, Risk and Business Improvement Committee met on 25 June 2018 and this report provides the recommendations from the Committee for consideration and adoption by Council. The reports from the meeting are available for viewing by Councillors on the Councillor Portal.

OFFICER'S RECOMMENDATION

THAT the unconfirmed minutes of the Audit, Risk and Business Improvement Committee meeting held on 25 June, 2018 be received and the following recommendations contained within those minutes be adopted.

3. PUBLIC FORUMS/DEPUTATIONS

Nil

4. CONFIRMATION OF MINUTES OF PREVIOUS MEETING

THAT the minutes of the Audit, Risk and Business Improvement Committee held on 25 June 2018 be taken as read and adopted as a correct record.

5. DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA

Nil

6. BUSINESS ARISING OR OUTSTANDING FROM PREVIOUS MEETINGS

Nil

7.1 COMMITTEE WORK PROGRAM STATUS

THAT the Committee receives the status of the Annual Work Program.

7.2 EXECUTIVE LEADERSHIP TEAM UPDATE TO THE COMMITTEE

THAT the Committee receives the verbal updates provided by the Leadership team on key activities or issues.

7.3 CFO UPDATE

THAT the Audit Risk and Business Improvement Committee receive the Chief Financial Officer's update.

7.4 NON-CURRENT ASSET REVALUATIONS POSITION PAPER

THAT ARaBIC note the results of the 2017-18 non-current asset revaluations and endorse the report for consideration by Council.

7.5 EXTERNAL AUDITOR'S UPDATE

THAT the Committee receive the External Auditor's update from the external auditors.

7.6 FINAL INTERNAL AUDIT PLAN FOR 2018 TO 2022

THAT the Committee endorse the Internal Audit Plan for 2018 to 2022. This report is to be brought back to Council as a separate agenda item for consideration.

7.7 INTERNAL AUDIT REPORT – COMMUNITY GRANTS PROGRAMS

THAT the Committee endorse the Review of Community Grants Programs report for the consideration of Council.

7.8 INTERNAL AUDIT REPORT – SOFTWARE LICENSING COMPLIANCE

THAT the Committee endorse the Software Licensing Compliance report for the consideration of Council.

7.9 INTERNAL AUDIT UPDATE

THAT the Committee receive the report on Internal Audit.

7.10 INTERNAL CONTROL FRAMEWORK

THAT the Committee receive this report on the status of the Internal Control Framework.

7.11 CORPORATE RISK REGISTER

THAT the Audit, Risk and Business Improvement Committee notes the status of the Corporate Risk Register and the current ratings. Members to provide comments out of session to the Chief Financial Officer by 30 July 2018

7.12 REVIEW OF OPERATIONAL RISK REGISTER – FINANCE & BUSINESS EXCELLENCE

THAT the verbal update of the Operational Risk Register – Finance & Business Excellence Report be received.

7.13 FINANCIAL SUSTAINABILITY MONITORING

THAT the Audit Risk and Business Improvement Committee note the Financial Sustainability Monitoring report.

8. STRATEGIC REPORTS

Nil

9. QUESTIONS/STATEMENT/MOTIONS ON NOTICE FROM COUNCILLORS

Nil

11.1 RISK MANAGEMENT

THAT the Committee receive the Risk Management Report for information.

11.2 CEO UPDATE ON EMERGING ISSUES

THAT the Committee receives the verbal update provided by the Chief Executive Officer on emerging issues.

11.3 CONFIRM WHETHER MEMBERS' BRIEFING SESSION IS REQUIRED

THAT it is confirmed that there is no requirement for a Member's Briefing.

12 URGENT BUSINESS/QUESTIONS

Nil

BACKGROUND

The Audit, Risk and Business Improvement Committee (ARaBIC) operates in accordance with the ARaBIC Policy and ARaBIC Terms of Reference.

COMMENTARY

No additional explanation on the unconfirmed minutes is required.

PREVIOUS DECISIONS

Not applicable, each report on a Committee meeting is considered separately from previous reports.

BUDGET IMPLICATIONS

There are no budget implications as a result of the Committee meeting.

LEGISLATIVE CONTEXT

Section 105 of the Local Government Act 2009 requires Council to establish an Audit Committee. Section 211 of the Local Government Regulations 2012 requires this report to be presented to Council following each meeting of the Committee.

LEGAL IMPLICATIONS

There are no legal implications arising from the operation of the Committee.

STAFFING IMPLICATIONS

There are no staffing implications as a result of the Committee meeting.

RISK ASSESSMENT

The Audit, Risk and Business Improvement Committee is a key part of the governance structures established by Council that help ensure there is effective ongoing risk management. No specific risks have been identified in relation to the operation of the committee or these minutes.

CORPORATE/OPERATIONAL PLAN

Corporate Plan Reference: **Strategy GO3: Pursue financial sustainability through effective use of the Council's resources and assets and prudent management of risk.**

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

Council is demonstrating strong governance responsibilities by enabling independent oversight of the: management of risk; compliance with legislation and standards; internal audit function; and external audit and reporting requirements.

12.1 - AUDIT, RISK AND BUSINESS IMPROVEMENT COMMITTEE - 25 JUNE 2018

ARaBIC Minutes 25 June 2018 - Unconfirmed

Meeting Date: 17 July 2018

Attachment No: 1

Livingstone SHIRE COUNCIL

AUDIT, RISK AND BUSINESS IMPROVEMENT COMMITTEE MEETING

MINUTES

25 JUNE 2018

The resolutions contained within these minutes will be confirmed at the Audit Risk and Business Improvement Committee meeting on 31 August 2018.

TABLE OF CONTENTS

ITEM	SUBJECT	PAGE NO
1	**OPENING**	1
2	**PRESENT**	1
3	**PUBLIC FORUMS/DEPUTATIONS**	2
	NIL	2
4	**CONFIRMATION OF MINUTES OF PREVIOUS MEETING**	3
5	**DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA**	4
6	**BUSINESS ARISING OR OUTSTANDING FROM PREVIOUS MEETINGS**	5
	NIL	5
7	**REPORTS**	6
	7.1 COMMITTEE WORK PROGRAM STATUS	6
	7.2 EXECUTIVE LEADERSHIP TEAM UPDATE TO THE COMMITTEE	7
	7.3 CFO UPDATE	8
	7.4 NON-CURRENT ASSET REVALUATIONS POSITION PAPER	9
	7.5 EXTERNAL AUDITOR'S UPDATE	10
	7.6 FINAL INTERNAL AUDIT PLAN FOR 2018 TO 2022	11
	7.7 INTERNAL AUDIT REPORT - COMMUNITY GRANTS PROGRAMS	12
	7.8 INTERNAL AUDIT REPORT - SOFTWARE LICENSING COMPLIANCE	13
	7.9 INTERNAL AUDIT UPDATE	14
	7.10 INTERNAL CONTROL FRAMEWORK	15
	7.11 CORPORATE RISK REGISTER	16
	7.12 REVIEW OF OPERATIONAL RISK REGISTER - FINANCE & BUSINESS EXCELLENCE	17
	7.13 FINANCIAL SUSTAINABILITY MONITORING	18
8	**STRATEGIC REPORTS**	19
	NIL	19
9	**QUESTIONS/STATEMENT/MOTIONS ON NOTICE FROM COUNCILLORS**	20
	NIL	20
10	**CLOSED SESSION**	21
	11.1 RISK MANAGEMENT	
	11.2 CEO UPDATE ON EMERGING ISSUES	
	11.3 CONFIRM WHETHER MEMBERS' BRIEFING SESSION IS REQUIRED	
11	**CONFIDENTIAL REPORTS**	22

11.1 RISK MANAGEMENT 22
11.2 CEO UPDATE ON EMERGING ISSUES 23
11.3 CONFIRM WHETHER MEMBERS' BRIEFING SESSION IS REQUIRED 24

12 URGENT BUSINESS\QUESTIONS 25

13 CLOSURE OF MEETING 26

MINUTES OF THE AUDIT, RISK AND BUSINESS IMPROVEMENT COMMITTEE MEETING HELD AT COUNCIL CHAMBERS, 4 LAGOON PLACE, YEPPOON ON MONDAY, 25 JUNE 2018 COMMENCING AT 1.10PM

1 OPENING

2 PRESENT

Members Present:

Councillor Jan Kelly (Chairperson)
Mr Pat Connor
Mr Russell Bickford (teleconference)
Mr Tony Edwards

Apologies

Mr Tony Trace
Councillor Nigel Hutton

In Attendance:

Mrs Chris Murdoch, Chief Executive Officer
Mr Brett Bacon, Executive Director Liveability and Wellbeing
Ms Andrea Ellis, Chief Financial Officer
Mr Matthew Willcocks, Chief Technology Officer
Mr Scott Williams, Internal Auditor
Mr Dan Pearce, Manager Assets
Mr Damien Cross, Coordinator Accounting Services
Mr Rod Chapman, Coordinator Corporate Governance
Mr Tendai Mkwanzi, Partner Deloitte
Mr Steve Stavrou, Partner Deloitte
Ms Mayuri Rajdev, Deoitte (teleconference)
Mr Tafadzwa Mudarikwa, Deloitte (teleconference)
Mr Dale Hassel, Queensland Audit Office (teleconference)
Ms Tanya Callaghan, Support Services Officer

3 PUBLIC FORUMS/DEPUTATIONS

Nil

4 CONFIRMATION OF MINUTES OF PREVIOUS MEETING

COMMITTEE RECOMMENDATION

THAT the minutes of the Audit, Risk and Business Improvement Committee held on 14 May 2018 be taken as read and adopted as a correct record.

Moved by: **Mr Edwards**
Seconded by: **Mr Connor**
MOTION CARRIED

5 DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA

6 BUSINESS ARISING OR OUTSTANDING FROM PREVIOUS MEETINGS

Nil

7 REPORTS

7.1 COMMITTEE WORK PROGRAM STATUS

File No: CM4.2.1
Attachments:
1. ARaBIC Annual Program of Work - Status for June 2018 Final
2. Agenda Timing - May 2018

Responsible Officer: Andrea Ellis - Chief Financial Officer
Author: Scott Williams - Internal Auditor

SUMMARY

The Audit, Risk and Business Improvement Committee operates with reference to an Annual Work Program to help ensure it effectively meets its responsibilities. The program identifies the planned agenda items for each meeting. This report summarises the status of the planned agenda items.

COMMITTEE RECOMMENDATION

THAT the Committee receives the status of the Annual Work Program.

Moved by: Councillor Kelly
Seconded by: Mr Connor
MOTION CARRIED

7.2 EXECUTIVE LEADERSHIP TEAM UPDATE TO THE COMMITTEE

File No: CM4.2.1
Attachments:
Responsible Officer: Andrea Ellis - Chief Financial Officer
Author: Scott Williams - Internal Auditor

SUMMARY

Each member of the Executive Leadership Team will provide a verbal update on key activities or issues.

COMMITTEE RECOMMENDATION

THAT the Committee receives the verbal updates provided by the leadership team on key activities or issues.

Moved by: Mr Connor
Seconded by: Mr Edwards
MOTION CARRIED

7.3 CFO UPDATE

File No: FM12.14.1
Attachments: 1. Monthly Financial Report - May 2018

Responsible Officer: Andrea Ellis - Chief Financial Officer
Author: Damien Cross - Senior Accountant

SUMMARY

This report is to provide the Audit, Risk and Business Improvement Committee with an update on key accounting, financial management and reporting matters.

COMMITTEE RECOMMENDATION

THAT the Audit Risk and Business Improvement Committee receive the Chief Financial Officer's update.

Moved by: Mr Bickford
Seconded by: Councillor Kelly
MOTION CARRIED

7.4 NON-CURRENT ASSET REVALUATIONS POSITION PAPER

File No:	**FM12.3.1**
Attachments:	**1. 2017-18 Non Current Asset Revaluations Position Paper**
Responsible Officer:	**Dan Toon - Executive Director Infrastructure** **Andrea Ellis - Chief Financial Officer**
Author:	**Daniel Pearce - Manager Assets & GIS** **Damien Cross - Senior Accountant**

SUMMARY

This report is to provide the Audit, Risk and Business Improvement Committee (ARaBIC) with an update on the progress of the 2017-18 non-current asset revaluations.

COMMITTEE RECOMMENDATION

THAT ARaBIC note the results of the 2017-18 non-current asset revaluations and endorse the report for consideration by Council.

Moved by: **Mr Edwards**
Seconded by: **Mr Connor**
MOTION CARRIED

7.5 EXTERNAL AUDITOR'S UPDATE

File No: CM4.2.1
Attachments: 1. External Audit Briefing Note - June 2018

Responsible Officer: Andrea Ellis - Chief Financial Officer
Author: Scott Williams - Internal Auditor

SUMMARY

The External Auditors will provide an update on their audit activities and any other matters.

COMMITTEE RECOMMENDATION

THAT the Committee receive the External Auditor's Update from the external auditors.

Moved by: Councillor Kelly
Seconded by: Mr Edwards
MOTION CARRIED

The Chief Executive Officer placed on record her thanks for the assistance provided by Steve Stavrou, Deloitte.

7.6 FINAL INTERNAL AUDIT PLAN FOR 2018 TO 2022

File No: CM4.2.3
Attachments:
1. Internal Audit Plan 2018 to 2022
2. 2018-19 Annual Audit Plan Detail

Responsible Officer: Chris Murdoch - Chief Executive Officer
Author: Scott Williams - Internal Auditor

SUMMARY

The Internal Audit Plan has been developed for next financial year and the three subsequent years. This final version of the plan is being presented for endorsement before it is presented to Council for their consideration.

COMMITTEE RECOMMENDATION

THAT the Committee endorse the Internal Audit Plan for 2018 to 2022. This report is to be brought back to Council as a separate agenda item for consideration.

Moved by: Mr Connor
Seconded by: Mr Bickford
MOTION CARRIED

7.7 INTERNAL AUDIT REPORT - COMMUNITY GRANTS PROGRAMS

File No:	**CM4.2.3**
Attachments:	**1. Internal Audit Report - Community Grants Programs**
Responsible Officer:	**Chris Murdoch - Chief Executive Officer**
Author:	**Scott Williams - Internal Auditor**

SUMMARY

The Internal Audit reviewing Council's Community Grants Programs has been completed. On the basis of the review work performed and the findings of this report, it is concluded that the effectiveness of the control environment within the scope of the area reviewed is Satisfactory. The majority of findings of the review are associated with a low risk with only two of the nine findings rated as a medium risk.

COMMITTEE RECOMMENDATION

THAT the Committee endorse the Review of Community Grants Programs report for the consideration of Council.

Moved by: **Councillor Kelly**
Seconded by: **Mr Bickford**
MOTION CARRIED

7.8 INTERNAL AUDIT REPORT - SOFTWARE LICENSING COMPLIANCE

File No:	**CM4.2.3**
Attachments:	**1. Internal Audit Report - Software Licensing Compliance**
Responsible Officer:	**Chris Murdoch - Chief Executive Officer**
Author:	**Scott Williams - Internal Auditor**

SUMMARY

The Internal Audit reviewing Software Licensing Compliance has been completed. On the basis of the review work performed and the findings of this report it is concluded that the effectiveness of the control environment within the scope of the area reviewed is rated as having Some Weakness as defined within the report. The majority of findings of the review are associated with a medium risk.

COMMITTEE RECOMMENDATION

THAT the Committee endorse the Software Licensing Compliance report for the consideration of Council.

Moved by: **Mr Edwards**
Seconded by: **Mr Connor**
MOTION CARRIED

7.9 INTERNAL AUDIT UPDATE

File No: CM4.2.3
Attachments: 1. Internal Auditor Independence Declaration

Responsible Officer: Chris Murdoch - Chief Executive Officer
Author: Scott Williams - Internal Auditor

SUMMARY

This report documents the status of the Annual Internal Audit Plan and provides further information on the Internal Audit Function.

COMMITTEE RECOMMENDATION

THAT the Committee receive the report on Internal Audit.

Moved by: Mr Bickford
Seconded by: Mr Edwards
MOTION CARRIED

7.10 INTERNAL CONTROL FRAMEWORK

File No:	**CM4.2.1**
Attachments:	**1. Assurance Statement Form**
Responsible Officer:	**Andrea Ellis - Chief Financial Officer** **Chris Murdoch - Chief Executive Officer**
Author:	**Scott Williams - Internal Auditor**

SUMMARY

Council has had an internal control framework in place and operating throughout 2017-18. This report recaps the background on the approach adopted and provides further information on the operation of the framework throughout the year. It then explains the planned next steps for the framework.

COMMITTEE RECOMMENDATION

THAT the Committee receive this report on the status of the Internal Control Framework.

Moved by: **Mr Connor**
Seconded by: **Councillor Kelly**
MOTION CARRIED

7.11 CORPORATE RISK REGISTER

File No:	**RM27.3.1**
Attachments:	**Nil**
Responsible Officer:	**Andrea Ellis - Chief Financial Officer**
Author:	**Rodney Chapman - Acting Coordinator Corporate Governance**

SUMMARY

This report is to provide the Audit Risk and Business Improvement Committee (ARaBIC) with an update on the Corporate Risk Register

COMMITTEE RECOMMENDATION

THAT the Audit, Risk and Business Improvement Committee notes the status of the Corporate Risk Register and the current ratings. Members to provide comments out of session to the Chief Financial Officer by 30 July 2018.

Moved by: **Councillor Kelly**
Seconded by: **Mr Edwards**
MOTION CARRIED

7.12 REVIEW OF OPERATIONAL RISK REGISTER - FINANCE & BUSINESS EXCELLENCE

File No:	**RM 27.4.1**
Attachments:	**1. Corporate Services Risk Register**
Responsible Officer:	**Andrea Ellis - Chief Financial Officer**
Author:	**Tanya Callaghan - Support Services Officer**

SUMMARY

The Chief Financial Officer will provide an update of Enterprise Risk Management as applied to the Finance & Business Excellence unit

COMMITTEE RECOMMENDATION

THAT the verbal update of the Operational Risk Register – Finance & Business Excellence Report be received.

Moved by: **Mr Edwards**
Seconded by: **Mr Connor**
MOTION CARRIED

7.13 FINANCIAL SUSTAINABILITY MONITORING

File No:	**FM12.4**
Attachments:	**1. Budget Workshop 1 - Developing the Strategic Financial Plan**
Responsible Officer:	**Chris Murdoch - Chief Executive Officer**
Author:	**Andrea Ellis - Chief Financial Officer**

SUMMARY

This report is to provide the Audit, Risk and Business Improvement Committee with an opportunity to question the assumptions and approach to achieving financial sustainability. The outcome may be adjustments to detail of the approach or advice to be considered by Council in their decision making and policy setting.

COMMITTEE RECOMMENDATION

THAT the Audit Risk and Business Improvement Committee note the Financial Sustainability Monitoring report.

Moved by: **Mr Bickford**
Seconded by: **Councillor Kelly**
MOTION CARRIED

8 STRATEGIC REPORTS

Nil

9 QUESTIONS/STATEMENT/MOTIONS ON NOTICE FROM COUNCILLORS

Nil

10 CLOSED SESSION

In accordance with the provisions of section 275 of the *Local Government Regulation 2012,* a local government may resolve to close a meeting to the public to discuss confidential items, such that its Councillors or members consider it necessary to close the meeting.

RECOMMENDATION

THAT the meeting be closed to the public to discuss the following items, which are considered confidential in accordance with section 275 of the *Local Government Regulation 2012,* for the reasons indicated.

11.1 Risk Management

This report is considered confidential in accordance with section 275(1)(h), of the *Local Government Regulation 2012*, as it contains information relating to other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage .

11.2 CEO Update on Emerging Issues

This report is considered confidential in accordance with section 275(1)(h), of the *Local Government Regulation 2012*, as it contains information relating to other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage .

11.3 Confirm Whether Members' Briefing Session is Required

This report is considered confidential in accordance with section 275(1)(h), of the *Local Government Regulation 2012*, as it contains information relating to other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage .

RECOMMENDATION

THAT the meeting moves out of closed session and be opened to the public.

11 CONFIDENTIAL REPORTS

11.1 RISK MANAGEMENT

File No: CM4.2.1

Attachments: Nil

Responsible Officer: Rodney Chapman - Acting Coordinator Corporate Governance
Andrea Ellis - Chief Financial Officer

Author: Suzanne Pambid - Governance Officer

This report is considered confidential in accordance with section 275(1)(h), of the *Local Government Regulation 2012*, as it contains information relating to other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage .

SUMMARY

The Risk Management Report encompasses a number of reports previously provided separately to the ARaBIC. The report is for the ARaBIC for information only unless otherwise noted.

COMMITTEE RECOMMENDATION

THAT the Committee receive the Risk Management Report for information.

Moved by: Mr Connor
Seconded by: Mr Edwards
MOTION CARRIED

11.2 CEO UPDATE ON EMERGING ISSUES

File No: CM4.2.1

Attachments:

Responsible Officer: Chris Murdoch - Chief Executive Officer

Author: Scott Williams - Internal Auditor

SUMMARY

The Chief Executive Officer will provide a verbal update on confidential emerging issues.

COMMITTEE RECOMMENDATION

THAT the Committee receives the verbal update provided by the Chief Executive Officer on emerging issues.

Moved by: Councillor Kelly
Seconded by: Mr Connor
MOTION CARRIED

11.3 CONFIRM WHETHER MEMBERS' BRIEFING SESSION IS REQUIRED

File No: CM4.2.1

Attachments:

Responsible Officer: Andrea Ellis - Chief Financial Officer

Author: Scott Williams - Internal Auditor

This report is considered confidential in accordance with section 275(1)(h), of the *Local Government Regulation 2012*, as it contains information relating to other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage .

SUMMARY

A Members' Briefing Session may be required if any of the Committee members want to discuss any item on the agenda or raise another matter for discussion confidentially with a selected group.

COMMITTEE RECOMMENDATION

THAT it is confirmed that there is no requirement for a Members' Briefing.

12 URGENT BUSINESS\QUESTIONS

13 CLOSURE OF MEETING

There being no further business the meeting closed at 2.45 pm.

Councillor Jan Kelly
CHAIRPERSON

25 June 2018

12.2 INTERNAL AUDIT PLAN FOR 2018 - 2019

File No:	**CM4.2.2**
Attachments:	**1. Internal Audit Plan 2018 - 2019⇩**
Responsible Officer:	**Chris Murdoch - Chief Executive Officer**
Author:	**Scott Williams - Internal Auditor**

SUMMARY

The Internal Audit Plan for 2018-19 has been developed following the established process including consultation with the Executive Leadership Team and the Audit Risk and Business Improvement Committee. The plan is being presented to Council for their approval.

OFFICER'S RECOMMENDATION

THAT Council approve the 2018-19 Internal Audit Plan.

BACKGROUND

The Internal Auditor has established a process and methodology to review and update the Internal Audit Plan on at least an annual basis. The methodology meets the relevant requirements in the *Local Government Regulations 2012* and is consistent with the standards set by the Institute of Internal Auditors. The methodology includes the following steps:

1. Identification of a list of potential audit topics. These are derived from review of the Corporate Plan, Operations Plan, Risk Registers, external references and discussion with management.
2. Cross-referencing identified topics to entries on the Risk Registers, or using auditor judgement to record an estimated risk rating.
3. Determining through review of previous audits, auditor judgement and discussion with management scores for level of confidence in controls, executive concern or importance and time since last audit.
4. The aggregate scores, and other timing factors, are used to develop a draft plan.
5. The plan is distributed to, and discussed with, the Executive Leadership Team.
6. The plan is then presented in draft to a meeting of ARaBIC, with an updated final plan presented to the following meeting.
7. The final plan, after endorsement by ARaBIC, is presented to Council for approval.

Although the focus is on developing a quality plan for the next financial year, the process also produces a 'Strategic Audit Plan' covering the following three financial years. This is included in the Internal Audit Plan document.

In response to a finding of the external auditors, the legislative requirements for the Internal Audit Plan have been addressed differently to previous years with all the required elements now addressed in a single consolidated document.

COMMENTARY

The plan has been developed following the same principle as last year: that there is greater benefit in using the available resources to perform a larger number of reviews that each has a shorter duration and either a narrower scope or a higher level assessment. The alternative of slightly fewer reviews that are more in depth does have some merits. Discussion in the latest Audit Committee meeting agreed to proceed with the proposed plan and approach for

this year. In planning for 2019-20 this principle will be re-examined and a new approach to determining the time to spend on reviews may be adopted.

The planning methodology is largely unchanged from the previous year including continued use of the same scoring model to prioritise potential reviews. The planned distribution of time between specific reviews and other activities has also remained the same. The methodology and its assumptions are explained within the audit plan document.

PREVIOUS DECISIONS

The Internal Audit Plan for 2017 – 2018 was approved by Council on 1 August 2017. It is routine for the Annual and Strategic Audit Plan to be reviewed and some changes made each financial year.

BUDGET IMPLICATIONS

There is sufficient budget for the Internal Audit Unit to deliver on the proposed plan.

LEGISLATIVE CONTEXT

The planning process is compliant with the requirements of the *Local Government Act 2009* and the *Local Government Regulation 2012,* in particular section 207 (2) of the regulations.

LEGAL IMPLICATIONS

There are no associated legal implications.

STAFFING IMPLICATIONS

The plan has been developed with consideration to the available staff capacity and no additional resources will be required.

RISK ASSESSMENT

The audit planning process is one of the treatments for the risk recognised on the operational risk register regarding internal audit potentially not complying with the legislation.

CORPORATE/OPERATIONAL PLAN

Corporate Plan Reference: **Strategy GO4: Provide transparent and accountable decision making reflecting positive leadership to the community.**

LOCAL GOVERNMENT PRINCIPLES

The Local Government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

The Internal Audit Plan has been developed following a robust process, which is compliant with the relevant legislative requirements and other professional standards. The plan will also meet the organisation's needs for the internal audit function.

12.2 - INTERNAL AUDIT PLAN FOR 2018 - 2019

Internal Audit Plan 2018 - 2019

Meeting Date: 17 July 2018

Attachment No: 1

Livingstone
SHIRE COUNCIL

Internal Audit Plan
2018 - 2019

Contents

1. Internal Audit Planning Methodology 3
1.1 Background 3
1.2 Planning Horizon and Updates 3
1.3 Planning Approach 4
1.4 Scoring Methodology 4
1.5 Assurance Map 5
1.6 Nature of Work 5
1.7 Consideration of Risk 5
1.8 Calculation of Capacity to Perform Selected Reviews 6
2. Internal Audit Plan – 2018-19 7
3. Significant Risks Identified and Control Measures of These Risks 8
4. Strategic Audit Plan – 2018-19 to 2021-22 10
5. Appendix 1 – 2018-19 Internal Audit Plan Distribution 12
6. Appendix 2 – Description of Recurring Reviews and Other Activities 13

Planned Distribution:

Name	Title
Chris Murdoch	Chief Executive Officer
	Executive Leadership Team
Rod Chapman	Coordinator Governance
Jenny McDonnell	Infrastructure Services – Systems and Administration
Gillian Casey	Liveability – Systems Administration and Quality
Mellissa Minter	Principal Business Improvement Officer

Document History:

Date	Version	Changes / Notes
24/04/2018	0.1	Initial draft created
16/05/2018	0.2	Updated process wording and minor corrections
07/06/2018	0.3	Removed track changes in final version for endorsement
27/06/2018	1	Consolidated Appendix 2 into the document with the details on the recurring reviews and other activities.

1. Internal Audit Planning Methodology

1.1. Background

The *Local Government Regulation 2012 (s207)* provides requirements including that the Council must each year prepare an internal audit plan that includes statements about:

a) The way in which the operational risks have been evaluated
b) The most significant operational risks identified in the evaluation
c) The control measures that the local government has adopted, or is to adopt, to manage the most significant operational risks.

Requirement (a) is addressed by Section 1 explaining the planning approach.

Requirement (b) is addressed by the scoring of the potential auditable areas with the results shown in Section 2 and 4 of this Plan.

Requirement (c) is addressed by the existing information in the risk registers and in the narrative describing each review. An extract from the risk registers is included in Section 3 of this Plan.

This planning methodology is also designed to meet IPPF requirement 2010: that the Internal Auditor "must establish a risk-based plan to determine the priorities of the internal audit activity, consistent with the organisation's goals".

The Council Operational Plan implicitly includes a performance expectation on the percentage completion of the Annual Internal Audit Plan, with a target of 90%. The plan will be developed with a quantity of planned audit days appropriate to the capacity of the existing Internal Audit resources to help ensure this measure is met. The CEO and the Audit Committee will consider if the resources are sufficient to provide adequate coverage of the risks identified in the planning process.

1.2. Planning Horizon and Updates

The Annual plan for the coming year is intended to be firm. However, the internal auditor will continue to monitor changing risks for Council and changes in management concern and may adjust the plan if required. Where this occurs the changes will be presented to the following Audit Committee meeting as per the Internal Audit Charter.

The rolling Four Year Plan will be updated each year. Although risks and priorities are likely to change over time and it is unlikely that the later years of the plan will be executed exactly as currently planned there is still important value in developing a plan with this longer horizon. In particular, a 4-year plan:

- gives an explicit indication of the scope of reviews planned to be performed in that time period. It also shows the number of topics identified in the universe that wouldn't be covered in that time. This allows a more informed consideration of the adequacy of available internal audit resources.
- makes it clear which auditable areas are the next priorities and planned to be covered in the following year. Hence, when a review that is desired by part of the management team isn't included in the current year, it is clear when it is planned to be covered. Also, where planned reviews are completed ahead of schedule or if a review needs to be deferred, there are approved reviews ready to be brought forward into the current year plan.

1.3. Planning Approach

The following lists the key steps in updating the plans, with some iteration of steps where required.

1. First stage is identification of relevant potential audit areas; this is known as defining the 'audit universe'. This list is to be developed / updated from review of the Corporate Plan, Operational Plan, Risk Registers and reference materials shared by other Councils.
2. High level objective and scope developed for the reviews, along with capturing other assurance providers and cross references to LSC plans and risk registers.
3. Meet with Directors to discuss key risks and areas of concern or priorities within the potential audit areas. Additional audit areas can be identified in these discussions.
4. Apply the scoring methodology to the reviews.
5. Develop a preliminary distribution of reviews within the planned financial years.
6. Distribute to and discuss with ELT. Address feedback provided.
7. Consult with the External Auditors.
8. Draft presented to ARaBIC for discussion and potential endorsement.
9. Final plan presented to Council for approval.

The distribution of reviews between the planned years is influenced by the scoring results, but does not perfectly follow that order. Other considerations are:

- milestones or timing factors, e.g. to review one year after a major process change
- logical sequence for reviews, e.g. to review general Water and Sewerage processes before examining the risks specific to the Recycled Water service
- other planned review or assurance activities, e.g. QAO planned reviews, business service reviews or formal improvement projects
- spreading the reviews within the organisation to avoid overload on an area and to maintain visibility of internal audit.

1.4. Scoring Methodology

To assist in ranking and prioritising the potential auditable areas, a score is calculated for each area using the following factors. The total score is simply a sum of the scores for the factors.

- Risk and Controls – Calculated as the difference between inherent risk and current risk, or where these factors are equal it is half the inherent risk plus 1. The calculation uses the numbers (e.g. Low 4, High 8) within the LSC Risk Matrix which provides a 10-point scale. In theory an extreme risk that is completely mitigated could score 9 on this factor. However, the scores in practice generally range from 1 to 5.
- Level of Confidence in Controls – This is a judgement regarding the auditor's level of concern or the confidence in the effectiveness of the current controls. This is made by the Internal Auditor based upon the results of previous reviews by any assurance provider, other observations and discussion with management. Rated from 1 – high confidence to 5 – limited confidence.
- Executive Concern or Importance – This is a judgemental factor considering the comments of Directors in planning meetings, the financial materiality of functions (e.g. payroll scores high even though management didn't express concern) or the significance of the function as seen in Council publications, announcements or meeting discussion.
- Time since last audit – scored as 1 point per year since last audit up to a maximum of 5.

1.5. Assurance Map

It is considered good practice for Internal Audit to develop an Assurance Map to support the planning process. This Map will present information on all sources of assurance on the auditable areas identified in the audit universe, i.e. it will include information on coverage of risk areas by other assurance providers such as external audit, internal quality assurance, safety auditors... The Three Lines of Defence Model, as pictured below by the IIA, will be used to guide identification and categorisation of the other assurance.

An Assurance Map has been developed as part of the planning for 2018-19. The spreadsheet used to manage the planning process facilitates creation of the Assurance Map supplemented by auditor judgement on the level of assurance. The assurance map will continue to be used for information and perspective on the plan; the chosen approach doesn't lead to any change in the scoring model.

1.6. Nature of Work

The Institute of Internal Auditors (IIA) Standards specify a requirement for Internal Audit to "evaluate and contribute to the improvement of governance, risk management and control processes". Each Auditable Entity will be categorised on its contribution to each of these three areas.

Initially this will be done to provide a perspective on the coverage of the draft annual and strategic audit plans. Consideration will be given to incorporating this into the scoring model if it appears likely that this perspective will aid in prioritisation of reviews.

1.7. Consideration of Risk

The Local Government Regulations require operational risks to be evaluated in developing the Plan. Similarly, the Institute of Internal Auditors requires annual planning to be risk based. Interpretation of how to meet these requirements is left to the auditors to determine.

Risk is explicitly addressed through the first scoring factor, audit areas with a higher level of risk and controls already in place are good candidates for an internal audit. Risk also influences the factor for management concern and materiality. In essence, areas with a higher consequence for 'failure' will have a higher inherent risk (part of first factor) and also be of concern to management. Although this may be seen as double counting the risk, this is an intended aspect of the model to bring appropriate

priority to areas with higher inherent risk. The risk factor in the model can score the same for a medium risk item (6) that is well mitigated (2) and for a high risk item (8) mitigated to a medium level (4); hence the influence of risk on the management concern factor works in a positive way to differentiate these items.

The risk rating used to determine the score is drawn from the corporate risk register where a relevant risk has been identified at that level. Risks referenced in operational / portfolio risk registers are then identified. The higher rating is used where multiple risks are relevant. Where no relevant risks are currently on the registers the area is generally rated as Medium Inherent and Current on the basis that risk management focuses on risks with a High inherent level. Auditor judgement is used regarding consequence with a conservative assumption that no controls are in place.

The overall methodology should ensure that the most significant risks, which are suitable for internal audit review, are identified. The factors of confidence in control and time since last audit then assist in prioritising between these and help ensure that the same areas are not scored at the top of the list every time. As such the methodology should ensure compliance with the *Regulations* and IIA requirements.

1.8. Calculation of Capacity to Perform Selected Reviews

Each year is treated as having 260 working days (52 weeks). The table below shows the current standard allocations of time for recurring reviews and other activities. Detailed descriptions of each of these is included in Appendix 2. These activities total to 95 days, with 45 days set aside for Leave (20 days Annual, 15 days Sick and 10 days Public Holidays) leaving 120 days of capacity for the Selected Reviews.

Activities	Category	Budget
Leave	Leave	45
Administration	Other	12
Training	Other	10
Internal Audit Methodology	Other	5
Advice and Assistance to Management	Review	4
AA - Business Improvement	Review	4
AA - Policy and Procedure Review	Review	4
AA - Risk Management	Review	4
AA - Projects	Review	7
Data Analytics	Review	10
Follow Up	Review	7
ARaBIC	Support	20
Annual Planning	Support	8
Total		**140**

Distribution of Time		
	Days	Percentage
Other	27	13%
Support	28	13%
Ongoing Reviews	40	19%
Selected Reviews	120	56%
	215	**100%**

2. Internal Audit Plan – 2018-19

Following is a brief description of the selected reviews included in the 2018-19 plan:

Title and Description	Days
Footpath Maintenance Operational review to consider how the maintenance is managed with consideration to surveys and data gathering, planning for maintenance, reactive maintenance on complaints and integration with other works.	10
Overdue Rates Management Examine how the practices in operation are meeting Council's policy expectations and achieving financial goals. Assess compliance in collections process, debt agreements and potential land disposal with relevant legal requirements.	10
Annual Operational Plan Reporting Look at process for collating data, investigating variances, summarising for reporting, options for automation. May include sample verification of reliability of source data being provided to Governance.	10
Payment Card Management Review the controls over issuing credit or payment cards, and subsequent acquittal of statements and monitoring of transactions with consideration to current Council policy and risks of fraud and error.	10
Planning Scheme Operational review to assess ability to meet and enforce relevant legislation and efficiency in the function. Assess establishment and use of delegations, how impartiality of the process is maintained, integrity controls for publishing of the Plans, updated processes for enquiries and how changes are managed.	15
Project Management Framework Assess the scope of the project management framework against common project risks. Review the approach to implementation of the framework including training, coaching, templates, monitoring and reporting. Assess current compliance with the framework. Review what has been established for project and portfolio reporting and assess reliability and completeness risks.	20
ICT Vendor Contract Management Review the existing procedures to help ensure effective management of vendors providing ICT services under contract. Will assess effectiveness of current arrangements and consider suitability to support potential increases in managed services, software as a service or other variations of cloud solutions or ICT co-sourcing.	15
Property Disposal Compliance Review would consider processes to ensure compliance with the LG Regulations and Council policies and procedures. Disposal by sale or lease would be in scope. Would consider approach to identifying properties for sale, consultation internally including possible Livingstone Planning Scheme considerations, tender processes and management of legal steps throughout.	15
Business Continuity Planning Review Council's plans and preparation that help ensure continuity of key business functions if there was a disruptive event. This would consider overall strategy and approach, business impact assessment, identification of key resources, development of alternate operating procedures and recovery steps and testing of the plans and procedures.	15
Grand Total	**120**

3. Significant Risks Identified and Control Measures of These Risks

The following risks are related to the reviews in the draft plan. The controls below were extracted from the relevant risk register in April 2018 and have not yet been validated.

Risk Ref	Risk Narrative	Existing Controls	Risk Rating Current
CORP-001	Loss of electronic data leading to inability to deliver services for staff and external stakeholders	Backup plan; User authentication; Firewalls; ICT Security Policy; DR Site; Secure server room; Annual backup to ensure data integrity and capture; Security Audits; Vulnerability Testing	Low (4)
CORP-003	Death or injury to an employee or member of the community or public	Compliant WH&S System; Annual Audits	Medium (5)
CORP-004	Inability to maintain Council as a going concern - Financial Sustainability	Sound corporate governance policies; Sound financial management practices including rigorous audits; Recruitment of skilled and professional staff; Meeting legislative requirements; LTFP; Project management framework	Medium (5)
CORP-006	Inability of Council's existing infrastructure to meet ongoing community needs	Asset management plan; LTFP; Local Government infrastructure plan; Total Management Planning (Environment Sustainability) for water and sewerage	Low (4)
FRAUD-001	Procurement	Auditable process, restricted accesses, delegations and approvals	High (7)
OCPCW-008	System failure (temporary or otherwise) – Community Sustainability	Some paper records kept; Compliance with IT protocol and instruction on data/file management	Low (4)
OCPCW-011	Absence of adopted policies and strategies pertaining to key environmental and land use issues, including climate change	Environmental Policy adopted and implemented; Update of Shoreline Management Plan and Important vegetation in Livingstone study; Future programs and projects with regard to a Coastal Hazard Adaptation Strategy and Urban Stormwater Management	Medium (5)
OCPCW-020	System failure (temporary or otherwise) – Public Environments	Manual scribing and use of hard copy whilst systems are down; Use of alternative storage devices (for example: Cloud, hard drive on laptops and hard drive on iPads, smart technology); Use of hard copy infringement books; Retention of hard file system	Medium (6)
OCPSD-034	Ignorance of current (or changes to) State matters or limited knowledge of State Planning Policies.	Registered with relevant state agencies for information bulletins and legislative updates; Strong working relationship development with regional office of the Department of Infrastructure Local Government and Planning; Attendance at training and information sessions associated with procedural or legislative change; Use of information and process systems to oversee staff actions which are dictated by changes in state policy or legislation; Communication strategy implemented to ensure all relevant personnel are informed of procedural or legislative changes	Medium (5)
OCPSD-035	Planning scheme (including associated certificates) not managed and administered in accordance with legislative requirements.	All property searches received are cross-checked to confirm if a "planning and development certificate" has been requested, to identify any requests which may have inadvertently been overlooked; The procedure prescribed for Making and Amending Planning Schemes, as published by the Queensland Government, is documented and cross-	Medium (6)

Risk Ref	Risk Narrative	Existing Controls	Risk Rating Current
		checked to ensure that each stage is correctly enacted; Established work instructions and procedures; andTraining and refresher courses associated with powers of entry; Certificates are prepared by one officer and then checked and signed by another; Training and refresher courses associated with powers of entry.; When standard and full certificates are prepared, all historic records are exhausted to ensure that all approvals (as required by legislation) are located and details provided	
OCSCEC-001	Inability to communicate internally or externally The risk is we may not be able to communicate internally or externally with our customers as a result of a loss of the IT system which may result in ineffective communication by our team	Business Continuity Plans	High (7)
OCSF-015	Council makes poor financial investment decisions.	Council has a clear and comprehensive investment policy to assist when making any decisions to invest funds; Delegations are in place for approving and making investment decisions; Council reviews investment performance at least annually; All investments are to be held in the name of the Council; All conflicts of interest to be disclosed as part of investment decision process; Management to monitor cash & anticipated future cash flows. Surplus funds invested in accordance with Council policy. Investment and transfer of funds approved by any two authorised officers.; Regular comparisons are conducted on the rate of returns available to maximise the performance of investments	Low (3)
OCSIT-019	External malicious attack on the council's IT network and infrastructure	IS Security Policy	Low (4)
OCSIT-021	Succession planning	Cross training and knowledge sharing; Policies and procedures	Low (4)
OCSIT-022	Loss of systems hosted external to council	IT Infrastructure systems firewall governance are managed and maintain with regular monitoring	Low (4)
OISC&M-010	Failure to complete capital works program	Fortnightly review of construction program	Medium (6)
OISIPD-018	Project Management	Weekly monitoring of status.; Forward planning to identify tasks and resources required.; Scope control.; Not a Unit Rate problem	Low (4)
OSGD-003	Loss of creditability with the community	Community satisfaction surveys; Established Ebusiness Bulletin; Regular Project Updates on LSC Website; Quarterly meetings with key shareholder groups; Seek comments and feedback from website	High (7)

4. Strategic Audit Plan – 2018-19 to 2021-22

			Planned Review Days and Timing			
			Planned Year			
Main Portfolio	**Score**	**Auditable Area**	**18-19**	**19-20**	**20-21**	**21-22**
Organisation Wide	18	Business Continuity Planning	15			
	17	Project Management Framework	20			
	16	Investment Decision Framework		10		
	16	Environmental Management System			20	
	15.5	Property Disposal Compliance	15			
	15	Council as a Developer		20		
	14	Payment Card Management	10			
Organisation Wide Total			**60**	**30**	**20**	
Infrastructure Services	18	Fleet Services		15		
	17	Water and Sewerage Processing			15	
	16	Footpath Maintenance	10			
	16	Asset Management Framework		25		
	16	Water SCADA Security		15		
	16	Refuse and Recycling Processes			20	
	13	Recycled Water Supply				15
Infrastructure Services Total			**10**	**55**	**35**	**15**
Liveability and Wellbeing	16	Planning Scheme	15			
	15	Plumbing and Building Certification		20		
	15	Economic Development Plan		10		
	15	Livingstone Shire State Emergency Service		15		
	15	Youth Development and Support Programs			10	
	15	Animal Management				10
	15	Cemeteries				10
	15	Disaster Management Preparations				20
	15	Swimming Pool Lease Administration				10
	14.5	External Communication Management				10
	14.5	Food licensing and compliance				10
	14	Records Management			15	
	13	Development Assessment			20	
Liveability and Wellbeing Total			**15**	**30**	**45**	**50**

			Planned Review Days and Timing			
			Planned Year			
Main Portfolio	**Score**	**Auditable Area**	**18-19**	**19-20**	**20-21**	**21-22**
Finance and Business Excellence	16	Overdue Rates Management	10			
	15.5	Annual Operational Plan Reporting	10			
	15	Tender Management Processes		15		
	15	Electronic Funds Transfer and Other Payments				5
	14.5	Risk Management Framework				15
	14	Budget Development			15	
	14	Rates Revenue Management			15	
	14	Asset Accounting				10
	14	PCI DSS (Payment Card Security) Compliance				10
	12	Transparent and Accountable Decision Making				10
Finance and Business Excellence Total			**20**	**15**	**30**	**50**
ICT Services	16	ICT Vendor Contract Management	15			
	16	ICT Asset Management			15	
ICT Services Total			**15**		**15**	
People and Culture	15	Recruitment and Selection				10
Grand Total			**120**	**145**	**145**	**145**

5. Appendix 1 – 2018-19 Internal Audit Plan Distribution

The following provides a view of the Annual Audit Plan distributed between the portfolios and planned timing for commencement of the reviews within the year.

Quarter	Auditable Area	Total Score	Organisation Wide	Infrastructure Services	Liveability and Wellbeing	Finance and Business Excellence	ICT Services	Grand Total
Q1	Footpath Maintenance	16		10				10
	Overdue Rates Management	16				10		10
Q1 Total				**10**		**10**		**20**
Q2	Annual Operational Plan Reporting	15.5				10		10
	Payment Card Management	14	10					10
Q2 Total			**10**			**10**		**20**
Q3	Planning Scheme	16			15			15
	Project Management Framework	17	20					20
Q3 Total			**20**		**15**			**35**
Q4	ICT Vendor Contract Management	16					15	15
	Property Disposal Compliance	15.5	15					15
Q4 Total			**15**				**15**	**30**
All	Business Continuity Planning	18	15					15
All Total			**15**					**15**
Grand Total			**60**	**10**	**15**	**20**	**15**	**120**

6. Appendix 2 – Description of Recurring Reviews and Other Activities

The following provides a brief description of these activities.

Item	Description	Days
ARaBIC	Time preparing reports and attending ARaBIC and other associated administrative activities.	20
Annual Planning	Time to develop the Annual and Strategic (3 year) Audit Plans including consultation with EMT and other managers, research on potential auditable areas, updates to the plan and preparation of documentation.	8
Advice and Assistance (AA) to Management	Time allowance to provide general advice and assistance on matters where a formal review isn't required.	4
AA - Business Improvement	Time to provide input to business improvement activities, particularly regarding appropriate controls within processes.	4
AA - Policy and Procedure Review	Time to provide feedback during the update of formal policies and procedures.	4
AA - Risk Management	Time to provide assistance to the risk management function including discussion of methodology, QA of registers and reports, input on risk mitigation and input regarding confidence in or adequacy of mitigation / controls.	4
AA - Projects	A time provision to allow for advice and assistance to key projects particularly regarding adequacy of their project management controls and risk management. This time may also be used to provide input to projects on process risks and internal controls.	7
Data Analytics	Uses data extracted from systems and targeted reports and queries to assess whether controls are operating as expected and to potentially identify transactions to be investigated.	10
Follow Up	Follow up of agreed actions from internal and external audit reports to confirm that the underlying risk is being appropriately mitigated and to provide a status to the Audit Committee.	7
Leave	Plan is based on the entitlements for these categories. This may fluctuate from year to year, and is likely to be less, but for planning this is logical. 20 days Annual Leave; 15 days Sick Leave; 10 days Public Holidays.	45
Administration	Allowance of 1 day per month for meetings with CEO, involvement in team activities, budgeting, procurement and other miscellaneous activities.	12
Training	Structured internal and external training.	10
Internal Audit Methodology	Time for developing, and reviewing, the internal audit methodology including the procedures manual and supporting tools and templates.	5

12.3 2018-19 INVESTMENT POLICY

File No: FM12.4.1

Attachments: 1. Investment Policy⇩

Responsible Officer: Andrea Ellis - Chief Financial Officer

Author: Damien Cross - Coordinator Accounting Services

SUMMARY

Council's Investment Policy has been previously presented to the Planning, Finance Innovation and Business Excellence Committee on 2 July 2018 for review and is now presented to Council for adoption in accordance with Section 191 of the Local Government Regulation 2012.

OFFICER'S RECOMMENDATION

THAT pursuant to Section 191 of the *Local Government Regulation 2012,* Council adopts the attached Investment Policy for the 2018-19 financial year.

COMMENTARY

Council's current Investment Policy was adopted on 27 June 2017 as part of the special council meeting held to adopt the 2017-18 Budget. Council finance officers in consultation with the Chief Financial Officer have reviewed the attached policy which was tabled at the Planning, Finance, Innovation and Business Excellence Committee on 2 July 2018 for review. The most significant change to the policy was to specifically list in paragraph 5.7 of the policy, all investments types which are prohibited in accordance with the *Statutory Bodies Financial Arrangement Act 1982.*

PREVIOUS DECISIONS

There have been no previous decisions in relation to the attached Policy.

BUDGET IMPLICATIONS

The adoption of this Policy by Council is not foreseen to have any impact upon Council's budget position.

LEGISLATIVE CONTEXT

Adoption of an Investment Policy is required in accordance with Section 191 of the *Local Government Regulation 2012.* Whilst Council needs to adopt an Investment Policy on an annual basis, there is no legislative requirement to have the Investment Policy adopted as part of the same Council meeting when the annual budget is adopted.

LEGAL IMPLICATIONS

There are no foreseen legal implications associated with the adoption of this Policy.

STAFFING IMPLICATIONS

There are no staffing implications associated with the adoption of this Policy. Authority for the day to day management of Council's Investment Policy is delegated by the Chief Executive Officer to the Chief Financial Officer pursuant to Section 259 (1) of the *Local Government Act 2009.*

RISK ASSESSMENT

Regular robust reporting of Council's Financial Policies assists in creating a framework of financial responsibility within the Council and providing sound long term financial management of Council's operations.

CORPORATE/OPERATIONAL PLAN

Corporate Plan Reference: **Strategy GO3: Pursue financial sustainability through effective use of the Council's resources and assets and prudent management of risk.**

LOCAL GOVERNMENT PRINCIPLES

The Local Government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

In accordance with Section 191 of the *Local Government Regulation 2012,* Council is required to adopt an Investment Policy on an annual basis. The attached Policy was tabled at the Planning, Finance, Innovation and Business Excellence Committee on 2 July 2018 for feedback from the Committee. The attached Investment Policy is now presented for Council adoption.

12.3 - 2018-19 INVESTMENT POLICY

Investment Policy

Meeting Date: 17 July 2018

Attachment No: 1

Livingstone SHIRE COUNCIL

INVESTMENT POLICY
(STATUTORY POLICY)

1. Scope

The Investment Policy (this 'Policy') applies to the investment of investable funds in accordance with Category One (1) investment power under Part 6 of the *Statutory Bodies Financial Arrangement Act 1982* (SBFAA) and the *Statutory Bodies Financial Arrangement Regulations 2007* (SBFAR).

2. Purpose

As per s 191 of the *Local Government Regulation 2012*, Council is required to prepare and adopt an investment policy.

To provide Council with a contemporary investment policy based on an assessment of risk within the legislative framework of the SBFAA and SBFAR. This includes:

- ensuring the preservation of Council's capital;
- investing Council funds not immediately required for financial commitments;
- maximising earnings from authorised investments of investable funds in accordance with s 47(1) of the SBFAA;
- consideration of council's net debt position when determining the use of investable funds; and
- ensuring that appropriate procedures and adequate internal controls are established and records are kept.

3. Reference (e.g. Legislation, related documents)

Local Government Act 2009
Local Government Regulation 2012
Statutory Bodies Financial Arrangements Act 1982
Statutory Bodies Financial Arrangement Regulation 2007
Public Sector Ethics Act 1994

4. Definitions

To assist in interpretation, the following definitions shall apply:

At-call	For an investment by a statutory body, means the body may, without penalty, obtain all amounts under the investment – (a) Immediately it gives written or oral notice to the person with whom the investment is made; or (b) Within 30 days after written or oral notice is given to the person with whom the investment is made.
Authorised investments	Investments allowed by the SBFAA & SBFAR and authorised for investment purposes by Council and/or Council's Chief

	Executive Officer.
Financial Institution	Those organisations listed on the Register of Approved Deposit Institutions (ADIs) on the Australian Prudential Regulation Authority website.
Investable funds	Funds not required in the short term (30 days) to meet the cash flow requirements of Council and available for investment.
Investment portfolio	The term portfolio refers to any combination of financial risk such as stocks, bonds or cash. It is a generally accepted principle that a portfolio is designed according to the investor's risk tolerance, time frame and investment objectives. The monetary value of each asset may influence the risk/reward ratio of the portfolio and is referred to as the asset allocation of the portfolio.
Investment arrangement	Means securities, investments and other similar arrangements, including, for example, bills of exchange, bonds, certificates of deposit and promissory notes.
Liquidity	A measure of the extent to which a person or organisation has cash to meet immediate and short-term obligations, or assets that can be quickly converted to do this.
Market average rate of return	An index of money market cash investment rates available to Council as per the SBFAA and SBFAR that is averaged over the same investment period as Council's investment portfolio to provide a comparison to Council's investment portfolio performance.
Net debt position	Council's net debt position is the difference between Councils Debt and Cash holdings.
Prohibited investments	Investments not allowed by the SBFAA & SBFAR and not authorised for investment purposes by Council and/or Council's Chief Executive Officer.
Prudent investment principles	Generally, any use of financial assets that is suitable for the risk and return profile and the time horizon of a given investor (Council). Investment officers who are entrusted with making prudent investments should also ensure that an investment is one that makes sense within the investor's overall portfolio and whose fees will not detract significantly from the investment's returns. The prudent investor rule only holds that persons must make sound money management decisions for their clients based on the information available. The outcome of their investment decision, whether good or bad, is not a factor in whether the investment is considered prudent.
Recognised local financial institutions	Those financial institutions identified by Council that have a local branch, provide retail banking services to the public, show evidence of supporting the community through donations or event support and provide a range of term deposits suitable for Councils investment requirements.
SBFAA	*Statutory Bodies Financial Arrangements Act 1982.*
SBFAR	*Statutory Bodies Financial Regulation 2007.*
Segregation of duties	Segregation of duties are specific internal controls implemented to ensure no one officer has so much control over an activity

	that mistakes could go undetected or that the officer could be placed in a situation where they could be tempted by an inappropriate activity. The emphasis is the segregation of functional responsibilities and to create a system of checks and balances, so that a duty performed by one officer would be checked by another officer in the ordinary course of work.
Speculation	Speculation is the practice of engaging in risky financial transactions in an attempt to profit from fluctuations in the market value of a tradable good such as a financial instrument, rather than attempting to profit from the underlying financial attributes embodied in the instrument such as capital gains, interest, or dividends.
The Act	*Local Government Act 2009.*
The Regulation	*Local Government Regulation 2012.*

5. Policy Statement

5.1 Investment approach

Council has adopted a passive investment approach. The objective of a passive investment approach is to ensure the return of capital and at the same time generate a return commensurate with the risk taken. This will be achieved primarily through investing in fixed interest rate term deposits that will be held to maturity and at-call investments.

5.2 Authority for Investment

The investment of Council's investable funds are to be in accordance with the relevant power of investment under the SBFAA and SBFAR and their subsequent amendments and regulations.

5.3 Ethics and conflict of Interest

a) A standard of prudence is to be used by investment officers when managing the overall portfolio. Investments will be managed with the care, diligence and skill that a prudent person would exercise in managing the affairs of themselves or other persons.

b) Investment officers are to manage the investment portfolios not for speculation, but for investment in accordance with the spirit of this Policy.

c) This Policy requires that employees and investment officers disclose to the Chief Executive Officer any conflict of interest or any investment positions that could be related to the investment portfolio.

5.4 Risk Management

a) Council's risk management approach to managing its investable funds includes:

- embedding risk management in the requirements of this Policy;
- meeting the requirements of the SBFAA and SBFAR;
- reviewing credit ratings of the financial institution and investment arrangements;
- investing only in authorised investments in accordance with s 44(1) of the SBFAA.; and

b) Council's loss appetite is zero for loss of the investment capital with the loss of investment income low. Investment income loss is controlled by investing in appropriately credit rated institutions with fixed interest term and at-call deposits.

5.5 Investment Objectives

Council's primary objectives in order of investment activities are to:

- preserve capital;
- maintain an appropriate level of liquidity; and
- maximise returns while investing in accordance with s 47(1) of the SBFAA.

5.5.1 Preservation of Capital

Preservation of capital is the principle objective of the investment portfolio. Investments are to be made in a manner that seeks to ensure security of the principle.

5.5.2 Maintenance of Liquidity

The investment portfolio will maintain sufficient liquidity to meet all reasonably anticipated operating cash flow requirements of Council, as and when they fall due, without incurring significant transaction costs due to making an early withdrawal request on any of Council's investments.

5.5.3 Return on Investments

The portfolio is expected to achieve a market average rate of return and take into account Council's risk tolerance, current interest rates and budget considerations. Any additional return target set by Council will also consider the risk limitations, prudent investment principles and cash flow characteristics identified within this Policy.

5.6 Authorised Investments

a) Council will only invest investable funds within the constraints of s 44(1) of the SBFAA.

b) The maturity structure of the portfolio will be in accordance with s 44(2) of the SBFAA.

5.7 Prohibited Investments

a) This Policy prohibits any investment carried out for speculative purposes. Prohibited investments include:

- Derivative type investments (excluding floating rates notices);
- Principal only investments or securities that provide potentially nil or negative cash flow;
- Stand alone securities issued that have underlying futures, options, forward contracts and swaps of any kind; and
- Securities issued in non-Australian dollars.

b) Council will approve dealings with all recognised local financial institutions that are listed on the Australian Prudential Regulation Authority website.

5.8 Limitation of Investment Power

As per s 43 of the SBFAA Council is limited to investments that are:

- in Australian Dollars; and

- undertaken in Australia.

5.9 Procedures and Internal Controls

The Chief Financial Officer shall establish processes and internal controls that will ensure investment objectives are met and that the investment portfolios are protected from loss, theft or inappropriate use. The established processes will include:

- a list of authorised and prohibited investments;
- a list or reference to approved financial Institutions;
- methods for obtaining quotes and investing funds;
- reconciliation and reporting requirements;
- compliance and oversight of investment parameters;
- maintenance and safekeeping of investment records, and
- segregation of duties and delegations.

5.10 Breaches

Any breach of this Policy is to be reported to the Chief Financial Officer and rectified within seven (7) days of the breach occurring. Breaches that result in a material or reportable loss as defined in the Regulation must be reported and actioned as per s 307A of the Regulation.

5.11 Delegation of Authority

a) Authority for implementation of this Policy is delegated by Council to the Chief Executive Officer in accordance with s 257(1) of the Act.

b) Authority for the day to day management of Council's Investment Portfolio is delegated by the Chief Executive Officer to the Chief Financial Officer, as per s 259 (1) of the Act.

5.12 Availability of Investment Policy

a) This Investment Policy will be available for public access and inspection at any of Council's public offices and on Council's website as required of s 199 of the Regulation.

b) Council will provide the ability for the public to purchase a copy of this Investment Policy as per s 199 of the Regulation.

6. Changes to this Policy

This Policy is reviewed when any of the following occur:

1. The related information is amended or replaced; or
2. Other circumstances as determined from time to time by the Council.

Notwithstanding the above, this Policy is to be regularly reviewed as required by s 104 (6) of the Act. These reviews will be at intervals of no more than one year.

7. Repeals

This Policy repeals the former Livingstone Shire Council Policy titled 'Investment Policy' adopted 27 June 2017.

CHRIS MURDOCH
CHIEF EXECUTIVE OFFICER

12.4 2018/19 FEES AND CHARGES

File No:	**GV1.1.1**
Attachments:	**Nil**
Responsible Officer:	**Andrea Ellis - Chief Financial Officer**
Author:	**Priscilla Graham - Coordinator Revenue**

SUMMARY

The intention of this report is to outline amendments required to the schedule of Fees and Charges 2018-19 adopted by Council on the 5 June 2018.

OFFICER'S RECOMMENDATION

THAT Council adopts the amendments to the Fees and Charges 2018-19 as follows;

1. The fee for Town Hall Hire (Other Organisations/Entities): Full Site - additional hours or short term (Min 2 hours) of $54 per hour.
2. Removal of the Local Disaster Coordination Centre (The Hub) Full Hire charge identified as $1,000 from the Fees and Charges Register.
3. Car Wash Fees (Multilevel Car Park) - $1 per 1 minute and 20 seconds.
4. Vacuum Fees (Multilevel Car Park) - $1 per 2 minutes.

BACKGROUND

The Fees and Charges for 2018-19 were adopted on the 5 June 2018. Subsequent to adoption some amendments have been identified.

COMMENTARY

The fees and charges schedule for the 2018-19 Financial Year was adopted on the 5 June 2018-19. Following adoption further review of the tabled Schedule has identified the following amendments:

Community Halls - Town Hall

The adopted schedule outlined separate charge items for additional hours (24 Hour Hire) and short term hire. These have been consolidated to single line items per facility.

This identified that the hourly rate adopted for the Town Hall (All Other Organisations/Entities); additional hours (24 hour hire) at $54 per hour, unintentionally differed to that of the hourly rate for short term hire at $44 per hour for the same facility. The recommendation is to adopt at $54.00 as identified below.

All Other Organisations/Entities

Note: Community Organisations receive a fifty (50) per cent discount

Full Site – maximum period of 24 hour hire	P5480.833.1103	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per day	$307.00
Full Site – additional hours plus 24 hour hire fee – Fee is per hour	P5480.833.1103	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per hour	$54.00
Full Site – short term minimum 2 hour hire) Fee is per hour	P5480.833.1103	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per hour	$44.00

Recommended Change

Full Site – additional hours or short term hire (Min 2 hours). Fee is per hour	P5480.833.1103	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per hour	$54.00

Local Disaster Coordination Centre (The Hub)

The adopted schedule outlined two separate charge items for the Coordination Centre Full Hire of facility in error. It is recommended that the "Full Hire" with no charge rate identified is removed as outlined below.

Coordination Centre

Local Disaster Coordination Centre – Emergency Services	P3350.436.1108	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per booking	$0.00
Full Hire	P3350.436.1108	Local Government Act 2009 | Part 2 S97 (2)(c)	Commercial	N		$1,000.00
Local Disaster Coordination Centre Commercial Rate (2 Hourly)	P3350.436.1108	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	two hourly	$300.00
Local Disaster Coordination Centre Commercial Rate (Daily)	P3350.436.1108	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per day	$1,500.00

Car Wash Fees

Car Wash Fees	A.0433934.303.1124	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per 1 minute 40 seconds	$1.00
Vacuum Fees	A.0433934.303.1124	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per 3 minutes	$1.00

Recommended (change to charge rate)

Car Wash Fees	A.0433934.303.1124	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per 1 minute 20 seconds	$1.00
Vacuum Fees	A.0433934.303.1124	Local Government Act 2009 | Part 6 S262 (3)(c)	Commercial	Y	per 2 minutes	$1.00

PREVIOUS DECISIONS

The Fees and Charges were adopted at the Ordinary Council Meeting 5th June 2018.

BUDGET IMPLICATIONS

Revenue budgeted is reflective of the Fees and Charges identified for the 2018/19 financial year inclusive of the recommended charges.

LEGISLATIVE CONTEXT

Sections 97 and 262 of the *Local Government Act* apply to the setting of fees and charges and have been applied. Council may amend fees and charges within a financial year by resolution.

LEGAL IMPLICATIONS

Not Applicable.

STAFFING IMPLICATIONS

No staffing implications are foreseen.

RISK ASSESSMENT

Review of the fees and charges ensures the appropriate level of cost recovery and commercial fee for service. The fees and charges schedule can be amended throughout the year in accordance with legislation via Council resolution.

CORPORATE/OPERATIONAL PLAN

Corporate Plan Reference: **Strategy GO3: Pursue financial sustainability through effective use of the Council's resources and assets and prudent management of risk.**

LOCAL GOVERNMENT PRINCIPLES

The Local Government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

The fees and charges for 2018-19 are set under the provisions of the *Local Government Act 2009*. Council is required to make a resolution to adopt all such fees and charges. Upon

resolution, the amendments will be made to the Fees and Charges Schedule 2018-19 and Council's website updated.

12.5 BLACK SPOT FUNDING APPLICATION

File No:	**GS15.2.3-5**
Attachments:	**Nil**
Responsible Officer:	**Dan Toon - Executive Director Infrastructure**
Author:	**Michael Prior - Manager Infrastructure Operations**

SUMMARY

Council officers have identified projects on Lake Mary and Bungundarra Roads to submit for the 2019/20 Black Spot funding program.

OFFICER'S RECOMMENDATION

THAT Council resolves to endorse a Black Spot funding application to provide works on Lake Mary and Bungundarra Roads as outlined in this report.

BACKGROUND

The Black Spot program is a federally funded initiative aimed at addressing road trauma by upgrading sites that are known traffic hazards.

COMMENTARY

Council has received an invitation to apply for funding under the Black Spot Program for the 2019/20 financial year with applications closing 27 July 2018. Black Spot funding is primarily prioritised on the basis of the Benefit Cost Ratio Calculation (BCR), with projects with a higher BCR receiving funding first. The BCR is based upon the total benefit to the community, calculated in terms of the reduction in crash costs over the service life of the proposed treatment, weighted against the overall cost of the project. The crash history at the location determines whether Council will submit a 'Reactive' or 'Proactive' proposal. A number of recorded crashes at the intersection of Arthur Street and John Street, Yeppoon allow Council to submit a reactive proposal. Projects are eligible for up to $2.0 M in federal funding through the Black Spot Program while other sources of funding can be utilised if the total cost exceeds $2.0 M; however the total project cost is to be used for the BCR calculation.

The following sites have been considered for further investigation:

- Lake Mary Road
- Bungundarra Road

Submission Overview – Lake Mary Road

State and local resources show that there is a history of recorded crashes on this road, and as such a reactive proposal will be submitted. The crash locations are located between Ch6350 and Ch15900 which coincides with two projects in the forward works program near these particular crash sites to upgrade Lake Mary Road to gravel road standard between Ch12000 and Ch18000. Lake Mary Road is an unsealed rural road which provides access for local residents in the Lake Mary, Bungundarra and Barmoya areas.

The crash profile on Lake Mary Road shows a trend of travelling off the carriageway and hitting an object. In the past five years (1 July 2012 to 30 June 2017) there have been a total of 6 recorded crashes, the details of which can be seen below:

Location	Crash Severity	Crash Type
Lake Mary Road	Hospitalisation	Other
Lake Mary Road	Hospitalisation	Off Carriageway On Curve Hit

Location	Crash Severity	Crash Type
		Object
Lake Mary Road	Hospitalisation	Off Carriageway On Straight, Hit Object
Lake Mary Road	Hospitalisation	Other – Fall from moving vehicle
Lake Mary Road	Hospitalisation	Off Carriageway On Straight, Hit Object
Lake Mary Road	Hospitalisation	Other

The preferred treatment option is to upgrade 3km of Lake Mary Road to:

- improve horizontal and vertical alignment
- Provide formation and gravel pavement

The concept estimate for road formation and gravel pavement for this section of Lake Mary Road is $350,000.

Submission Overview – Bungundarra Road

There is a history of crashes which have occurred on Bungundarra Road also. There have been a total of 4 crashes on Bungundarra Road from 2012 to 2017 and a cluster of crashes between Ch 500 and Ch 2750. The crash details can be seen below:

Location	Crash Severity	Crash Type
Bungundarra Road	Hospitalisation	Head On
Bungundarra Road	Hospitalisation	Head On
Bungundarra Road	Hospitalisation	Out of Control on Curve
Bungundarra Road	Hospitalisation	Out of Control on Straight

Bungundarra Road has been highlighted as a future B-Double route to service the primary producers and businesses in the area. This project will contribute to providing necessary requirements to upgrade to a B-Double route.

The preferred treatment option is to upgrade relevant sections of Bungundarra Road to:

- Provide sealed curve widening at crash locations

The concept estimate for sealed curve widening at this location is $250,000.

PREVIOUS DECISIONS

None known for the proposed Black Spot funding.

BUDGET IMPLICATIONS

Provided the total estimated cost of each project remains under $2.0M and the application is successful, the project will be 100% federally funded.

LEGISLATIVE CONTEXT

Council is empowered under the Local Government Act to manage road reserves.

LEGAL IMPLICATIONS

None known

STAFFING IMPLICATIONS

If the funding application is successful, the design and construction of the project can be delivered by existing Council staff.

RISK ASSESSMENT

NIL

CORPORATE/OPERATIONAL PLAN

Corporate Plan Reference: Strategy AM2: Identify infrastructure and asset requirements through community consultation and technical expertise.

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

Submission of a Black Spot funding application for projects on Lake Mary Road and Bungundarra Road is considered worthwhile.

12.6 DRAFT FIG TREE CREEK MASTERPLAN

File No:	**EM11.12.1**
Attachments:	**1. Fig Tree Creek Master Plan⇩**
Responsible Officer:	**David Mazzaferri - Manager Disaster Management, Recovery and Resilience** **Brett Bacon - Executive Director Liveability and Wellbeing**
Author:	**Leise Childs - Senior Land Protection Officer**

SUMMARY

This report provides the draft Fig Tree Creek Master Plan for Council's consideration. This first stage has set out some broad principles, strategies and concepts to provide strategic direction for issues within the Fig Tree Creek Catchment. It provides an overarching Vision and Concept Plan to inform detailed master planning.

OFFICER'S RECOMMENDATION

THAT Council endorse the Fig Tree Creek Master Plan for further public consultation and integration into the Council's Strategic Planning Framework

BACKGROUND

The establishment of the Environment Recovery and Resilience Taskforce following Tropical Cyclone Marcia brought a renewed emphasis to environmental planning and recovery. Community groups such as Capricorn Coast Landcare and Capricornia Catchments have a long standing interest in environmental protection and rehabilitation. These groups have funded a number of on-ground projects to control weeds and replant native vegetation. Fig Tree Creek Catchment has been a focus of such activities and this area was identified as an opportunity to facilitate better planning for ongoing sustainable use and enjoyment by the community.

A Fig Tree Creek Catchment Working Group was established in January 2016 consisting of representatives of Council and community groups. The group quickly understood the importance of having a strategic direction and collaboration between government and community to ensure that environmental activities and future developments and uses can coexist. Council provided funding to prepare a strategic document which provides an overview for the whole Catchment, broad direction and recommendations for implementation. The document was prepared by Blacksmith Planning and Design with assistance from Deicke Richards.

In tandem with the master plan is the "Twinning project" incorporating on-ground projects supported by Capricornia Catchments. Capricornia Catchments and the Fig Tree Creek Catchment Management Project have been selected to partner with the winners of the prestigious International Rivers Prize, Sunshine Coast Rivers Initiative, in the River Foundation Twinning Programme. The Sister Catchment project will build the capacity of the Capricorn Coast region to plan for, develop and implement best practice measures to protect and manage the environmental values of the waterway running through the expanding urban area of Yeppoon, which has a direct impact on the Southern Great Barrier Reef.

COMMENTARY

The Fig Tree Creek catchment takes in a large proportion of the Yeppoon township, including the town centre. It includes most of the residential areas north-west and south-west of Yeppoon, and is defined loosely by the Yeppoon Golf Course and Yeppoon Road to the south, Meikleville Hill and Barlows Hill in the north and Limestone Creek Road at Inverness in the west.

The following is the suggested Vision for the catchment which can help drive the initiatives and actions contained in the master plan:

> *An active connected and walkable catchment enjoyed by the community and visitors for its source of freshwater, healthy waterways, environmental qualities and recreation opportunities. A catchment that promotes local waterways as safe and attractive wildlife corridors.*

The intention of the master plan is to create a more walkable and connected community by promoting a range of connections through the catchment area.

Fig Tree Creek provides a range of recreational, social and environmental benefits. It is a place for recreational activity from boating to fishing and walking and is an important part of the region. The lower catchment is an environmental reserve, providing important breeding, feeding and nesting points for many native fauna. Ross and Fig Tree Creeks are an important part of the tourism industry that exists in the Capricorn Region.

The majority of the catchment has been highly urbanised bringing a number of issues including: extremely narrow and poorly defined creek channel through existing urban areas; weed infestation; poor water quality; flooding; sediment build up; poor physical access; poor amenity and degraded environmental quality.

This has been brought about by a number of factors over the years, however chief among them are the previous residential development practices which have created poor urban practices in relation to the management of Fig Tree Creek and its management as a water source. This has resulted in the creek being contained in many locations in between back fences. There is much which can be done to improve the viability of the creek as a source of amenity, habitat and connection. In this regard Council and the community will both play a large part in any future success of the catchment.

The State of the Catchment section provides a more detailed overview of the three main parts of Fig Tree Creek; Upper, Middle and Lower Catchments. The master plan provides a broad overview of the catchment sections. It is not a detailed analysis of the creek and its tributaries but rather tries to lay a platform for further policy investigation and action.

The Strategic Master Plan section deals with the strategic view of the catchment and details a range of interrelated policy responses formed around six key elements: Policy and Planning; Flood and Overland Flow; Stormwater and Water Quality; Environment and Open Space; Education and Community Action and Connection and Access.

Activities of the Capricornia Catchments and Sunshine Coast Rivers Initiative Twinning project include: wider community engagement (including a focus on traditional owners) and an on-ground project which engages and empowers property owners to monitor and maintain their section of waterway, it is an incentive based project which fosters the involvement of landholders whose tenure makes up parts of the riparian zone.

The funding provided to Capricorn Catchments to deliver the project is only $25,000 this financial year but if successful there is potential to apply for the same amount again. The grant includes a project officer to undertake engagement activities, visit landowners and liaise with stakeholders, limited contractor fees to assist with on-ground works, purchase of marketing materials and displays. Officers are already starting to identify properties which may be eligible for engagement and on-ground support.

There is an opportunity to hold a forum involving representatives from the Sunshine Coast Rivers Initiative. Meeting with these project partners (including local government, natural resource management and industry representatives) will highlight the genuine collaboration and interest in this region. A key aspect of delivery of these projects is communication with the wider community. The development of a communication strategy has commenced in consultation with Council's Communication unit.

PREVIOUS DECISIONS

Council first considered the Draft Fig Tree Creek Master Plan at a Workshop on 19 April 2016 and, more recently, at a Workshop on 16 April 2018.

BUDGET IMPLICATIONS

Existing resources can accommodate the ongoing collaboration and communications via the Environment Recovery and Resilience taskforce and Fig Tree Creek Working Group. Funding for future implementation projects will be required.

LEGISLATIVE CONTEXT

The master plan provides a strategy to assist Council and community to meet various legislative requirements in the management of developments and activities within the Catchment including Water Sensitive Urban Design requirements.

LEGAL IMPLICATIONS

The master plan is not a legally binding document however it can guide the development of instruments such as the planning scheme or local laws to promote community compliance with best practise standards.

STAFFING IMPLICATIONS

The existing staff resources in Natural Resource Management and Sustainability as well as Communications staff will support the implementation of a community information programme regarding the master plan development and twinning activities. However, future project implementation will need to be assessed in terms of capacity of existing staff and resources.

RISK ASSESSMENT

The adoption of the Fig Tree Creek Master Plan approach will minimise the risk for conflict between land uses and promote sustainable development through consideration of economic, social and environmental aspects of private and community uses.

CORPORATE/OPERATIONAL PLAN

Strategy EN2 of Council's Corporate Plan states: '*Recognise and understand the various eco-systems of the Shire to encourage their sustainable use and appreciation through appropriate accessibility.'*

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

The draft Fig Tree Creek Master Plan provides an overarching Vision and Concept Plan to inform detailed master planning. The next steps for Council to progress issues and ideas arising from this master plan would be to:

1) present the Master Plan for community feedback;

2) seek community comments on early ideas;

3) use the Plan to guide Council's long-term planning and spending;

4) conduct technical studies to work out which ideas are feasible and will work best;

5) undertake detailed master planning of areas as nominated in this document;

6) begin turning the ideas into reality through targeted projects; and

7) partner with locals, businesses and community groups to undertake key initiatives.

12.6 - DRAFT FIG TREE CREEK MASTERPLAN

Fig Tree Creek Master Plan

Meeting Date: 17 July 2018

Attachment No: 1

February 2017 / Issue A
Fig Tree Creek Masterplan
Yeppoon, Queensland
BLACKSMITH
PLANNING & DESIGN
DEICKE RICHARDS

Disclaimer

While every care has been taken in preparing this publication, Livingstone Shire Council accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained within.

All plans, maps and images are intended to represent generalised concepts for the purpose of master planning. They do not and are not intended to identify and give attributes or rights to specific land parcels. To the best of our knowledge, the content was correct at the time of publishing.

Document prepared by Blacksmith Planning & Design
Date issued: 3 February 2017 - Issue A
The report was prepared with the assistance of
Design Hubmill
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BLACKSMITH
PLANNING & DESIGN

Introduction 1
State of the Catchment 4
Vision 6
Strategic Masterplan 8
- Upper catchment 8
- Middle catchment 10
- Lower catchment 12

Implementation 14
Next Steps 15

DRAFT

Livingstone SHIRE COUNCIL

Introduction

"My interest is in the future, because I am going to spend the rest of my life there."

Charles Kettering

The Fig Tree Creek catchment takes in a large proportion of the Yeppoon township including the town centre. It includes most of the residential areas north west and south west of Yeppoon, and is defined loosely by the Yeppoon Golf Course and Yeppoon Road to the south, Meikleville Hill and Barwick Hill in the north and out to Limestone Creek Road at Inverness in the west.

Fig Tree Creek provides a range of recreational, social and environmental benefits. It is a place for recreational activity from boating to fishing and walking and is an important part of the region. The lower catchment is an environmental reserve, providing important breeding, feeding and nesting point for many native fauna. Ross and Fig Tree Creeks are an important part of the tourism industry that exists in the Capricorn Region.

The majority of the catchment has been highly urbanised however bringing a number of issues including:

- Extremely narrow and poorly defined creek channel through existing urban areas
- Weed infestation
- Poor water quality
- Flooding
- Sediment build up
- Poor physical access
- Poor amenity
- Degraded environmental quality

This has been brought about by a number of factors over the years however chief among them are the previous residential development practices which have created poor urban outcomes in relation to the management of Fig Tree Creek and its management as a water source. This has resulted in the creek being contained in many locations in between back fences.

This type of outcome creates:

- A poor open space network that is not connected and is not able to be connected. This in turn impacts upon ped/cycle connection
- No overlooking or passive surveillance
- Poor flooding and drainage response as any overflow has nowhere to go except into private property and no access to make any alterations, improvements or repairs
- Weed infestation as there is no ability to undertake maintenance of vegetation
- Lack of community stewardship as the creek is at the back of properties and essentially out of mind out of sight.

These residential practices must not be allowed to perpetuate in the upper catchment where further development is contemplated in accordance with the Strategic Framework in the draft planning scheme.

This work will analyse the catchment and then offer a range of potential solutions to some of the issues. Some issues such as the constrained nature of the creek are to a large degree intractable without the wholesale purchasing of some private property adjoining the creek. This is to be avoided however, due to the enormous financial, community and political costs.

But there is still much that can be done to improve the viability of the creek as a source of amenity, habitat and connection. In this regard Council and the community will both play a large part in any future success of the catchment.

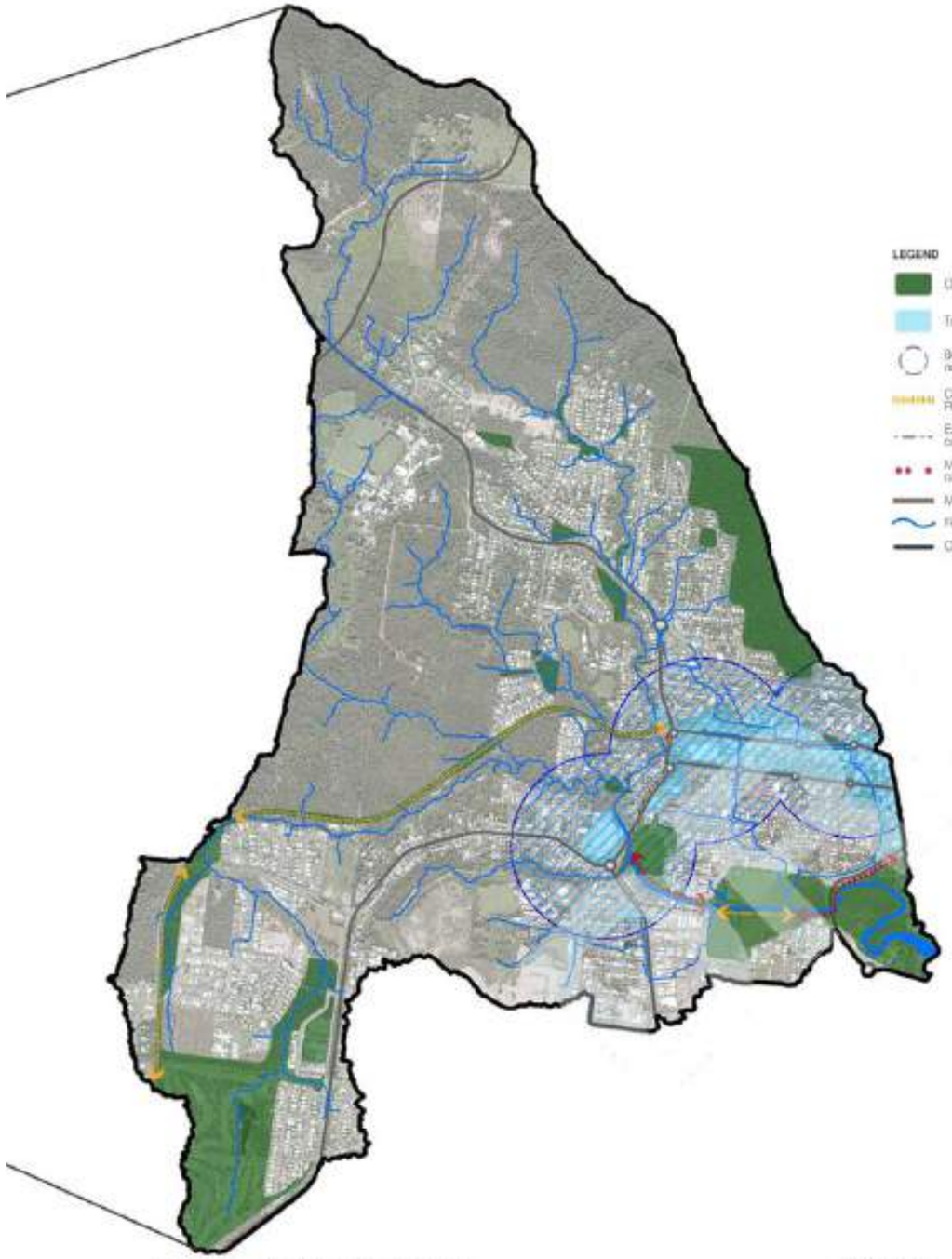
Fig Tree Creek

Falling from the higher parts of the catchment at Pacific Heights and Barlows Hill the catchment dominates the urban area within and surrounding Yeppoon as shown in Figures 1 and 2. A number of broader environmental corridors which extend along local ridgelines adjoin the catchment from the north. The Ross Creek catchment adjoins the Fig Tree Creek Catchment to the south and provides additional opportunities for environmental connections. Rural areas dominate land uses to the west.

Figure 3 is the draft Strategic Framework for Council's new planning scheme. This shows some areas of the catchment to the west of the existing urban area that are still to be developed for a range of residential uses. How these areas are developed needs to be carefully considered if there improvements to be made to the health and performance of the catchment.

Figure 1 – Fig Tree Creek catchment in relation to Yeppoon and surrounds

1:100,000


LEGEND
Open space network
Town centre
800m distance to centre node
Capricorn Coast Pineapple Rail Trail
Existing pedestrian connection
Missing shared use connection
Major roads
Fig Tree Creek waterways
Catchment Boundary

Legend
Pacific Heights
Barmaryee
Yeppoon
Cooee Bay
Hidden Valley
Taroomball
1
4
5
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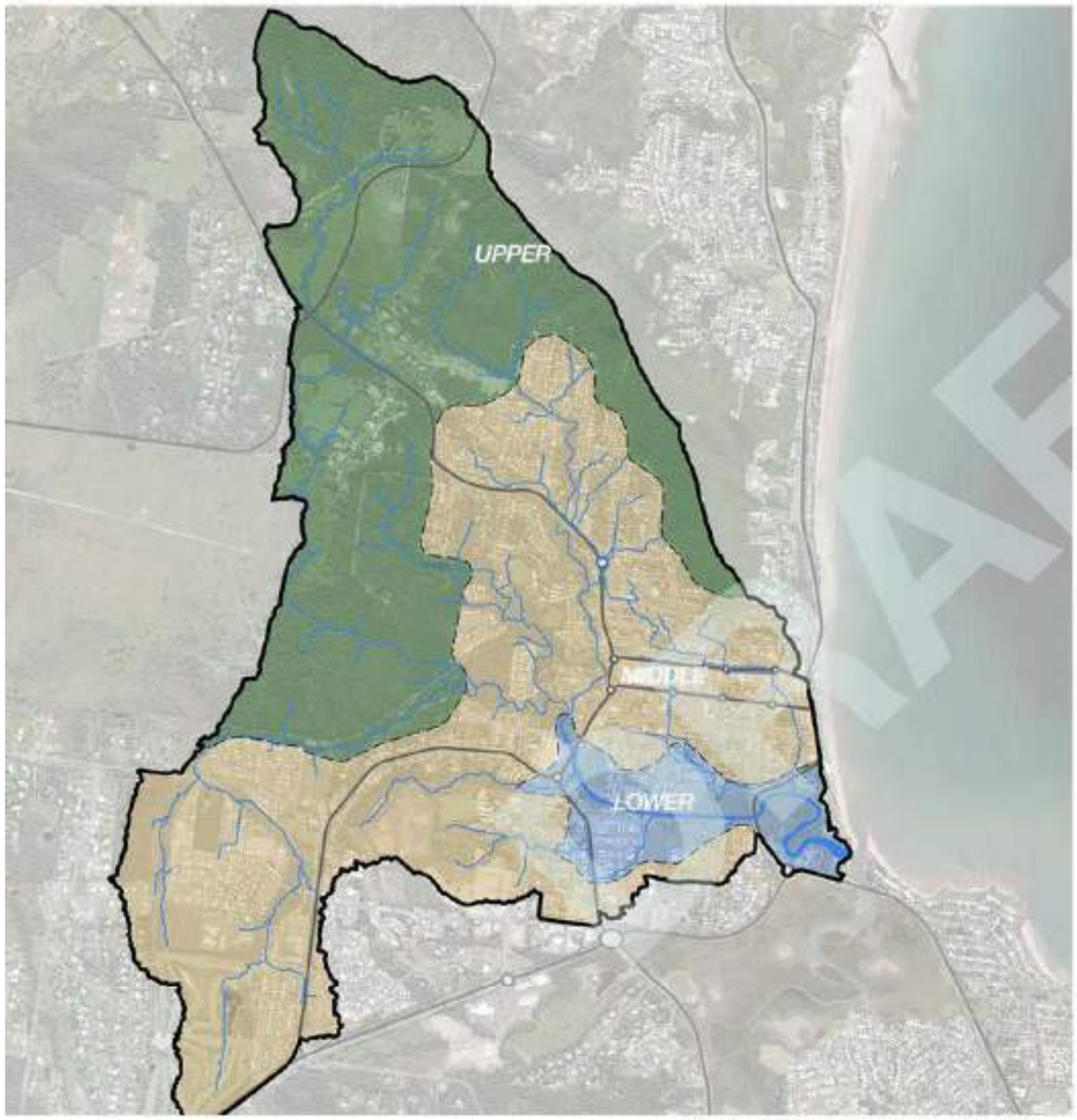
11



The State of the Catchment

This section provides a more detailed overview of the various parts of Fig Tree Creek. For the purpose of both analysing and providing strategic advice regarding the catchment, it has been broken into three main parts. The catchment has distinct components essentially based on current land uses and extent of urban development. For instance the upper catchment distinguishes itself by having the least amount of urban development at present. The lower catchment is arguably the most environmentally significant containing the tidal range of the Fig Tree Creek and contains significant areas of mangroves and wetlands.

Upper Catchment

This is the birthplace of Fig Tree Creek where the quality of the spring waters is the stuff of local legends. This area is essentially those parts of the catchment which have not been developed for urban purposes and includes parts of Inverness, Adelaide Park, Pacific Heights etc. Parts of the upper catchment are designated for Residential or Park Residential purposes and will be developed at some point in the future. Outcomes should seek to achieve more pedestrian and cycle connectivity with other parts of the catchment. Policy responses should reflect appropriate design outcomes that reflect the vision for the catchment.

Other parts are zoned Open Space or Rural and are unlikely to be developed in the near future. Water quality and environmental connections are important outcomes that should be explored these areas.

Middle Catchment

This includes the majority of the urban areas of Yeppoon. Park Street is the assumed eastern boundary of the middle catchment and represents the point at which fresh water and salt water mix. Essentially this is the tidal range of the creek at present.

The middle catchment is highly developed. Urban development practices have created poor interfaces with the creek. In a number of instances the creek is lost in a jumble of backyards, and private property where the health of the waterways suffers through neglect and poor maintenance. As shown in figures 5 and 6 the creek is in places choked with weeds and sediment build up which impacts on urban drainage and flooding.

A considerable number of weed species can be found in the waterway. These weed species impact on the environmental value of the corridor diminishing its value as a habitat linkages. Because of the location of the creek corridors behind or within private property these waterways are not able to accessed to perform any remediation works.

Flooding occurs in this part of the catchment due to:

- Interruption of natural water flows by structures such as retaining walls built in the flow path.
- Water velocity has been increased by concrete straightening and creek bank erosion.

Infrastructure works on flood mitigation have concentrated on the lower catchment have been undertaken in an attempt to correct problems originating in the middle and upper catchments. These problems need to be addressed at their origin.

Lower Catchment

This is the part of Fig Tree Creek which sits to the east of Park Street and represents the tidal range of the creek. The creek in this part of the catchment suffers from bank erosion and stability problems due to the volume and velocity of water entering into this part of the creek. Sediment and erosion controls are absent.

Multiple incremental drainage solutions have been imposed on this part of the catchment over many years. All of which have been directed at solving multiple issues of flooding and drainage, etc. This part of the catchment is very low lying and contains a considerable amount of reclaimed wetland areas for urban development. Indeed, Council's own works depot is contained on reclaimed wetland. Considerable amounts of open space are in this location as well including the Yeppoon Showgrounds and the Capricorn Coast Football Club. Most of these parks are connected by off road cycle links however the linkages are not complete.

Marine vegetation – mangroves etc make for a reasonably pleasant environment to walk next to or simply look at. There are many opportunities in this space to enhance the recreation experience of this part of the catchment, utilise the open space for a range of activities and indeed the creek is wide enough to allow navigation via canoes and kayaks.

In an unpublished management plan dated July 2004 prepared by the Department of Natural Resources and Mines for the Management of Ross and Fig Tree Creeks it noted with respect to the environmental values of the lower catchment:

> *The mangrove areas of Ross and Fig Tree Creeks provide a permanent campsite for a large colony (approximately 2000) of black flying fox (Pteropus alecto) and a seasonal camp for several hundred thousand little red flying fox (Pteropus scapulatus). Permanent flying fox camps have high biodiversity value. Black flying foxes use the area during summer as a maternity site. This species is more sedentary than other species of flying fox but may undertake local movements of up to 50km when foraging. There is migration from Ross Creek and Fig Tree Creek to other satellite colonies at Water Park Creek and Emu Park, particularly if flowering/fruiting is scarce. They feed on nectar (Eucalyptus, Corymbia, Banksia, Melaleuca & Syncarpia spp.) and fruits (Ficus spp.) and cultivated fruit and are considered critically important to the maintenance of healthy forest ecosystems on the central Queensland Coast. The numbers of little red flying foxes camping at Ross and Fig Tree Creeks varies from year to year and has been used as a maternity site.*
>
> *The Ross and Fig Tree Creeks roost is considered important for the species as the loss of daytime roost sites is considered a threatening process for little red flying foxes.*
>
> *Some migratory birds use the area as a roosting and feeding zone and the Japan-Australia Migratory Bird Agreement (JAMBA) and the China-Australia Migratory Bird Agreement (CAMBA) identify the importance of protecting habitats for a range of rare and threatened wader species that frequent the area.*

Elements of a pedestrian and cycle network existing in this part of the catchment. This area is reasonably flat or gently undulating and is an ideal place to be promoting walking and cycling to access local activity nodes such as the Yeppoon waterfront. A number of small scale projects linking the existing network are 'easy wins' in this location.

Vision

The following is a suggested Vision for the catchment which can help drive the initiatives and actions contained in this document:

An active connected and walkable catchment enjoyed by the community and visitors for its source of freshwater, healthy waterways, environmental qualities and recreation opportunities. A catchment that promotes local waterways as safe and attractive wildlife corridors.

The intension of the master plan is to create a more walkable and connected community by promoting a range of connections through the catchment area.

Schools and other community and recreational facilities should be connected within the catchment through either linkages utilising the creek corridor where available or along the road network where safe to do so. This along with a range of community education actions and campaigns should be the focus of the master plan.

Figure 7 - Elements of pedestrian and cycle connection always exist on the lower catchment

Figure 6 - Eden Park like other parts of the open space need a purpose and activation

Strategic Master Plan

This section deals with the strategic view of the catchment and details a range of interrelated policy responses. The master plan provides a broad overview of catchment. It is not a detailed analysis of the creek and its tributaries but rather tries to lay a platform for further policy investigation and action.

Policy response for the master plan will be formed around six key elements:

Policy and Planning

In particular looking at issues such as how the planning scheme does or should be treating parts of the catchment. It will consider any significant changes to Council's current policy regime in response to particular catchment issues.

Stormwater and Water Quality

Locations within the catchment have been identified as suitable for some form of regional treatment facility for stormwater. These facilities allow and polish stormwater as it flows into the creek system. These items are important in maintaining the health of the system, its visitors and the many flora and fauna species in all parts of the creek that depend on this catchment.

Ideally the design of stormwater infrastructure should:

- prevent or minimise adverse social, environmental, and flooding impacts on waterways, overland flow paths and other parts of the drainage network; and
- ensure that the design of channel works as part of development maximises the use of natural channel design principles where possible. This more natural solution has the added benefit of bringing beauty and wildlife habitat to the local area.

Ideally all households should be encouraged to have rainwater tanks and rainwater gardens to assist in retaining and treating stormwater. Public streets should be used as part of the treatment train particularly in upper parts of the catchment that are undeveloped. The avoidance of concentration of flows and the use of natural drainage channels along streets need to be incorporated into operational works design. The aim is to slow stormwater entering the creek system to reduce velocities at the bottom of the catchment.

Education & Community Action

Given the nature of some parts of the catchment where public access is not possible, the community needs to be enticed, educated and empowered to take on a stewardship role for the catchment.

A stewardship programme needs to be lead by Council with the assistance of a range of state and local community groups. This programme could include:

- Education material dealing with issues weed management, catchment role and identity, what can I do to help?, etc.
- Catchment signage showing that residents and visitors are part of a catchment.
- Letter box signs and street signs
- Offering incentives and resources to residents and community groups to assist in maintaining parts of the creek corridor – weed removal, replanting, etc.
- Include local schools within the catchment

The stewardship programme could be extended to include schemes such as land for wildlife for upper catchment areas or backyards for wildlife which could operate on a far smaller scale for areas in the middle catchment.

Flood & overland flow

This includes physical responses such as back flow valves, detention and retention facilities. It also includes ensuring sufficient capacity is maintained within riparian corridors to cater for the flood events and ensuring urban development does not impact upon both storage and conveyance of flows.

Environment & Open Space

This includes a number of elements including:

- Recognising the creek and its tributaries as playing a role in local habitat linkages
- Removal of weeds and other invasive species from the waterway
- Protection of parts of the upper catchment from unnecessary development
- Ensure development in the upper catchment recognises the importance of maintaining the environmental values of the catchment and provides a suitable design response
- Revegetation of the creek and its banks
- Creating access to the creek through open space corridors that line the creek providing a network of riparian corridors
- A programme of street trees to assist with both the creation of habitat and in the greening of existing urban areas
- Valuing and programming open space

Connection & Access

Physical access is constrained through parts of the catchment however other opportunities exist to create or enhance linkages lower in the catchment, create new linkages in the upper parts of the catchment or provide linkages to other paths such as the Rail Trail. This Master Plan explores a number of options for further pedestrian and cycle access in the catchment.

The ability to walk and cycle all parts of the catchment needs to be a goal of the master plan. The master planning process investigates opportunities and strategies that could be applied in locations right across the catchment. These are detailed on the following pages.

Upper Catchment

The overall intent for this master plan in this location is to maintain areas of vegetation and habitat as first priority. This has the effect of reinforcing the existing habitat linkages and maintaining water quality of stormwater runoff. Some redevelopment is expected in the upper catchment and therefore planning policy needs to be of sufficient detail and strength so as to maintain environmental and water quality values for riparian corridors where they occur in development parcels.

Securing larger parcels of land with environmental value located along waterways will contribute the connectivity of the catchment to other regional environmental corridors. This will require either strategic purchase of land by Council or the state government or entering into an agreement with private land holders.

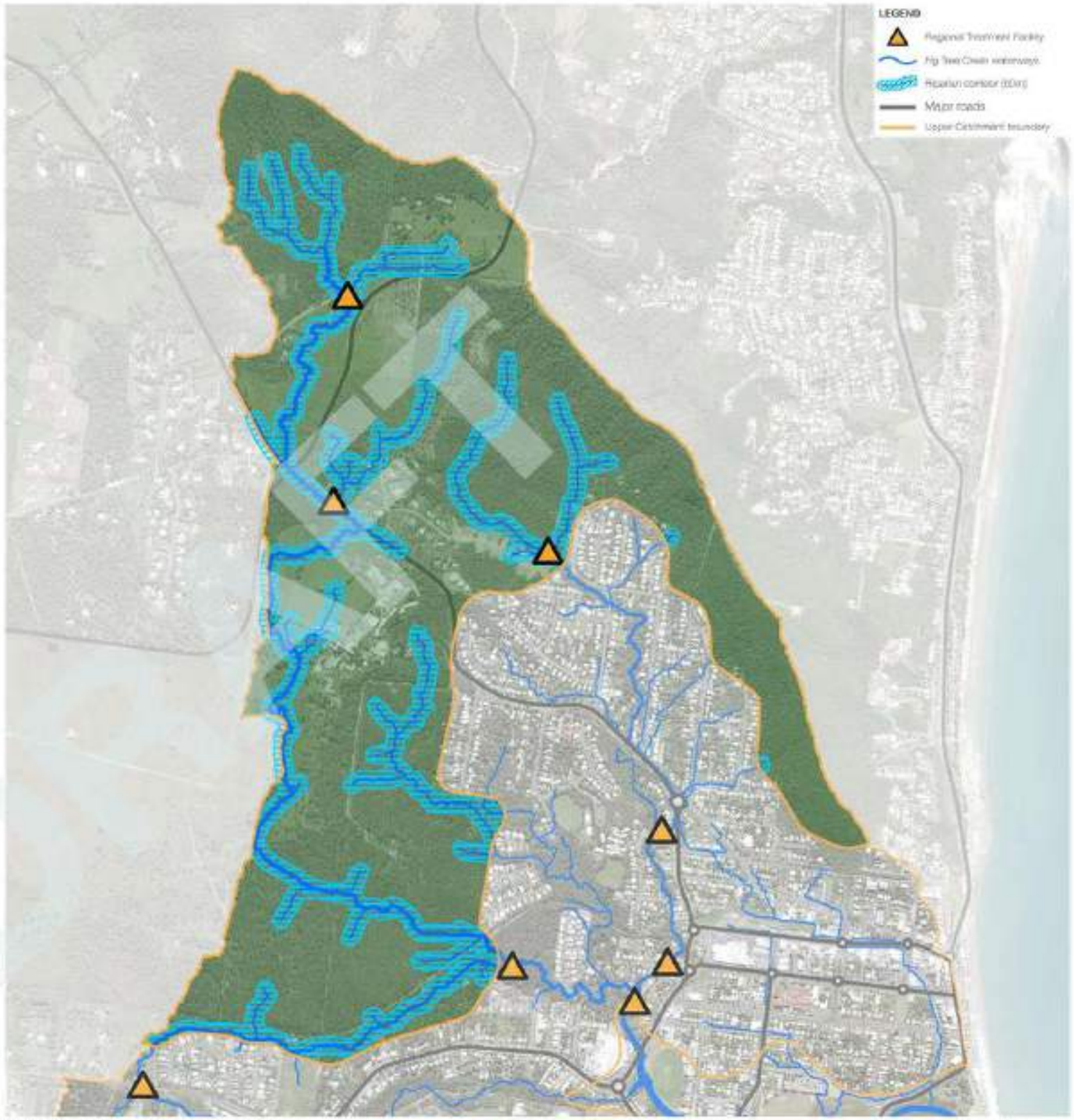


Figure 9 - Waterway mapping of Fig Tree Creek – Upper Catchment

Policy + Planning

At present the planning scheme does not contain sufficient detail in order protect items of local environmental significance or to ensure there is an adequate design response for future urban development within the catchment. To ensure the existing patterns of urban development are not repeated in the catchment the following amendments are recommended:

The strategic framework whilst maintaining an effective urban footprint around the town does not recognise the Fig Tree Creek Catchment in any way. It neither recognises the creek as an environmental corridor or its ability to contribute to a movement network.

The Draft Reconfiguration Code does not adequately address issues of lot layout design, road network design or pedestrian and cycle networks. As a minimum the Reconfiguring a lot Code needs to stipulate that:

- All lots are designed to overlook open space and riparian corridors to improve safety and surveillance in accordance with the principles of CPTED.
- Minor roads are to adjoining all open space and riparian corridors.
- Riparian and other waterway corridors in all residential zones are not to be included in private lots.
- Cycle and pedestrian paths are aligned to the open space network.
- The road network minimises fragmentation of areas to be conserved for biodiversity, waterway and/or environmental purposes.

In addition, further mapping should be generated to ensure the creek and its major tributaries are nominated as Local biodiversity corridors for the purposes of the draft Biodiversity code as shown in Figure 9. These mapped areas need to remain in public ownership.

Flood + Overland Flow

The detention and/or retention of flows will improve the ultimate flow through the lower catchment. Some preliminary work has been undertaken on the catchment and have identified where these regional treatment facilities are likely to occur as shown in Figure 9. These are just preliminary at this stage and the ultimate size and location of this final facility will be subject to further stormwater and hydraulic analysis to be undertaken by the development proponent. These elements need to be mapped and included in the planning scheme to signal council's intentions for these infrastructure items.

Stormwater + Water Quality

The majority of this part of the catchment is at present not developed. Retaining these areas in their natural state maintains the health of the waterways. Parts are zoned for rural purposes and in these areas owners should be encouraged to maintain the health of the waterways by limiting stock movement through the waterways and creeks, maintaining vegetation cover and limited the use of fertilisers, pesticides and herbicides.

In other areas the maintenance of vegetation cover is important by limiting tree removal and earthworks are key objectives.

Street design and layout should also reflect WSUD principles enhancing landscape and habitat features creating an "Urban Ecology". This can be achieved through avoiding concentrating flows and using vegetated swales, bioretention systems and wetlands within streetscapes and open space areas as shown in Figure 10.

Environment + Open Space

Maintaining a strong urban footprint is an important first step to maintain the health of the catchment. When further land development occurs, it should be a necessary precondition of that development that waterways are included in open space corridors of sufficient minimum width to maintain riparian vegetation, encourage pedestrian and cycle connectivity and allow appropriate stormwater infrastructure. A minimum width of 60 m (exclusive of road reserves) is recommended for all waterway corridors as shown in Figure 9.

This will ensure environmental values of any waterways are maintained and allows for edge effects of urban development.

Tenure in this regard is important as the larger waterways must remain in public ownership. The private ownership of important waterway corridors as part of urban development has led to poor environmental outcomes elsewhere in the catchment.

The purchase of environmentally significant sites should also be a consideration where other forms of agreement or control can not be achieved.

Education + Community Action

In all parts of the catchment this element has the potential to perhaps drive the most change in terms of culture and engagement with issues concerning the catchment.

A possible education campaign may have the following elements:

A general awareness campaign should be introduced for the entire catchment that highlights to residents, visitors and schools that they are indeed part of a water catchment as shown in Figure 11. This has been done successfully in Brisbane.

Fig Tree Creek signage should be introduced. In many parts of the catchment it is difficult to identify where the creek is. Signage at various crossing should be introduced in all parts of the catchment but more importantly in the middle and lower parts.

Land for wildlife campaigns run in South East Queensland sponsored by the state government and a number of local governments and other bodies. Land for Wildlife is a voluntary program that encourages and assists landholders to manage wildlife habitat on their properties. They offer education about native plants, animals and ecosystems and provide advice on managing threats such as weeds and pest animals. Their assistance is provided to residential and rural landowners as well as schools, golf courses etc. Securing land within the catchment that adjoins the creek and provides for environmental connectivity could be secured using this type of programme. Particularly they offer expertise and assistance in habitat restoration weed management etc.

The land for wildlife type of approach can work well for larger land holdings rural properties, schools etc in the upper catchment.

Connection + Access

Formal connection and access in the upper catchment is not a priority aspect of the plan except in a strategic and policy sense. As most of the catchment has not been developed, getting physical access will generally only be achieved as part of further development. As a matter of urgency, a movement plan needs to be generated for this part of the catchment and integrated with councils' overall movement strategy so that when development occurs elements of the movement network impacted by the development can be incorporated into the design and layout. This has implications for the LGIP and needs to be investigated as part of normal infrastructure reviews.

Middle Catchment

This part of the catchment is highly urbanised and highly degraded in terms of its environmental quality. The fragmented ownership patterns and small land holdings make achieving successes here difficult. The emphasis in this part of the catchment is on improving the health of the waterway through weed removal, sensitive replanting and community education.

Physical access along the creek corridor is for the most part impossible. Improvements in water quality and as a habitat linkage, will be reliant on community 'buy in' to improve the health of the system.

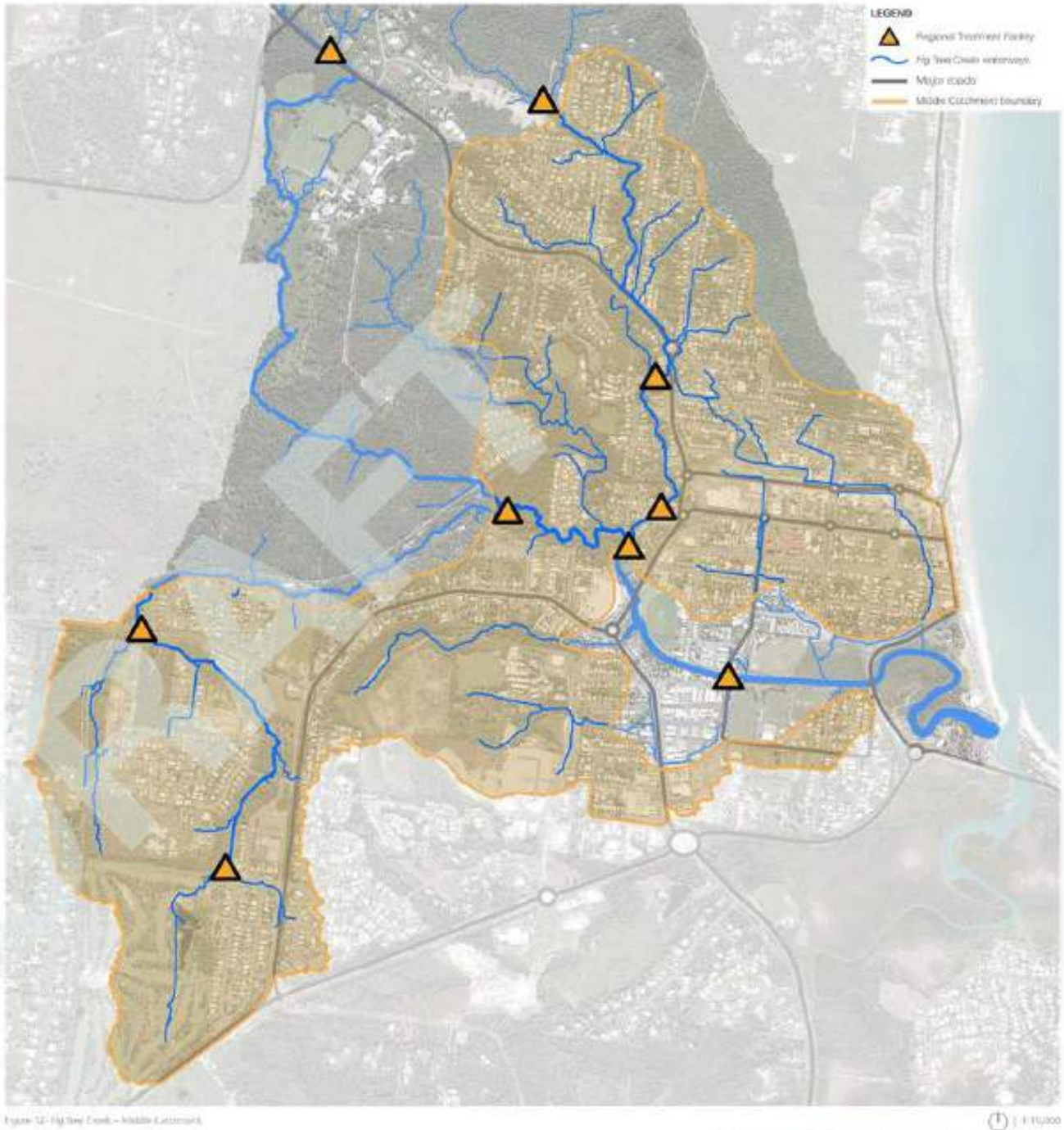


Figure 12 - Fig Tree Creek – Middle Catchment

Policy + Planning

Given the existing pattern of development the planning scheme has little influence in this part of the catchment. Should redevelopment occur the only parts of the planning scheme or other council policy that will come into effect are likely to be in relation to issues such vegetation retention, landscape plans, sediment and erosion control, etc.

Local laws in relation to the protection of vegetation and weed removal have perhaps greater influence. If public education campaigns with incentives to assist in weed removal and revegetation are the carrot, then local laws perhaps represent the stick.

Brisbane City Council's Natural Assets Local Law (NALL) 2003 helps to protect natural assets, including bushland areas, wetlands, waterway corridors and trees in urban areas.

The law affects residents if they own or occupy land:

- near a river or a waterway
- that has a significant landscape level
- in a bushland area
- in an Emerging Community Zone or other urban area with large trees.

There are four categories of protected vegetation. These are:

- Council vegetation
- waterway and wetland vegetation
- significant urban vegetation
- significant native vegetation

The development of a similar local law for Livingstone Shire may be beneficial in helping to protect native vegetation in the waterway corridors.

Flood + Overland Flow

There is little room here for intervention for physical detention or retention devices in this part of the catchment. It is recommended that further analysis of the flood characteristics in this part of the catchment be undertaken. This should be done in conjunction with identifying suitable locations for Regional Treatment Facilities (RTFs). Those facilities need to be considered as part of a larger flood study for the catchment identifying suitable locations for treatment facilities and where necessary identifying sites that need to be acquired to allow for their installation. Possible locations are shown in Figure 12.

Stormwater + Water Quality

Again, as with flood mitigation RTF devices will contribute to water quality objectives for the catchment by polishing stormwater before entering the creek system.

As with the upper catchment street design and layout should also reflect WSUD principles. In this regard it is more likely these elements will need to be retrofitted to existing streets using road reserves, roundabouts etc to achieve WSUD outcomes.

Figure 11 - Weir (see River fishway

Environment + Open Space

There are few opportunities to secure more open space in this part of the catchment except through site acquisition.

An open space study is required for this part of the catchment. There are a number of parks that are located adjoining the creek systems most of which are poorly maintained or accessed and provide little value to the communities they serve or the catchment. An open space study needs to identify these spaces and look at:

- How these spaces can be activated
- How they can contribute to water quality and environmental goal for the creek
- What role they have in providing physical contact with the creek – getting people to touch, feel and enjoy the waters of Fig Tree Creek
- What role these can play in ideas of physical connectivity

Environmental values of the creek have the potential to be enhanced, although as discussed it will require community input to achieve this. This is discussed more fully under Education and Communication.

In addition to the above fishways as shown in Figure 13, could be incorporated into existing road crossing and culverts in this part of the catchment. Fish undertake migrations for a number of reasons including to spawn, feed and seek refuge. Those migrations are also essential to ensure the dispersal of species and maintain genetic fitness within fish communities. Fishways, also known as fish ladders or fish passes, are structures placed on or around constructed barriers (such as dams or weirs) to give fish the opportunity to migrate. For the Fig Tree Creek Catchment, these items could be incorporated at a number of locations to help improve the health of the waterway.

Education + Community Action

The land for wildlife type of approach has been discussed for the upper catchment. In the middle catchment areas, land holdings are smaller and would not qualify under the land for wildlife programme. A separate programme running in parallel that assists with smaller land holdings may also be beneficial. 'Backyards for wildlife' for instance could be a similar styled programme tailored for the Fig Tree Creek Catchment where the creek gets subsumed and lost behind back fences. Backyards for wildlife would work with owners of smaller landholdings to remove weeds, restore riparian corridors to improve the water and environmental quality of the creek and its visual amenity.

This could be backed by limited council resources to provide coordination and an educational material. Council could provide green waste removal and provide tube stock to allow areas to be replanted. As with land for wildlife some form of sign could be placed on participating front yards demonstrating people's commitment to restoring the health of the waterway.

There are a number of volunteer groups and organisations in the Yeppoon area that could be engaged to undertake this kind of service backed by Council resources in terms of plant tube stock, provision of materials, supervision and office space.

Connection + Access

Connection & access are very limited making the community action options the most viable for this part of the catchment. There are a limited number of points along roads where additional access points can be formalised. Those additional points of access can be considered and detailed as part an open space study for the catchment. This study should include providing additional connection with the Capricorn Coast Pineapple Rail Trail.

Given the above all efforts should be made to make walking and cycling as attractive options in other parts of the catchment. A tree grain access network should be identified for the catchment to link activity nodes and attractions such as the foreshore, schools, golf course, shops etc. This should include identifying both on road and off road connections. In additional a programme of street tree planting for the catchment.

Street trees and footpaths help to create better walking environments. At present there are significant areas of existing urban development with little or no street trees. A street tree and footpath programme could assist in promoting walking and creating a better walking environment in the catchment.

Lower Catchment

The Lower catchment which contains the tidal reaches of the creek contains large areas of open space both formal and informal and provides many opportunities for access, connection and recreation.

A foreshore master plan has been developed for the foreshore area of the Yeppoon Town Centre from the mouth of Ross Creek (and Fig Tree Creek) along the waterfront area of the town centre. This catchment master plan will capitalise on this particularly in terms of connection and access to enhance this part of the catchment.

NOTES

1. Potential location for regional treatment facility. The final location and size of this facility is subject to further detailed investigations
2. Bank stabilisation and revegetation must occur in this location as a matter of priority
3. Revegetation of creek corridor. This should be occurring along the length of the creek in this part of the catchment
4. Sediment Control Device. A device in this location can be included with the existing culverts
5. With the AFL club moving to Barmoya this reuse of the site provides for a broad range of opportunities such as a Wetlands Interpretive Centre. This should be the subject of a separate master plan for this locality that deals with the reuse of this site and how ped/cycle access can be better achieved.
6. This part of the catchment has the potential to be part of a broader canoe/kayak trail which includes Ross Creek.
7. Some elements of pedestrian and cycle paths exist. Extensions to this path should be completed through a boardwalk and bridge to connect with proposed elements of the Foreshore Master Plan
8. New ped/cycle bridge crossing of Fig Tree Creek as part of a boardwalk extension to the existing cycle path. This may include a potential connection under the existing bridge at Appleton Drive when future works are undertaken to the bridge
9. As part of upgrades of for the town centre this should include upgrades to the pedestrian crossing at this point
10. Ped/cycle connection to join with Foreshore Master Plan connections

Figure 14 – Fig Tree Creek – Lower Catchment

Policy + Planning

This area is dominated by areas of wetland and open space. Policy in this regard needs to be geared towards maintaining access to these areas and ensuring development does not encroach into wetlands and areas impacted by flooding. Flood analysis back by planning scheme policy should control development activity in these areas.

The following issues and policy matters should form the broad policy response for the wetlands and ecosystems in this part of the catchment:

- The maintenance and re-establishment of the connectivity of ecosystems, particularly remnant ecosystems;
- Ensuring viable populations of protected native species continue to exist throughout their range, by maintaining opportunities for long-term survival, genetic diversity and the potential for continuing evolutionary adaptation. This includes the protection of significant wildlife habitats, such as:
- Protecting significant wildlife habitats (including roosting, nesting and breeding habitat for turtles, birds or crocodiles) through suitable management measures including buffers for those habitats;
- Retaining the current extent and quality of migratory and resident shorebird roosting and feeding habitat. If habitat is to be lost it should be replaced, where practicable, before loss, by an equivalent artificial habitat in a location that minimises any alteration of distribution and abundance of shorebirds;
- Maintaining the values and integrity of fish habitats and fish migratory pathways through suitable management measures - sediment and erosion control, waste and litter, etc;
- The retention of native vegetation; and
- The retention of and appropriate management of riparian vegetation along waterways of sufficient width to provide for a self-sustainable linked network.

These policy matters should be reflected in the planning scheme to guide the protection of catchments throughout the Shire.

Flood + Overland Flow

Much of this lower catchment area is flood affected and subject to inundation. Prudent policy should be avoiding further development in these areas in the first instance and ensuring what development there is flood resilient in its construction.

There are a number of overland flow channels created to take some tidal flows. The gradual conversion of these channels to natural channels encouraging revegetation and ground water infiltration will assist in providing further wetland habitat.

Natural drainage systems have a number of advantages including:

- supports existing wetland and riparian vegetation
- creates habitat for wildlife and aquatic species
- slows down and attenuating floodwater by spreading out flows through vegetated creeks and corridors
- promotes of infiltration and groundwater recharge
- enhancement of water quality
- complements recreation paths and linkages and promotes walkability and active recreation
- improves amenity and visual appreciation

Stormwater + Water Quality

Perhaps this is where considerable efforts could be made to the improvement of the health of the waterway and the ecosystems that are dependent upon the creek in the lower catchment.

In this part of the creek an emphasis should on the improvement of water quality through:

- Treatment of urban runoff
- Sediment and erosion protection and controls
- Removal of rubbish and other waste (through trash racks, detention areas etc)

Sediment and erosion controls may include 'in line' sediment controls that can complement existing culverts crossings and that can be easily maintained.

As part of this Strategic Master Plan consideration should be given to method of rating or scoring each catchment on the Capricorn Coast to consider the health of the system from an environmental as well as a community perspective. Overall measures for each catchment to compare the health of this and other catchments to gauge remediation actions and guide future policy direction on things such as:

- Sediment and erosion control
- Community access and active recreation
- Waste
- Water quality
- Environmental quality
- Habitat restoration and weed removal

The Healthy Waterways organisation has been running for several years in South East Queensland where community pressure to improve waterway health is arguably greater. However, given that this project is currently being undertaken there is obviously some pressure to improve waterway health on the Capricorn Coast.

Health Waterways is a not for profit organisation with the backing of Government, scientific, university and community organisations.

Environment + Open Space

As noted above this part of the catchment has perhaps the most significant extent of both flora and fauna as a result of the wetlands around the mouth of Fig Tree and Ross Creeks. The area also has extensive areas of open space which reflects the extent of flooding in the locality.

Just east of Park Street between Park Street and Arthur Street, Fig Tree Creek has been heavily modified to cater for adjoining development such as the showgrounds. This tidal section of the creek has some serious erosion issues due to both the nature of the soils and the velocity of water moving through the system at this point. Remediation works are required at this point to refine, revegetate creek banks and add measures to reduce water velocities at this point. This is a key action that needs to be undertaken as a priority.

Swan Park east of Arthur Street is currently being used by the one of the local AFL clubs. The lease on this land is due to expire in a couple of years and there are plans to relocate this club out to the Balmoral sports facility. This will then free this space up for a potential range of uses. Given the nature of the locality it would be expected this space could accommodate a range of this such:

- Additional flood attenuation and storage (including sediment control)
- Extension to the existing wetlands
- Passive recreation – boardwalks birdwatching etc
- An educational/interpretive centre

A separate master plan for this site could explore the spatial arrangements of a number of opportunities and how these would fit into the Foreshore Master Plan.

Education + Community Action

Most of this area has excellent access or potential for excellent physical access along the creek and within some of the wetland areas. Community education in this instance should revolve around the value of wetlands as habitat for fisheries and for other fauna. Education should also focus on the impacts of waste on estuarine and marine environments. In this regard the reuse of Swan Park when the AFL club leaves could be for a wetlands interpretive centre. This centre could focus on catchment planning, wetlands, and marine education.

Connection + Access

There are abundant opportunities in this part of the catchment to explore opportunities for further connection. Figure 14 explores further opportunities for connection through this part of the catchment and in particular developing linkages with the Foreshore and the Foreshore Master Plan area.

Active recreation should also be encouraged in this area including:

- Fishing - recreational fishing occurs in the area, both shoreline and boat fishing;
- Swimming;
- Canoeing and other non-engine powered watersports;
- Environmental Groups - several environmental groups use the area, one of significance is CoastCare, who have rehabilitated a section of the Environmental Reserve;
- Playgrounds;
- Picnicking areas;
- Boardwalks.

All these uses can be catered with in this lower catchment. A further detailed master plan that connects with the foreshore master plan should be developed which further explores opportunities highlighted here.

Implementation

The following section identifies the broad range of projects highlighted in the master plan. It also highlights the relative priority of each initiative. Table 1 provides a ready reckoner breakdown of the project and provides an indication of responsible agencies and departments. It also ascribes a priority from 1 - 5 with 1 being the highest priority and should be completed as soon as possible.

	Policy + Planning	Flood + Overland Flow	Stormwater + Water Quality	Environment + Open Space	Education + Community Action	Connection + Access
Upper	Planning scheme amendments - - Strategic Framework - Reconfiguration Code - Biodiversity Code - Planning scheme mapping LDC CSAP Priority 1	Regional Treatment Facilities to be nominated on plan LDC IC CSAP Priority 1	Maintain vegetation cover Limit stock access to waterways Maximise earthworks Incorporation of WSUD design principles into street layout and design DNR, DPI LDC IC Priority 3	Maintain current urban footprint Strategic land purchase or agreement on environmentally significant sites Waterways to be included in public open space corridors which may include ped/cycle pathways LDC CSAP Priority 1	Catchment awareness campaign including signage and education of residents, visitors and schools Land for wildlife programme LDC CSAP, IDL Guidelines, Design Priority 2	Access and movement plan identify ped/cycle route and linkages LDC CSAP Priority 2
Middle	Natural Assets Local Law LDC IC CSAP Priority 5	Regional Treatment Facilities to be nominated on plan. LDC IC Priority 1	Incorporation of WSUD design principles into existing streets. LDC IC, CSAP Priority 2	Open space study Fishways LDC CSAP Priority 3	Backyards for wildlife programme LDC CSAP Priority 2	Street tree planting Fine grain access and connections study for ped/cycle movement to be combined with open space study LDC CSAP Priority 2
Lower	Environment policy aimed at maintaining the integrity of the wetland and limiting intrusion and impact from urban development. LDC CSAP Priority 1	Flood resilient construction for all buildings subject to flooding and inundation. Conversion of overland flow channels to natural drainage channel design. LDC IC, CSAP Priority 4	Sediment control device located in stream Healthy waterways Cap Coast establishment to monitor catchments in Capricorn Coast LDC IC, CSAP Priority 3	Remediation works for the lower Fig Tree Creek Revegetation along creek banks and ped/cycle paths Master Plan for Swan Park LDC IC, CSAP Priority 1	Wetlands interpretive & education centre for Swan Park LDC CSAP Priority 3	Completion of ped/cycle linkages including new bridge LDC IC, CSAP Priority 2

Next Steps

This first stage has set out some broad principles, strategies and concepts to provide strategic direction for issues within the Fig Tree Catchment. It provides an overarching Vision and Concept Plan to inform detailed master planning.

The next steps for Council to progress issues and ideas arising from this master plan would be:

- Use the master plan to guide Council's long-term planning and spending.
- Conduct technical studies to work out which ideas are feasible and which ones will work best.
- Undertake detailed master planning of areas as nominated in this document.
- Present the plan for community feedback. Seek community comments on early ideas.
- Begin turning the ideas into reality through targeted projects.
- Partner with locals, businesses and community groups to undertake key initiatives.
- Explore fresh ideas and new solutions to old problems.

There are a number of items that need urgent attention such as the raking and revegetation of the lower part of Fig Tree Creek as shown in Figure 16. This should be undertaken independent of other work detailed here.

Figure 15 - The part of Fig Tree Creek in dire need of raking

DEICKE RICHARDS

BLACKSMITH
PLANNING & DESIGN

12.7 FLYING FOX ROOST MANAGEMENT - STATEMENT OF MANAGEMENT INTENT

File No:	**LE19.3.7**
Attachments:	**1. Urban Flying Fox Management Area⇩** **2. Draft Statement of Management Intent for flying Fox Roost Management in Livingstone Shire⇩**
Responsible Officer:	**David Mazzaferri - Manager Disaster Management, Recovery and Resilience** **Brett Bacon - Executive Director Liveability and Wellbeing**
Author:	**Leise Childs - Senior Land Protection Officer**

SUMMARY

Flying foxes are protected in Queensland under the Nature Conservation Act 1992. Under this legislation, within designated Urban Flying Fox Management Areas, local governments may undertake roost management activities in accordance with a code of practice, where the locations of flying fox roosts are proven to be in conflict with public health and safety.

A key element of any flying fox management programme is the provision of information, particularly for those urban areas directly affected by flying fox roosts. An important part of this communication is the publication of a Statement of Management Intent.

This report provides a draft Statement of Management Intent for Council's consideration. Council's adoption of this document will provide necessary and relevant information to flying fox management and limitations applied to the management of flying fox roosts within Livingstone's Urban Flying Fox Management Areas as resolved by Council.

OFFICER'S RECOMMENDATION

THAT Council adopt the Statement of Intent as contained within this report. The Statement of Intent will be published on Council's website together with additional educational resources and fact sheets.

BACKGROUND

In 2013 the Queensland Government amended the Nature Conservation Act 1992 in order to reduce the range of activities requiring an individual permit application. This review was aimed at "green tape reduction", streamlining the existing system of damage mitigation permits, allowing for greater self-assessment against a code of practice. The changes gave local governments the option to carry out a range of non-lethal pre-approved activities to manage flying fox roosts in urban areas. Councils 'may' choose to undertake such management actions in certain cases.

COMMENTARY

The purpose of a statement of management intent is to articulate a local government's plans for how it will manage roosts in its Urban Flying Fox Management Areas and to ensure that communities are well informed about how their local government will deal with flying fox roosts. Attachment One contains the map of designated Urban Flying Fox Management Areas.

The Department of Environment and Science (formerly the Department of Environment and Heritage Protection) provides a template to prepare a Statement of Management Intent. A draft Statement of Management Intent is attached (refer to Attachment Two). In addition to publication of an approved Statement of Management Intent, Council's website could be

enhanced to provide easy access to information about flying foxes, the legal requirements, health concerns and what residents and councils can do to manage roosts.

Education of the community is an important tool to manage potential conflicts between residents and flying fox roosts. As well as face to face information, Council can provide fact sheets in response to enquiries and also make these fact sheets available at public events and displays such as the Marlborough Show.

Strategic planning for land use and development surrounding known flying fox roosts is an important role for local government to reduce potential conflicts. The provision of adequate space for flying foxes to roost away from residential use is vital for their long term survival and a programme for revegetation of suitable areas in the vicinity of roosts is recommended.

PREVIOUS DECISIONS

Council considered this report at its Workshop of 4 April 2018.

BUDGET IMPLICATIONS

The costs of roost management activities can be significant, as evidenced by the expense incurred by neighbouring councils which have undertaken vegetation modification and dispersal of roosting flying foxes. The draft Statement of Management Intent limits local government intervention to land under the control of Council containing or surrounding a roost. Complaints in relation to roosts contained on private land or State land would be referred to the Department of Environment and Science for management options.

LEGISLATIVE CONTEXT

The *Nature Conservation Act 1992* provides authority for local governments to undertake roost management activities in accordance with the "*Code of Practice – Ecologically Sustainable Management of Flying Fox Roosts*" within designated Urban Flying Fox Management Areas.

Regulation of activities affecting flying fox roosts on land outside designated Urban Flying Fox Management Areas remains the responsibility of the Department of Environment and Science. Councils and private landholders retain the ability to apply for permits in individual cases, inside and outside urban boundaries.

LEGAL IMPLICATIONS

Management of flying fox roosts are the responsibility of the land owner upon which the roosts are located. Roosts can be on private, government or council land. Councils only have authority to take action on their land in an Urban Flying Fox Management Area in compliance with the Code of Practice. However, Council may choose to help facilitate action on another piece of urban land, the Statement of Management Intent establishes the limits of Council's responsibilities.

Local governments wishing to conduct non-code compliant activities within an Urban Area or manage a roost outside a designated Urban Flying Fox Management Area are required to obtain a flying fox roost management permit. Individuals may also apply for a flying fox roost management permit.

Operating outside of the code of practice or outside of an Urban Flying Fox Management Area without a flying fox roost management permit is not authorised and may have legal consequences. For example, actions could breach sections of the *Nature Conservation Act 1992* or the *Animal Care and Protection Act 2001* as well as the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*.

All persons are allowed to undertake low impact activities at roosts in accordance with the "*Code of practice – Low Impact Activities Affecting Flying Fox Roosts*". Low impact activities include weeding, mulching, mowing or minor tree trimming. Operating outside of this Code of Practice is not authorised and may have legal consequences.

STAFFING IMPLICATIONS

The existing staff resources in Natural Resource Management and Environmental Health will support the implementation of a community information and education programme including publication of the Statement of Management Intent and other resources on Council's website.

RISK ASSESSMENT

The adoption of a Statement of Management Intent in conjunction with an educational package will minimise the risk for conflict between residential land use and flying fox roosts and assist in managing other risks generally associated with flying fox activities.

It may also reduce enterprise risk by addressing sustainable development through consideration of economic, social and environmental aspects of local government intervention in flying fox management.

CORPORATE/OPERATIONAL PLAN

Strategy EN2 of Council's Corporate Plan states: '*Recognise and understand the various eco-systems of the Shire to encourage their sustainable use and appreciation through appropriate accessibility.'*

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

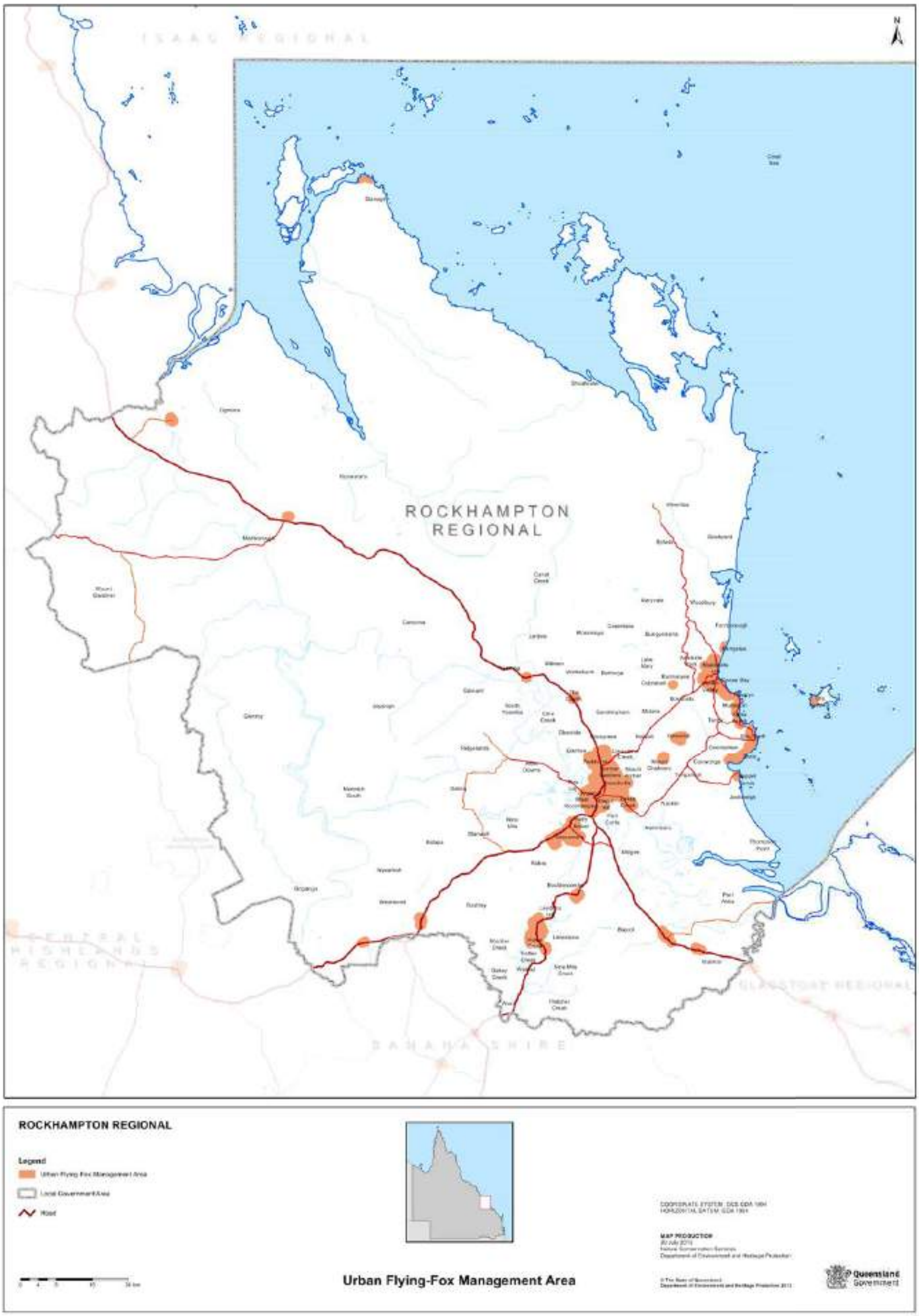
Education of the community plays a decisive role in the management of potential conflict between residents and flying fox roosts. Adoption of the Statement of Management Intent as provided within this report will provide the means for Council to articulate to the broader community the flying fox management plans pertaining to management of flying fox roosts within Livingstone's Urban Flying-fox Management Areas.

12.7 - FLYING FOX ROOST MANAGEMENT - STATEMENT OF MANAGEMENT INTENT

Urban Flying Fox Management Area

Meeting Date: 17 July 2018

Attachment No: 1


ISAAC REGIONAL
ROCKHAMPTON REGIONAL
CENTRAL HIGHLANDS REGION
BANANA SHIRE
GLADSTONE REGIONAL
ROCKHAMPTON REGIONAL
Legend
Urban Flying Fox Management Area
Local Government Area
Road
Urban Flying-Fox Management Area
Queensland Government

12.7 - FLYING FOX ROOST MANAGEMENT - STATEMENT OF MANAGEMENT INTENT

Draft Statement of Management Intent for flying Fox Roost Management in Livingstone Shire

Meeting Date: 17 July 2018

Attachment No: 2

Appendix 2

Draft

Statement of Management Intent for Flying Fox roost management in Livingstone Shire

1. Purpose

The purpose of this Statement of Management Intent is to outline the position of Livingstone Shire Council concerning Flying Fox Roost Management within designated Urban Flying-Fox Management Areas in accordance with the *Nature Conservation Act 1992*.

It provides direction regarding a logical and balanced approach to management of Council land containing or surrounding a flying fox roost and to dealing with complaints from the public regarding flying fox colonies.

2. Background

Under the *Nature Conservation Act 1992*, within designated Urban Flying-Fox Management Areas, Council may carry out activities to interfere with a flying-fox roost under the "Code of Practice – Ecologically Sustainable Management of Flying-Fox Roosts", in situations where the location of flying-foxes is in conflict with public health and safety.

Livingstone Shire Council recognises the ecological importance of flying-foxes and their valuable contribution to sustaining our unique biodiversity through pollination and seed dispersal of natural vegetation while recognising the health and wellbeing of humans.

3. Location of UFFMA in Livingstone Shire Council

Urban Flying Fox Management Areas have been identified over land subject to an urban zoning under Councils planning scheme, inclusive of a one kilometre buffer around such areas. This area of Urban Flying Fox management is mapped by the state government (Appendix A) and can be found at: http://www.ehp.qld.gov.au/wildlife/livingwith/flyingfoxes/management-areas.html

The Livingstone Shire Urban Flying Fox Management Area is identified along with the Rockhampton Region at present. To view a map of an individual property in relation to the Urban Flying Fox Management Area, refer to:
http://www.ehp.qld.gov.au/wildlife/livingwith/flyingfoxes/management-areas/map-request.php

The Livingstone Shire Council area has a number of permanent and known roost sites:

- Yeppoon Ross Creek / Fig Tree Creek estuary area
- Emu Park – Bell Park area
- Keppel Sands – Pumpkin Creek area
- Great Keppel Island
- Marlborough

4. Management Options

Where Council owned or controlled land is inhabited or affected by flying-foxes and their presence significantly impacts residents or the community, Council will consider appropriate non-lethal measures to manage flying fox roosts in accordance with the relevant Code of Practice.

Council will develop public education resources to assist the community to understand the issues around living in proximity to flying foxes and the practical measures to mitigate health risks.

Complaints in relation to roosts on private land will be referred to the Department of Environment and Science for management options. Complaints in relation to roosts on State land will be referred to The Department of Environment and Science for management options.

5. General guidelines

It is not feasible to provide uniform directions for deciding when to intervene to modify roost trees or move a flying fox roost. Each case will be assessed on its merit following guidelines as established by this document and with reference to legislation and established best practice.

Manipulating animal populations should be considered carefully as such intervention can have unforeseen consequences. Various aspects of flying fox population dynamics dictate that attempts to disperse or move a colony may be difficult, if not impossible. Therefore dispersal should be regarded as the last option for managing a particular local problem.

On receiving a complaint about the location/presence of a flying fox colony near or within a residential area, all reasonable efforts should be made to deal with the situation through education. Council officers should conduct a situation assessment and seek expert advice where required.

The following factors will be considered before any action is undertaken:

- Proximity to residences and sensitive areas, such as schools ;
- Health risks to humans and domestic animals;
- History of colonies using this site (is it an established roost or transitional campsite);
- The species mix within a roost;
- Welfare of the animals - general assessment of the animals' health and condition;
- Breeding status of population, presence of immature flying foxes and stage of development
- Legislative compliance;
- Land ownership;
- Status of roost vegetation such as protected mangroves or remnant vegetation;
- Environmental impacts;
- Likelihood of success and cost of management actions;
- Possible relocation sites and impacts;
- Level of impact on affected residents/community (noise, smell, presence of the colony);
- Whether or not appropriate educational tools have been utilised.

6. Effective From

This statement of management intent was endorsed by Council on [date] and has effect from [insert date of commencement] until superseded.

12.8 KEPPEL BAY SAILING CLUB REQUEST FOR TENURE - CAUSEWAY LAKE

File No: CP5.9.2

Attachments:
1. Correspondence from Keppel Bay Sailing Club - Request for Tenure⇩
2. Proposed Tenure Location - Causeway Lake⇩

Responsible Officer: Debra Howe - Director Strategic Growth and Development

Author: Jared Thomsen - Senior Sport & Education Officer

SUMMARY

This report discusses a request from the Keppel Bay Sailing Club to enter a tenure agreement with Livingstone Shire Council at the Causeway Lake to support the development of its sailing operations.

OFFICER'S RECOMMENDATION

THAT Council resolves to issue a Trustee Permit for a period of three (3) years to the Keppel Bay Sailing Club over approximately 800 square metres in the Reserve for Landing Purposes adjacent to Resada Esplanade at Causeway Lake, in the general location depicted in Attachment Two.

BACKGROUND

The Keppel Bay Sailing Club (the Club) currently utilises a storage container on the northern shore of the Causeway Lake from which the Club operates its 'Tackers - Learn to Sail' programme. As outlined in correspondence from the Club, refer Attachment 1, this programme has continued to grow in recent years, with participation tripling since 2016.

As a result of the continued development of the programme, the Club has requested to establish tenure on the southern shore of the Causeway Lake, in order to relocate its operations to a more beneficial location. The requested tenure will provide benefits in the management and development of the programme and also addresses issues arising with neighbouring property owners at its current location.

COMMENTARY

After receiving correspondence from the Club detailing its interest in relocating from the northern shore of the Causeway Lake to a more suitable location on the southern shore, Council officers met with representatives of the Club to fully understand its request and the associated information. It was confirmed that the Club's preferred location for relocation was an area of approximately eight (8) metres by ten (10) metres within the Reserve for Landing Purposes adjacent to Resada Esplanade, refer Attachment 2, on the southern shore of the Causeway Lake.

In processing this request for tenure Council officers liaised with a number of internal Units to ensure the proposed tenure agreement would not have a detrimental impact to Council or its operations. The following internal Units were contacted and did not raise any concerns with Council supporting the Club's request for tenure:

- Engineering Services;
- Water and Waste Operations
- Construction and Maintenance
- Community Assets

- Community Wellbeing
- Economy and Places; and
- Liveability.

It should also be noted that Council's Natural Resource Management team have inspected the proposed area and advised that no species of significance have been identified. Further to this, it has been confirmed that placement of the storage containers will be sympathetic to the existing vegetation to ensure impact to the environment is minimised, refer Attachment 2.

PREVIOUS DECISIONS

No previous decisions have been made by Council regarding this matter.

BUDGET IMPLICATIONS

There are no budget implications associated with this matter.

LEGISLATIVE CONTEXT

Section 236 (1)(b)(ii) of the *Local Government Regulation 2012* states:

> *'subject to subsections (2) to (4), a local government may dispose of a valuable non-current asset other than by tender or auction if the valuable non-current asset is disposed of to a community organisation*.'

Section 236 (2) of the *Local Government Regulation 2012* further states that,

> *'an exception mentioned in subsection (1)(a) to (e) applies to a local government disposing of a valuable non-current asset only if, before the disposal, the local government has decided, by resolution, that the exception may apply to the local government on the disposal of a valuable non-current asset other than by tender or auction*.'

LEGAL IMPLICATIONS

There are no legal implications relevant to this matter.

STAFFING IMPLICATIONS

There are no significant staffing implications surrounding this matter. It is understood that drafting and executing the tenure agreement would be accommodated in the existing capacities of the Community Partnerships unit.

RISK ASSESSMENT

The following risks associated with not approving the Club's request have been identified:

- Reputation – not providing support to the development of community clubs, associations, or organisations as per Corporate Plan;
- Compliance – failing to establish an appropriate tenure agreement as per legislation.

The following risks associated with approving the Club's request have been identified:

- Assets – if the Club were to dissolve Council, as Trustee of the land, would assume the asset if not recovered by the Club.

CORPORATE/OPERATIONAL PLAN

Strategy CO1: Facilitate, encourage and enable self-sustainable community associations and volunteer groups to pursue their diverse aspirations.

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

Formalising a tenure agreement with the Keppel Bay Sailing Club over part of the Reserve for Landing Purposes adjacent to Resada Esplanade, Causeway Lake will provide security, opportunity for growth, and also enable the Club to make applications for grants and other funding sources to support its continued development.

12.8 - KEPPEL BAY SAILING CLUB REQUEST FOR TENURE - CAUSEWAY LAKE

Correspondence from Keppel Bay Sailing Club - Request for Tenure

Meeting Date: 17 July 2018

Attachment No: 1

Keppel Bay Sailing Club

21st February, 2018

Mayor Bill Ludwig
Livingston Shire Council
Po Box 2292, Yeppoon, 4703

Cc: Brett Bacon (Director of Community and Planning), Chris Murdock (CEO)

Dear Mayor Ludwig,

As per discussion in relation to KBSC usage at the Causeway Lake, KBSC is seeking to relocate our Shipping Container from near the Hire Business to the Northern side of the Causeway to the area near the toilets on the Southern Side. The current position is proving to be an issue with the neighbouring tenant and owner of Causeway Lake Boat Hire.

It is recognised that both the current and desired location is state land under control of local government, so therefore request your assistance for the relocation to the location that has been discussed and is currently being pursued by Keppel Bay Sailing Club to lease.

Keppel Bay Sailing Club understands at present that this land lease we are seeking is being addressed though state government and is pursuant to feasibility studies and Master Planning, however, in order for us to continue to operate effectively our Tackers Learn to sail program. The program has continued to grow with participation tripling over the last 2 years. Moving our container will not only streamline these operations but remove the current situation of our volunteers and participants having issues and we will ensure minimum impact to the community currently utilising this area. Please see following maps for clarification of our desired location for the shipping container.

Sincerely

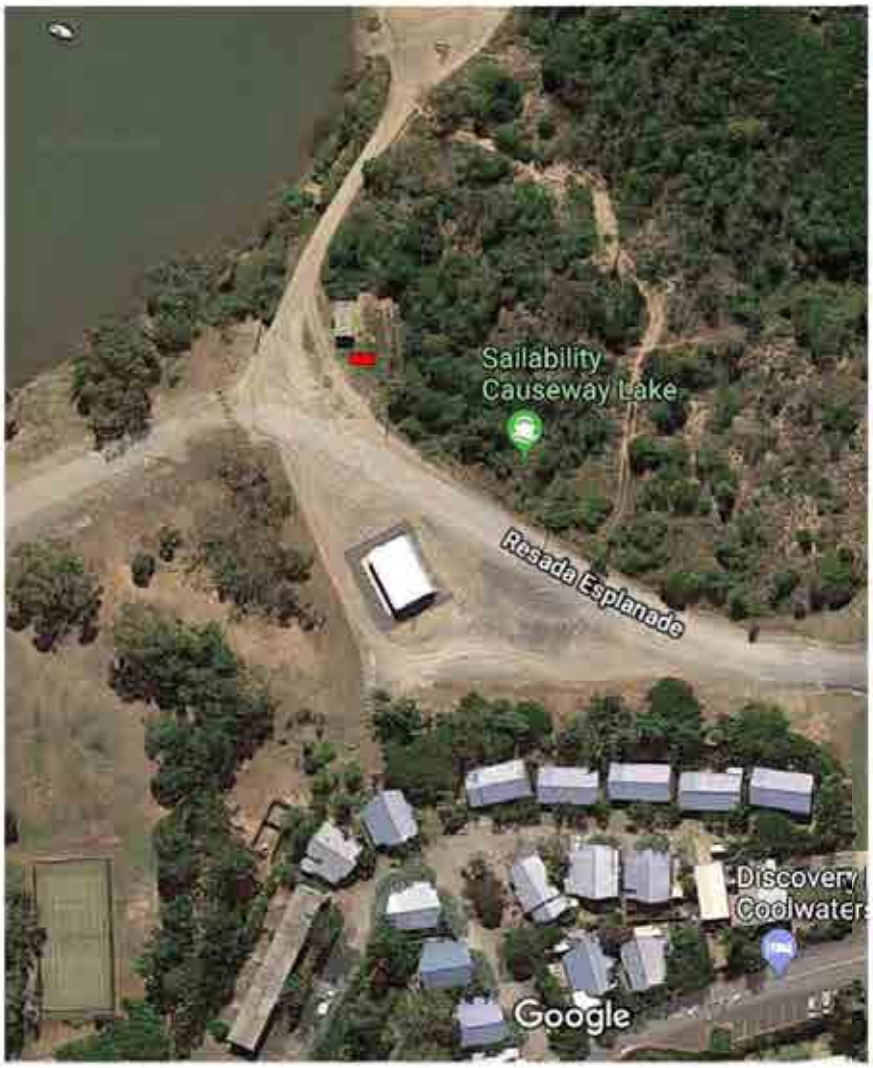
Julie Strudwick
Secretary / Manager

Phone **4939 9500** PO Box 32 Yeppoon Qld 4703 sales@kbsc.com.au kbsc.com.au

Keppel Bay Sailing Club

Phone **4939 9500** PO Box 32 Yeppoon Qld 4703 sales@kbsc.com.au kbsc.com.au

Keppel Bay Sailing Club



Phone 4939 9500 PO Box 32 Yeppoon Qld 4703 sales@kbsc.com.au kbsc.com.au

12.8 - KEPPEL BAY SAILING CLUB REQUEST FOR TENURE - CAUSEWAY LAKE

Proposed Tenure Location - Causeway Lake

Meeting Date: 17 July 2018

Attachment No: 2

Resada Esplanade
Resada Esplanade

12.9 COMMUNITY ORGANISATION LEASE RENEWALS

File No:	**CP5.9.2**
Attachments:	**Nil**
Responsible Officer:	**Debra Howe - Director Strategic Growth and Development**
Author:	**Jared Thomsen - Senior Sport & Education Officer**

SUMMARY

This report provides a summary of tenure agreements between Livingstone Shire Council and a number of not-for-profit community organisations which are due for renewal.

OFFICER'S RECOMMENDATION

THAT Council resolve to renew the relevant tenure agreements as outlined in this report for the following not-for-profit community organisations:

1) Scouts Association of Australia (Queensland Branch);
2) Capricorn Coast Mallet Sports Club Incorporated;
3) Keppel Coast Country Music Club Incorporated;
4) Cawarral Cricket Club Incorporated; and
5) Mount Chalmers Community History Centre Incorporated.

BACKGROUND

Council manages tenure agreements with a significant number of not-for-profit community organisations in order to provide formal access to Council controlled land, and / or its facilities.

As tenure agreements expire, or approach expiry, Council must undertake the requisite renewal process to ensure continued access is provided to not-for-profit community organisations in their delivery of activities, programmes, and projects.

COMMENTARY

Renewal of tenure agreements have been recommended in line with the following information:

1) Scouts Association of Australia (Queensland Branch)
   13 Ivey Street East, Lammermoor Lot 127 on LN1826
   Reserve for Park
   Proposed Renewal: Reserve Lease, ten (10) year term.

2) Capricorn Coast Mallet Sports Club Incorporated
   24 Bowls Street, Yeppoon
   Lot 53 on SP176889
   Proposed Renewal: Freehold Lease, ten (10) year term – five (5) years, with option to renew for additional five (5) years.

3) Keppel Coast Country Music Club Incorporated
   61 Millroy Drive, Barmaryee
   Part Lot 270 on SP281980
   Proposed Renewal: Freehold Lease, ten (10) year term – five (5) years, with option to renew for additional five (5) years.

4) Cawarral Cricket Club Incorporated
   71 Annie Drive, Cawarral

Part Lot 71 on LN1208
Proposed Renewal: Reserve Lease, ten (10) year term; and Trustee Permit, three (3) year term.

5) Mount Chalmers Community History Centre Incorporated
24 School Street, Mount Chalmers
Part Lot 3 on SP155342
Proposed Renewal: Freehold Lease, ten (10) year term – five (5) years, with option to renew for additional five (5) years.

The associated annual lease fee would be levied to these not-for-profit community organisations in line with Council's adopted fees and charges.

PREVIOUS DECISIONS

No previous decisions have been made regarding the renewal of these.

BUDGET IMPLICATIONS

The relevant fees and charges, in line with Council's adopted *2018/19 Fees and Charges* and the *Rates Remission and Rebates Policy*, will be levied to each of the community organisations reflective of the individual tenure agreement.

LEGISLATIVE CONTEXT

Renewal of tenure agreements must be undertaken in line with the *Local Government Regulations (2012)*, Section 236 (1)(c)(iii) which states:

'(1) Subject to subsections (2) to (4), a local government may dispose of a valuable non-current asset other than by tender or auction if—

(a) …

(b) …

(c) For the disposal of land or an interest in land—

(i) …

(ii) …

(iii) the disposal is for the purpose of renewing the lease of land to the existing tenant of the land.'

Further to this, the *Local Government Regulations (2012)*, Section 236 (2) outlines that:

'(2) An exception mentioned in subsection (1) (a) to (d) applies to a local government disposing of a valuable non-current asset only if, before the disposal, the local government has decided, be resolution, that the exception may apply to the local government on the disposal of a valuable non-current asset other than be tender or auction.'

LEGAL IMPLICATIONS

There are no legal implications relevant to this matter.

STAFFING IMPLICATIONS

The requisite actions associated with the tenure renewal process can continue to be accommodated within existing staffing capacities.

RISK ASSESSMENT

The following risks associated with not resolving to renew the requisite tenure agreements have been identified:

1) *Reputation* – not providing support to the development of community clubs, associations, or organisations as per Corporate Plan;

2) *Compliance* – failing to establish an appropriate tenure agreement as per legislation.

The following risks associated with resolving to renew the requisite tenure agreements have been identified:

1) *Assets* – if these not-for-profit community organisations were to dissolve Council, as Trustee / Owner of the land, would assume the asset if not recovered by the Club.

CORPORATE/OPERATIONAL PLAN

Corporate Plan Reference: **Strategy CO1: Facilitate, encourage and enable self-sustainable community associations and volunteer groups to pursue their diverse aspirations.**

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

These not-for-profit community organisations have been operating across the Shire for many years and provide an opportunity for the local community to be involved in a range of activities.

By undertaking the requisite renewal of tenure arrangements Council will be continuing to enable these not-for-profit community organisations to grow and develop.

12.10 MULTICULTURAL DEVELOPMENT AUSTRALIA - SKILLING QUEENSLANDERS FOR WORK PROGRAMME - JACK'S PADDOCK

File No:	**GS15.2.3**
Attachments:	**1. Correspondence from Multicultural Development Australia - Jack's Paddock⇩** **2. Correspondence from Jack's Paddock Incorporated - Multicultural Development Australia⇩**
Responsible Officer:	**Debra Howe - Executive Director Liveability and Wellbeing**
Author:	**Jared Thomsen - Senior Sport & Education Officer**

SUMMARY

This report discusses an update to the project to be delivered by Multicultural Development Australia through funding it has received from the Queensland Government's Skilling Queenslanders for Work programme.

OFFICER'S RECOMMENDATION

THAT, in line with this report, Council rescind the resolution made at the Ordinary Meeting held 5 September 2017 which stated:

> '*Council provides in-principle support for the construction of a mountain bike skills park and shade shelters on Lot 35 on SP166175 (Lex Semple Park), and the submission of a funding application by Multicultural Development Australia to the Queensland Government's Skilling Queenslanders for Work programme, in line with the following conditions:*
>
> *1) prior to the commencement of the project, community consultation and engagement must be completed to ensure community support for the project;*
>
> *2) obtain all requisite financial and in-kind contributions for associated materials, plant and labour to complete the project;*
>
> *3) all planning and design documentation must be reviewed and approved by Council prior to the commencement of the proposed project; and*
>
> 4) *all stages of the proposed project (design, planning, and construction) must be completed in accordance with the relevant standards and guidelines.*'

AND THAT Council approves the construction of garden beds and pathways at Jack's Paddock, 25-27 Ross Street, Yeppoon (Lot 1 on RP619568), in line with the following conditions:

1) all construction works must be done in line with the support of the Jack's Paddock Incorporated, and its plan developed in conjunction with community consultation
2) obtain all requisite financial and in-kind contributions for associated materials, plant and labour to complete the project, and
3) all planning and design documentation must be reviewed and approved by Council prior to the commencement of the proposed project.

BACKGROUND

Livingstone Shire Council was approached by Multicultural Development Australia in 2017 regarding its proposal to submit an application for funding from the Queensland

Government's Skilling Queenslanders for Work programme to undertake construction works at Lex Semple Park (Lot 35 on SP166175). In making a determination regarding this request, Council provided in-principle support for the funding application with the following conditions:

1) prior to the commencement of the project, community consultation and engagement must be completed to ensure community support for the project;
2) obtain all requisite financial and in-kind contributions for associated materials, plant and labour to complete the project;
3) all planning and design documentation must be reviewed and approved by Council prior to the commencement of the proposed project; and
4) all stages of the proposed project (design, planning, and construction) must be completed in accordance with the relevant standards and guidelines.'

Multicultural Development Australia was successful in its application for funding from the Queensland Government's *Skilling Queenslanders for Work* programme. Subsequently, Council confirmed Multicultural Development Australia's requirement to adhere to the conditional support in delivery of the project as outlined above.

As the planning and implementation process progressed it became clear that the immediate community held concerns regarding the location of the proposed project. With this in mind, and with respect to the funding requirements associated with the programme, Multicultural Development Australia made a decision not to pursue the project at Lex Semple Park.

COMMENTARY

Having made a decision not to pursue construction at Lex Semple Park, Multicultural Development Australia investigated opportunities within Livingstone Shire to deliver the requisite training for its programme participants, while also delivering benefits to the local community. Multicultural Development Australia identified Jack's Paddock, 25-27 Ross Street, Yeppoon as an alternative and made contact with Jack's Paddock Incorporated. Multicultural Development Australia have requested Council's approval to undertake construction works at the Jack's Paddock, Lot 1 on RP619568, refer Attachment 1.

Jack's Paddock Incorporated has also provided its support to the proposal to construct garden beds and pathways in line with the overall plan for the area, refer Attachment 2, which has been guided by community consultation by Jack's Paddock Incorporated.

PREVIOUS DECISIONS

At the Ordinary Meeting on 5 September 2017 Council resolved that:

> *'Council provides in-principle support for the construction of a mountain bike skills park and shade shelters on Lot 35 on SP166175 (Lex Semple Park), and the submission of a funding application by Multicultural Development Australia to the Queensland Government's Skilling Queenslanders for Work programme, in line with the following conditions:*
>
> *5) prior to the commencement of the project, community consultation and engagement must be completed to ensure community support for the project;*
>
> *6) obtain all requisite financial and in-kind contributions for associated materials, plant and labour to complete the project;*
>
> *7) all planning and design documentation must be reviewed and approved by Council prior to the commencement of the proposed project; and*
>
> 8) *all stages of the proposed project (design, planning, and construction) must be completed in accordance with the relevant standards and guidelines.*'

BUDGET IMPLICATIONS

There are no budget implications associated with this matter.

LEGISLATIVE CONTEXT

There is no legislative context relevant to this matter.

LEGAL IMPLICATIONS

There are no legal implications surrounding with this matter.

STAFFING IMPLICATIONS

There are no staffing implications associated with this matter.

RISK ASSESSMENT

The following risks associated with providing conditional approval have been identified:

1) Reputation – Council's reputation may be negatively impacted if approval is given to undertake works which are not supported by the community. This risk has been mitigated by conditioning the approval accordingly.
2) Asset – A scenario may arise whereby Council is required to assume the assets delivered by the works as its own. This risk has been mitigated by conditioning the approval accordingly.
3) Community – Jack's Paddock Incorporated may be negatively impacted by the works if they are not in line with previously agreed plans. This risk has been mitigated by conditioning the approval accordingly.

The following risks associated with not providing conditional approval have been identified:

1) Reputation – Council's reputation may be negatively impacted if it does not support Multicultural Development Australia to undertake the works which are in support of a local community organisation.
2) Community – Jack's Paddock Incorporated would miss out on an opportunity to expedite establishment of its community garden if support is not provided.

CORPORATE/OPERATIONAL PLAN

Strategy CO4: Promote and encourage community health and wellbeing through programs addressing environmental health, community safety issues, social cohesion and inclusiveness.

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

By providing conditional approval to Multicultural Development Australia to undertake construction works at Jack's Paddock, Council will enable worthwhile community facilities to be established that support community health and wellbeing and social cohesion.

In addition, the project will also empower the long-term unemployed to re-enter to workforce by gaining training, skills, and certification.

12.10 - MULTICULTURAL DEVELOPMENT AUSTRALIA - SKILLING QUEENSLANDERS FOR WORK PROGRAMME - JACK'S PADDOCK

Correspondence from Multicultural Development Australia - Jack's Paddock

Meeting Date: 17 July 2018

Attachment No: 1

03 July 2017

Livingstone Shire Council
Community Partnerships
PO Box 2292
YEPPOON QLD 4703

To: Jared Thomsen
Principal Community Development and Engagement Officer

RE: Partnership between Jacks Paddock Inc. and MDA Ltd. Rockhampton for purposes of construction work on the community garden proposed to Council

Dear Mr Thomsen,

I am writing to confirm that we have spoken with Berni Jakstas, President of Jacks Paddock Inc. regarding construction of a community garden on the proposed site (plans submitted to Council).

MDA Ltd. currently has Queensland Government funding for a construction traineeship for 26 trainees to work in the Livingstone Shire Council area.

We are happy to work within the parameters of the submitted plan – constructing garden beds, paths and other projects as per the plan submitted to Council by Jacks Paddock Inc. with materials provided by the group.
We agreed not to undertake any works on the site that are not on the plan.

Trainee involvement will be coordinated with Jacks Paddock Inc., in conjunction with MDA Site Supervisor Ken Lyngkuist who will oversee on-site work and Project Coordinator Laine Harth.

Please feel free to contact us on 4921 2222.

Yours Sincerely,

Allison Roberts
Skilling Queenslanders for Work Program Manager
MDA Ltd Rockhampton
m. 0423468114
e. allisonr@mdaltd.org.au

mda
MULTICULTURAL DEVELOPMENT AUSTRALIA

Shaping a better future for all

Head Office
Brisbane Multicultural Centre
28 Dibley Street
Woolloongabba QLD 4102
07 3337 5400

Nundah Office
Unit 5/2 Jenner Street
Nundah QLD 4012
07 3198 2500

Toowoomba Office
154 Hume Street
Toowoomba QLD 4350
07 4632 1466

Rockhampton Office
108 Alexandra Street
Kawana QLD 4701
07 4921 2222

All Offices
07 3337 5444 (fax)
welcome@mdaltd.org.au
www.mdaltd.org.au

#CREATEWELCOME
www.mdaltd.org.au

ABN: 41 372 481 576 • ACN: 168 205 632

12.10 - MULTICULTURAL DEVELOPMENT AUSTRALIA - SKILLING QUEENSLANDERS FOR WORK PROGRAMME - JACK'S PADDOCK

Correspondence from Jack's Paddock Incorporated - Multicultural Development Australia

Meeting Date: 17 July 2018

Attachment No: 2

Jack's Paddock Inc

3rd July 2018

Allison Roberts
Multicultural Development Association

Re: Skilling Queensland Trainee program

Thanks for taking the time to meet with us recently Allison. We are excited to work with your group on the development of Jack's Paddock as per the plan approved by both our group and Livingstone Shire Council.

The values and objectives of our two groups are closely aligned and certainly can be of great benefit to each other and our local community.

Please note that the project is currently conditional pending our finalising tenure with council and that MDA supply your own insurances. We shall supply materials for the project as donated by the community.

We look forward to working with MDA and the progression of Jack's Paddock as soon as possible!

Yours truly

Berni Jakstas
President
Jack's Paddock Inc
0407 353 748

12.11 REQUEST FOR NEGOTIATED INFRASTRUCTURE CHARGES FOR A DEVELOPMENT PERMIT D-159-2017 FOR RECONFIGURING A LOT (ONE LOT INTO FIFTEEN LOTS)

File No: **D-159-2017**

Attachments:
1. **Approved Plan⇩**
2. **Infrastructure Charges Notice⇩**
3. **Decision Notice⇩**
4. **Representations⇩**

Responsible Officer: **Erin McCabe - Co-ordinator Development Assessment**
David Battese - Manager Strategy & Development

Author: **Jenna Brosseuk - Senior Planning Officer**

SUMMARY

Applicant:	Dr Peter Dunbar C/-RPS
Consultant:	RPS
Real Property Address:	Lot 5 on SP214946
Common Property Address:	Lot 5 Marlborough Road, Marlborough
Area of Site:	11,288 hectares
Planning Scheme:	*Livingstone Shire Planning Scheme 2005*
Planning Scheme Zoning:	Rural Zone
Planning Scheme Overlays:	Overlay Map O1 – Protected Areas Overlay Map O3 – Wetlands and Wetlands 100 metre Buffer Overlay Map O4 – Good Quality Agricultural Land Overlay Map O5 – Bushfire Hazard Planning Scheme Maps: Planning Scheme Map 2A – Classes C1 and C2 Planning Scheme Map 10 – Locally Significant Vegetation
Existing Development:	Dwelling house, ancillary outbuildings and agriculture (cattle grazing)
Existing Approvals:	Nil
Approval Sought:	Development Permit for a Reconfiguring a Lot for a (one lot into fifteen lots)
Level of Assessment:	Code assessable
Submissions:	Not applicable
Referral Agency(s):	Department of Infrastructure, Local Government and Planning – Concurrence agency Powerlink – Advice agency
Adopted Infrastructure Charges Area:	Located outside of the priority infrastructure area

OFFICER'S RECOMMENDATION

THAT in relation to the change representations for Development Permit D-159-2017 for Reconfiguring a Lot (one lot into fifteen lots) made by RPS on behalf of Dr Peter Dunbar C/- RPS on land described as Lot 5 on SP214946 and located at Lot 5 Marlborough Road, Marlborough, Council resolves that the Infrastructure Charge Notice amount remain unchanged.

BACKGROUND

Council, under delegation on 13 November 2017, approved a Development Application for Reconfiguring a Lot (one lot into fifteen lots) over Lot 5 on SP214946 and located at Lot 5 Marlborough Road, Marlborough.

The applicant has made representations in accordance with Section 125 of the *Planning Act 2016* for a Negotiated Infrastructure Charges Notice. The representations seek to negotiate the infrastructure charge amount per allotment.

The matter was previously scheduled for a decision at the Council Meeting of 6 February 2018 however was deferred based on a request by the application to make a deputation with Council.

The applicant presented a deputation at the Advisory Committee meeting of 2 July 2018.

COMMENTARY

SITE AND LOCALITY

The site is an irregular shape and incorporates an area of 11,288 hectares. The site is used for cattle grazing and holds a number of cattle pens over the site. The site is also developed with a Dwelling house and ancillary outbuildings. Access is currently via multiple access locations to both Marlborough Road and Clifton Road.

The site also holds the Develin Nature Refuge to the east of Clifton Road. The Develin Nature Refuge was created through an agreement between the land owner and the State Government.

TOWN PLANNING COMMENTS

The applicant has requested the Infrastructure Changes Notice amount be reduced.

The infrastructure charges totals $129,360.00. The charge is calculated in accordance with section 3.4.2 - Development located partly outside or entirely outside the priority infrastructure area and Table 8 - Minimum infrastructure charge for reconfiguring a lot partly outside or entirely outside the priority infrastructure area, as follows:

1. Fifteen (15) lots at $9,240.00 per lot;
2. less a credit of $9,240.00 for the existing lot.

The representations state that the charge is not reasonable for the rural nature of the development and the isolated location, being an area generally unserviced by Council. The applicant contends that a reduced charge of $4,095.00 per lot is reasonable for the development. This charge is based on the request to pay only fifty per cent (50%) of the transport component of the adopted charge. The total charge would then amount to $57,330.00 (with the credit of $4,095.00 applied for the existing lot). The applicant has detailed the following matters as reasons for Council to support the lesser charge:

- The lots are not serviced by any new or additional Council infrastructure;
- The lots are not serviced by sewer or water;
- The lot are not serviced by Council parks;

- No changes to road access is proposed, with each lot being able to use existing access points;
- The lots are not serviced by public transport;
- Only two of the 15 lots gain direct access to a Council road, with the majority impacting on a State Controlled Road;
- No upgrades of any Council infrastructure are required as part of the development; and
- The nature of the subdivision is for administrative purposes associated with cattle grazing and changes to the Biosecurity Act 2014.

Council comments

It is acknowledged that only two of the proposed fifteen lots access directly onto a Council controlled road and that the subdivision does not require parks or upgrades to parks. However, infrastructure charges are not solely directed towards immediate access to Council roads or parks and land for community facilities required by a development. Infrastructure charges are payable for all development and contribute to the provision of essential trunk infrastructure across the Shire.

The subject site is also located outside of the priority infrastructure area under the *Adopted Infrastructure Charges Resolution (No. 2) 2015*. The charge amount has been calculated in accordance with section 3.4.2. The amount of $9,240.00 is determined by the resolution and is a figure that provides a level of certainty to the developer when considering the feasibility of a project. Table eight states the minimum infrastructure charge for reconfiguring a lot partly outside or entirely outside the priority infrastructure area and the charge amount is calculated based on the access to the relevant trunk network. The minimum access to trunk networks is the transport and parks networks.

The applicant has requested only fifty per cent (50%) of the transport component be charged. If this is applied, this will equate to 19.5 per cent of the transport charge and will total $4,095.00 per lot. To deviate from Table 8 and Table 9 calculations, is also a deviation from Council policy.

There is no certainty that the development will not be on-sold or generate additional traffic demand on the trunk infrastructure roads within the Livingstone Shire Council area, nor certainty that additional demand will not be placed on public parks and land for community facilities. Further, the parks and community facilities and road network charge components are considered open networks whereby all development and all residents and land owners in the Shire have access to these facilities.

Rural land subdivision is afforded a lesser infrastructure charge than the maximum amount due to the reduced access to the relevant trunk networks. The lesser infrastructure charge reflects a proportional spilt in accordance with table nine. Utilising table nine to calculate the charge amount for subdivisions outside of the priority infrastructure area, provides transparency in decision making to ensure each development application is charged the same percentage towards each accessible trunk network, in accordance with the resolution.

Officers recommend the Infrastructure Charges Notice remain unchanged and the applicant be offered the opportunity to utilise the Development Incentive Policy for Reconfiguring a Lot being the deferment of infrastructure charges through an Infrastructure Agreement, whereby the payment of charges can be deferred for two years or on transfer of ownership of a lot (whichever is first).

PREVIOUS DECISIONS

The Development Permit was approved, with conditions, under delegation on 13 November 2017. A Decision Notice and Infrastructure Charges Notice was issued on 14 November 2017.

BUDGET IMPLICATIONS

Management of this application and representations assessment has been within the existing budget allocations.

If the charge amount reflected in the Infrastructure Charges Notice is recommended to be reduced, adequate monies may not be collected to ensure trunk infrastructure is delivered in accordance with the schedule of works.

LEGISLATIVE CONTEXT

The assessment of the application and the representations has been in accordance with the *Planning Act 2016*.

Under Part 2, Division 2 of the *Planning Act 2016*, Council has the ability to levy charges, in accordance with the *Adopted Infrastructure Charges Resolution (No. 2) 2015* at the time a development approval is given. This same principle has been continued in the newly commence charges resolution (No.3). Infrastructure Charges must be issued on an Infrastructure Charges Notice and given to the applicant.

LEGAL IMPLICATIONS

A decision by Council contrary to the request by the applicant may be appealed to the Planning and Environment Court.

STAFFING IMPLICATIONS

There are no significant staffing implications associated with this assessment.

POLICY IMPLICATIONS

If Council considers an alternative infrastructure charge different to the existing adopted infrastructure resolution Council may wish to consider fundamental changes to the existing policy.

RISK ASSESSMENT

The risks associated with determination of this request include a risk of appeal, reputational risk and financial risk.

A determination of the application contrary to the outcome sought through the representations may be escalated to appeal by the applicant, should they contend the position by Council is unreasonable. Officers consider that the risk of appeal is a low probability however it is possible. Costs of an appeal would be borne by Council

Council's reputation may be impacted if it does not maintain the infrastructure charging policy positions it has adopted. Decisions divergent from these policies may undermine future decision making.

Not collecting infrastructure charges places Council in the situation whereby funding the gap in charges towards trunk infrastructure projects will have to be done by other means. It will result in a lost opportunity to collect monies collected for the delivery of trunk infrastructure.

CORPORATE/OPERATIONAL PLAN

Strategy GO4: Provide transparent and accountable decision making reflecting positive leadership to the community.

CONCLUSION

The representations made by RPS on behalf of Dr Peter Dunbar C/-RPS have been assessed and the specific requests have been discussed directly with the applicant and there is a divergence between the Council officer's position and the applicant's representations.

The representations requested that the infrastructure charges be revised based on demand generated by the use on the transport and parks trunk network. This has been reviewed and

the recommendation is to retain the infrastructure charges at the current charge amount of $129,360.00.

Council advised the applicant of the draft recommendation and that the reduction in the charge amount was not supported. The applicant was offered the opportunity to utilise the Development Incentive Policy for Reconfiguring a Lot being the deferment of infrastructure charges however, the applicant advised via meeting on 25 January 2018 and a subsequent email on the same day, that they did not agree with the recommendation and wanted the report to be taken to a Council Meeting for a final decision.

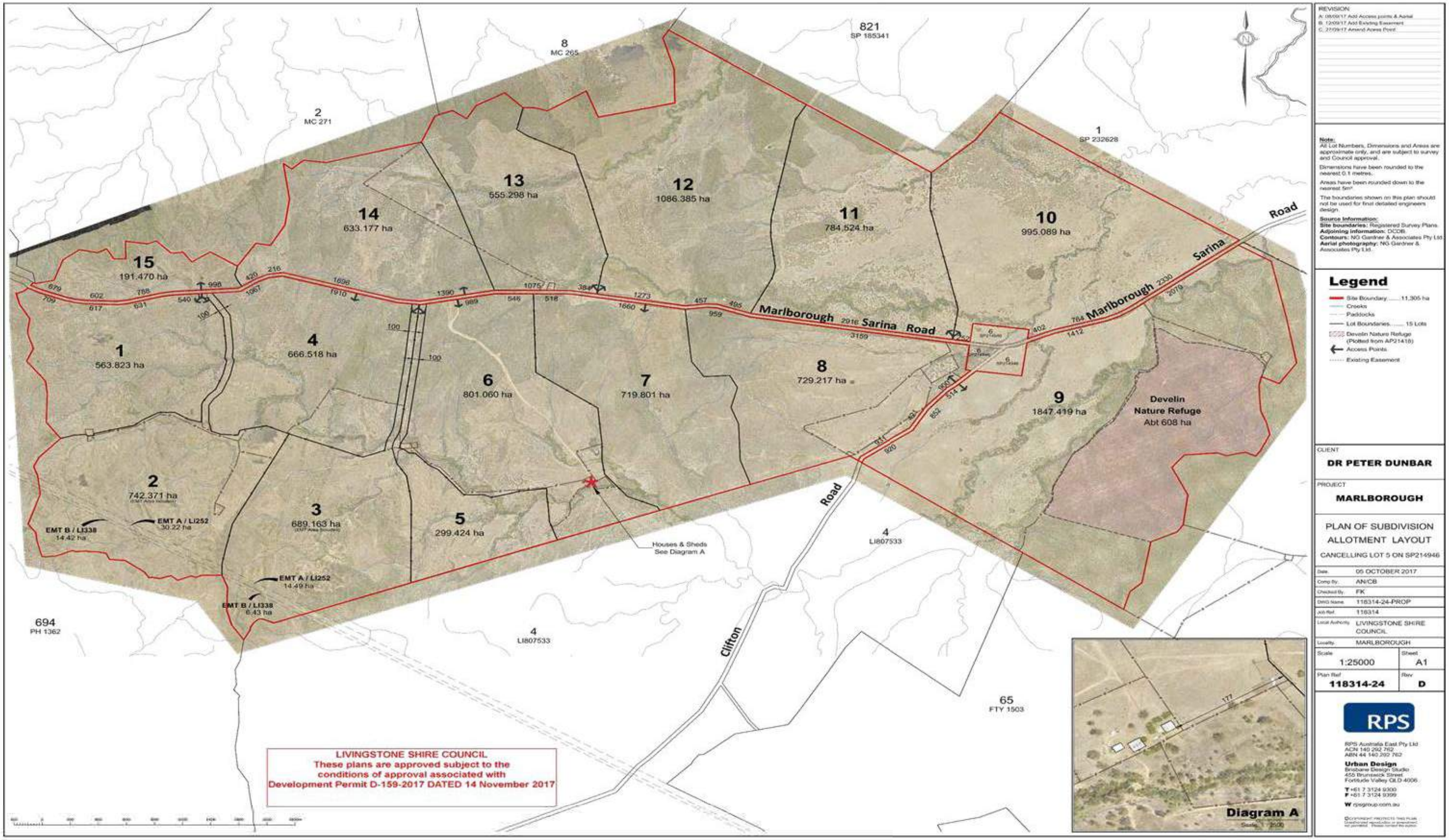
Subsequently, it is considered that the recommendation by officers is the appropriate outcome for the development.

12.11 - REQUEST FOR NEGOTIATED INFRASTRUCTURE CHARGES FOR A DEVELOPMENT PERMIT D-159-2017 FOR RECONFIGURING A LOT (ONE LOT INTO FIFTEEN LOTS)

Approved Plan

Meeting Date: 17 July 2018

Attachment No: 1


821
SP 185341
8
MC 265
2
MC 271
1
SP 232628
13
555.298 ha
12
1086.385 ha
14
633.177 ha
11
784.524 ha
10
995.089 ha
15
191.470 ha
Sarina Road
Marlborough Sarina Road
Marlborough
1
563.823 ha
4
666.518 ha
6
801.060 ha
7
719.801 ha
8
729.217 ha
9
1847.419 ha
Develin
Nature Refuge
Abt 608 ha
2
742.371 ha
EMT B / LI338
14.42 ha
EMT A / LI252
30.22 ha
3
689.163 ha
5
299.424 ha
EMT A / LI252
14.49 ha
EMT B / LI338
6.43 ha
Houses & Sheds
See Diagram A
4
LI807533
Clifton Road
694
PH 1362
4
LI807533
65
FTY 1503
LIVINGSTONE SHIRE COUNCIL
These plans are approved subject to the
conditions of approval associated with
Development Permit D-159-2017 DATED 14 November 2017
Diagram A
REVISION
A: 05/09/17 Add Access points & Aerial
B: 12/09/17 Add Existing Easement
C: 27/09/17 Amend Acess Point
Note:
All Lot Numbers, Dimensions and Areas are approximate only, and are subject to survey and Council approval.
Dimensions have been rounded to the nearest 0.1 metres.
Areas have been rounded down to the nearest 5m².
The boundaries shown on this plan should not be used for final detailed engineers design.
Source Information:
Site boundaries: Registered Survey Plans.
Adjoining information: DCDB.
Contours: NG Gardner & Associates Pty Ltd.
Aerial photography: NG Gardner & Associates Pty Ltd.
Legend
Site Boundary..... 11,305 ha
Creeks
Paddocks
Lot Boundaries..... 15 Lots
Develin Nature Refuge (Plotted from AP21418)
Access Points
Existing Easement
CLIENT
DR PETER DUNBAR
PROJECT
MARLBOROUGH
PLAN OF SUBDIVISION
ALLOTMENT LAYOUT
CANCELLING LOT 5 ON SP214946
Date: 05 OCTOBER 2017
Comp By: AN/CB
Checked By: FK
DWG Name: 118314-24-PROP
Job Ref: 118314
Local Authority: LIVINGSTONE SHIRE COUNCIL
Locality: MARLBOROUGH
Scale: 1:25000
Sheet: A1
Plan Ref: 118314-24
Rev: D
RPS
RPS Australia East Pty Ltd
ACN 140 292 762
ABN 44 140 292 762
Urban Design
Brisbane Design Studio
455 Brunswick Street
Fortitude Valley QLD 4006
T +61 7 3324 9300
F +61 7 3324 9399
W rpsgroup.com.au

12.11 - REQUEST FOR NEGOTIATED INFRASTRUCTURE CHARGES FOR A DEVELOPMENT PERMIT D-159-2017 FOR RECONFIGURING A LOT (ONE LOT INTO FIFTEEN LOTS)

Infrastructure Charges Notice

Meeting Date: 17 July 2018

Attachment No: 2

Livingstone SHIRE COUNCIL

Infrastructure Charges Notice

Planning Act 2016, section 119 & 121

Application number:	**D-159-2017**	Your reference:	PR118314
Date received:	**10 August 2017**	Contact:	Jenna Brosseuk
Date of decision:	**13 November 2017**	Contact number:	1300 790 919

1. APPLICANT DETAILS

Name:	**Dr Peter Dunbar C/-RPS**		
Postal address:	**PO Box 1559** **FORTITUDE VALLEY QLD 4006**		
Phone:	(07) 3124 9375	Email:	Jacqueline.miller@rpsgroup.com.au

2. PROPERTY DESCRIPTION

Street address:	Lot 5 Marlborough Road, Marlborough
Property description:	Lot 5 on SP214946

3. OWNER DETAILS

Name:	P D Dunbar
Postal address:	PO Box 8200, Allenstown Queensland 4700

4. DEVELOPMENT APPROVAL

Development Permit for Reconfiguring a Lot (one lot into fifteen lots)

5. INFRASTRUCTURE CHARGE

The charge is levied pursuant to the *Adopted Infrastructure Charges Resolution (No.2) 2015*. The details and breakdown of the charge are outlined below:

Total charge:	**$129,360.00** This charge may be indexed in line with Consumer Price Index on an annual basis.
Charge area:	The subject site is located outside the priority infrastructure area.
Calculation:	The charge is calculated in accordance with section 3.4.2 - Development located partly outside or entirely outside the priority infrastructure area and Table 8 - Minimum infrastructure charge for reconfiguring a lot partly outside or entirely outside the priority infrastructure area, as follows:

	1. Fifteen (15) lots at $9,240.00 per lot; 2. less a **credit** of $9,240.00.
Credit:	The above calculation takes into account a credit of $9,240.00 for the existing allotment pursuant to section 4.0 of Council's *Adopted Infrastructure Charges Resolution (No. 2) 2015*. The credit is calculated as follows: 1. one existing lot at $9,240.00 per lot.

6. PAYMENT DETAILS

The charge must be paid:	Prior to the local government approving the plan of subdivision (endorsement of the survey plan).
Payment options:	Payment of the infrastructure charge can be made: **ONLINE** – by accessing Council's online services website. *Please contact Council for your payment reference number PRIOR to making payment* **IN PERSON** –at Council's Customer Service Centre at Town Hall. **TELEPHONE** – Call 1300 790 919 or 07 4913 5000 to pay via MasterCard or Visa. *Council complies with the Payment Card Industry Data Security Standard. Compliance helps to alleviate sensitive data being compromised and protects cardholder data.* **MAIL** – post a cheque payable to 'Livingstone Shire Council' and send to PO Box 2292, Yeppoon Queensland 4703.

7. LAPSING OF INFRASTRUCTURE CHARGES NOTICE

This infrastructure charges notice lapses if the development approval to which it pertains ceases to have effect in accordance with section 71 and 119 (11) of the *Planning Act 2016*.

8. ASSESSMENT MANAGER

Erin McCabe **Co-ordinator – Development Assessment** **Community and Planning Services**		Date:	14 November 2017

12.11 - REQUEST FOR NEGOTIATED INFRASTRUCTURE CHARGES FOR A DEVELOPMENT PERMIT D-159-2017 FOR RECONFIGURING A LOT (ONE LOT INTO FIFTEEN LOTS)

Decision Notice

Meeting Date: 17 July 2018

Attachment No: 3

Livingstone SHIRE COUNCIL

Decision Notice (approval)

Planning Act 2016, section 63(2)
Development Assessment Rules, part 5: Decision

Application number:	**D-167-2017**	Your reference:	170906
Date received:	**30 August 2017**	Contact:	Jenna Brosseuk
Date of decision:	**12 December 2017**	Contact number:	1300 790 919

1. APPLICANT DETAILS

Name:	**Keith Ruskin, Lyndal Rhoda Ruskin, Kevin Edward Haigh and Shirley Daphne Haigh**		
Postal address:	**C/- GSPC** **PO Box 379** **GRACEMERE QUEENSLAND 4702**		
Phone:	(07) 4922 7033	Email:	admin@gspc.com.au

2. PROPERTY DESCRIPTION

Street address:	Lot 9 Henry Street, Emu Park
Real property description:	Lot 9 on E15615

3. OWNER DETAILS

Name:	K Ruskin and L R Ruskin and K E Haigh and S D Haig
Postal address:	72 Bright Street, Emu Park Queensland 4710

4. DEVELOPMENT APPROVAL

Development Permit for Reconfiguring a Lot (one lot into two lots)

5. DETAILS OF APPROVAL

The application is **approved in full with conditions** which are included in **attachment one** of this notice and the following approvals are given:

Type of approval/assessable development details	*Planning Regulation 2017* reference	Development Permit	Preliminary Approval
Development assessable under the planning scheme, a temporary local planning instrument, a master plan or a preliminary approval which includes a variation approval	Nil	**YES**	NO

6. SUPERSEDED PLANNING SCHEME

No

7. THE APPROVED PLANS

The stamped approved plans are provided with this notice in **attachment four**. The approved development must be completed and maintained generally in accordance with the approved drawings and documents:

Plan/Document Name	Plan Number	Dated
Detail and level survey over Lots 9 and 10	170906-05 (Sheet 1)	26.09.2017

8. FURTHER DEVELOPMENT PERMITS

The following development permits are required to be obtained, as detailed in the conditions of approval, before the development can be carried out:

Type of development permit required	Subject of the required development permit
Operational Works	*Road Works* *Access Works*

9. REFERRAL AGENCIES

There were no Referral agencies activated by this application.

10. PROPERLY MADE SUBMISSIONS Not applicable

11. CURRENCY PERIOD FOR THE APPROVAL

Any part of this development approval relating to reconfiguring a lot will lapse if a plan for the reconfiguration that, under the Land Title Act, is required to be given to a local government for approval, is not given to the local government within **four (4) years** after the approval starts to have effect, as per section 85(1)(b) of the *Planning Act 2016*.

12. WHEN THE DEVELOPMENT APPROVAL TAKES EFFECT

This development approval takes effect in accordance with section 71 of the *Planning Act 2016*. Generally, the approval starts to have effect when the approval is given to the applicant unless the following circumstances apply:

- if an appeal about the approval is started, and subject to the outcome of the appeal—the approval starts to have effect when the appeal ends.

13. STATEMENT OF REASONS

Pursuant to section 63 (5) of the *Planning Act 2016*, Council has prepared a notice about the decision for this development application, which is included in **attachment two** of this notice.

14. APPEAL RIGHTS

The rights of an applicant to appeal to a tribunal or the Planning and Environment Court against a decision about a development application are set out in chapter 6, part 1 of the *Planning Act 2016*. For particular applications, there may also be a right to make an application for a declaration by a tribunal (see chapter 6, part 2 of the *Planning Act 2016)*.

Appeal by an applicant

An applicant for a development application may appeal to the Planning and Environment Court against the following:

- the refusal of all or part of the development application
- a provision of the development approval
- the decision to give a preliminary approval when a development permit was applied for
- a deemed refusal of the development application.

An applicant may also have a right to appeal to the Development tribunal. For more information, see schedule 1 of the *Planning Act 2016*.

The timeframes for starting an appeal in the Planning and Environment Court are set out in section 229 of the *Planning Act 2016*.

Attachment three is an extract from the *Planning Act 2016* that sets down the appeal rights.

15. ASSESSMENT MANAGER [decision made by Council resolution].

Erin McCabe **Co-ordinator - Development Assessment** **Community and Planning Services**		Date:	15 December 2017

Attachment 1 - Livingstone Shire Council Conditions

Planning Act 2016, section 65

1.0 ADMINISTRATION

1.1 The Developer is responsible for ensuring compliance with this approval and the Conditions of the approval by an employee, agent, contractor or invitee of the Developer.

1.2 Where these Conditions refer to "Council" in relation to requiring Council to approve or to be satisfied as to any matter, or conferring on the Council a function, power or discretion, that role of the Council may be fulfilled in whole or in part by a delegate appointed for that purpose by the Council.

1.3 All conditions of this approval must be undertaken and completed to the satisfaction of Council, at no cost to Council.

1.4 All conditions, works, or requirements of this approval must be undertaken and completed prior to the approval of a plan of subdivision (Survey Plan endorsement), unless otherwise stated.

1.5 Where applicable, infrastructure requirements of this approval must be contributed to the relevant authorities, at no cost to Council prior to the approval of a plan of subdivision (Survey Plan endorsement), unless otherwise stated.

1.6 The following further Development Permits must be obtained prior to the commencement of any works associated with its purposes:

1.6.1 Operational Works:

(i) Road Works; and

(ii) Access Works.

1.7 All Development Permits for Operational Works must be obtained prior to the approval of a plan of subdivision (Survey Plan endorsement).

1.8 Unless otherwise stated, all works must be designed, constructed and maintained in accordance with the relevant Council policies, guidelines and standards.

1.9 All engineering drawings/specifications, design and construction works must comply with the requirements of the relevant *Australian Standards* and must be approved, supervised and certified by a Registered Professional Engineer of Queensland.

1.10 All services, including any electricity, telecommunications, stormwater drainage systems, internal plumbing and sanitary drainage systems must be located within the respective property boundaries/ lot it serves, or secured by an easement in favour of the benefitting lot(s).

2.0 APPROVED PLANS AND DOCUMENTS

2.1 The approved development must be completed and maintained generally in accordance with the approved plans and documents, except where amended by the conditions of this permit:

Plan/Document Name	Plan/Document Reference	Dated
Detail and level survey over Lots 9 and 10	170906-05 (Sheet 1)	26.09.2017

2.2 Where there is any conflict between the conditions of this approval and the details shown on the approved plans and documents, the conditions of approval must prevail.

2.3 Where conditions require the above plans or documents to be amended, the revised document(s) must be submitted for approval by Council prior to the submission of a Development Application for Operational Works.

3.0 ROAD WORKS

3.1 A Development Permit for Operational Works (road works) must be obtained prior to the commencement of any road works on the site.

3.2 All works must be designed and constructed in accordance with the approved plans (refer to condition 2.1), *Capricorn Municipal Development Guidelines*, relevant Australian Standards and the provisions of a Development Permit for Operational Works (road works).

3.3 Henry Street must be designed and constructed for the full-width and frontage of existing Lot 9 on E15615 to an "Urban Access Street" standard, inclusive of all associated drainage systems.

3.4 Traffic signs and pavement markings including any alterations must be provided in accordance with the *Transport Operations (Road Use Management) Act 1995* and the *Manual of Uniform Traffic Control Devices (Queensland)*.

3.5 Public space lighting must be provided in accordance with *Australian Standard AS1158 "Lighting for Roads and Public Spaces"*.

4.0 ACCESS WORKS

4.1 A Development Permit for Operational Works (access works) must be obtained prior to the commencement of any access works on the site.

4.2 All works must be designed and constructed in accordance with the approved plans (refer to condition 2.1), *Capricorn Municipal Development Guidelines*, *Australian Standard AS2890 "Off Street Car Parking"* and the provisions of a Development Permit for Operational Works (access works).

4.3 Compliant access driveways to proposed Lots 9 and 10 must be constructed in accordance with the *Capricorn Municipal Development Guidelines*.

4.4 Urban Street addressing must be provided for each lot.

5.0 PLUMBING AND DRAINAGE WORKS

5.1 Internal plumbing and sanitary drainage associated with the existing buildings and structures must be wholly contained within the lot it serves.

5.2 Adequate on-site water storage for domestic and firefighting purposes must be maintained for the existing development(s) and must be wholly contained within the lot it serves.

5.3 Any construction of new, or alternation to existing, internal plumbing and sanitary drainage works must be in accordance with regulated work under the *Plumbing and Drainage Act* and a Development Permit for Plumbing and Drainage Works.

6.0 STORMWATER WORKS

6.1 All roof and allotment runoff must be discharged lawfully in accordance with the requirements of the *Queensland Urban Drainage Manual* and the *Capricorn Municipal Development Guidelines*.

6.2 All roof and allotment runoff must be discharged such that it does not restrict, impair or change the natural flow of runoff water or cause an actionable nuisance to adjoining properties or damage infrastructure.

7.0 SITE WORKS

7.1 Site works must be constructed such that they do not, at any time, in any way restrict, impair or change the natural flow of runoff water, or cause a nuisance or worsening to adjoining properties or infrastructure.

8.0 ELECTRICITY AND TELECOMMUNICATIONS

8.1 Electricity and telecommunication connections must be provided to the proposed development to the standards of the relevant authorities.

8.2 Evidence must be provided of a certificate of supply with the relevant service providers to provide each lot with live electricity and telecommunication connections, in accordance with the requirements of the relevant authorities.

9.0 ASSET MANAGEMENT

9.1 Any alteration necessary to electricity, telephone, water mains, sewerage mains, and/or public utility installations resulting from the development or in connection with the development, must be at full cost to the Developer.

9.2 Any damage to existing kerb and channel, pathway or roadway (including removal of concrete slurry from public land, pathway, roads, kerb and channel and stormwater gullies and drainage lines) which may occur during any works carried out in association with the approved development must be repaired. This must include the reinstatement of the existing traffic signs and pavement markings which may have been removed.

9.3 'As constructed' information pertaining to assets to be handed over to Council and those which may have an impact on Council's existing and future assets must be provided prior to the approval of a plan of subdivision (Survey Plan endorsement). This information must be provided in accordance with the Manual for Submission of Digital As Constructed Information.

10.0 ENVIRONMENTAL

10.1 Any application for a Development Permit for Operational Works must be accompanied by an Erosion and Sediment Control Plan which addresses, but is not limited to, the following:

(i) objectives;
(ii) site location / topography;
(iii) vegetation;
(iv) site drainage;
(v) soils;
(vi) erosion susceptibility;
(vii) erosion risk;
(viii) concept;
(ix) design; and
(x) implementation, for the construction and post construction phases of work.

10.2 The Erosion Control and Stormwater Control Management Plan must be implemented and maintained on-site for the duration of the works, and until all exposed soil areas are permanently stabilised (for example, turfed, hydromulched, concreted, landscaped). The prepared Erosion Control and Stormwater Control Management Plan must be available on-site for inspection by Council Officers during those works.

11.0 OPERATING PROCEDURES

11.1 All construction materials, waste, waste skips, machinery and contractors' vehicles must be located and stored or parked within the site. No storage of materials, parking of construction machinery or contractors' vehicles will be permitted in Henry Street.

ADVISORY NOTES

NOTE 1. Aboriginal Cultural Heritage

It is advised that under Section 23 of the *Aboriginal Cultural Heritage Act 2003*, a person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal Cultural Heritage (the "cultural heritage duty of care"). Maximum penalties for breaching the duty of care are listed in the Aboriginal Cultural Heritage legislation. The information on Aboriginal Cultural Heritage is available on the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs website www.datsima.qld.gov.au

NOTE 2. Asbestos Removal

Any demolition and/or removal works involving asbestos materials must be undertaken in accordance with the requirements of the *Workplace Health and Safety* legislation and *Public Health Act 2005*.

NOTE 3. General Environmental Duty

General environmental duty under the *Environmental Protection Act* prohibits unlawful environmental nuisance caused by noise, aerosols, particles dust, ash, fumes, light, odour or smoke beyond the boundaries of the property during all stages of the development including earthworks, construction and operation.

NOTE 4. General Safety Of Public During Construction

The *Workplace Health and Safety Act* and *Manual of Uniform Traffic Control Devices* must be complied with in carrying out any construction works, and to ensure safe traffic control and safe public access in respect of works being constructed on a road.

NOTE 5. Works in Road Reserve Permit

It is advised that a Works in Road Reserve Permit (including a fee for the vehicle crossover and compliant with Standard *Capricorn Municipal Development Guideline* Drawings) may be accepted in place of the Development Permit for Operational Works (access works).

NOTE 6. Adopted Infrastructure Charges Notice

This application is subject to infrastructure charges in accordance with Council's *Adopted Infrastructure Charges Resolution (No. 2) 2015*. The charges are presented on an Infrastructure Charges Notice which has been supplied with this decision notice.

Livingstone SHIRE COUNCIL

Attachment 2 – Statement of reasons

Planning Act 2016, Section 63 (5)

The development application for a **Development Permit for Reconfiguring a Lot (one lot into two lots)** approved as per this Decision Notice (approval) D-167-2017

1. REASONS OF THE DECISION

The development application is approved and the reasons for the decision are based on findings on material questions of fact

(i) The development does not comply with Specific Outcome O10 of the Industry Zone Code as the development is not connected to the reticulated sewer or water supply networks nor is Henry Street constructed to the full frontage and the access to the sites is not in accordance with the relevant standards.

(ii) Despite the non-compliance, Council is satisfied that the existing development and the proposed lot configuration is adequately serviced by on-site infrastructure. Council considers the creation of two lots on the premises will not compromise the ongoing use of the premises for preferred industrial uses, including those already operating on site and the amenity of the locality will not be adversely affected by the arrangement.

(iii) Despite the non-compliance with Specific Outcome O10, the application complies with the overall outcomes sought for the Industry Zone and proposed allotments of adequate size to accommodate preferred and existing industrial uses and upgrade to the road and access have been conditioned.

(iv) The development does not compromise the achievement of the state interest – natural hazards, risk and resilience outlined in the *State Planning Policy*.

(v) The development does not compromise the achievement of regional outcomes outlined in the *Central Queensland Regional Plan*.

(vi) On balance, the application should be approved because the circumstances favour Council exercising its discretion to approve the application even though the development does not comply with two aspects of the assessment benchmarks.

The evidence or other material on which the findings were based are:

- The common material for the development application;
- The assessment benchmarks identified in section 2 of this notice; and
- The matters prescribed by regulation identified in section 6 of this notice.

2. ASSESSMENT BENCHMARKS

The following are the benchmarks applying for this development:

Benchmarks applying for the development	Benchmark reference
Industrial Zone Code Special Management Area Code	*Livingstone Planning Scheme 2005* Reprint 7 as in force 10 July 2017
Chapter 4 – Regional outcomes and policies	*Central Queensland Regional Plan*, October 2013
Part E: State interest policies and assessment benchmarks (Planning for safety and resilience to hazards)	*State Planning Policy*, July 2017

3. COMPLIANCE WITH BENCHMARKS

The development meets the overall outcomes for the Industrial Zone Code despite not complying with Specific Outcome of O10 of the code:

Benchmark reference	Reasons for the approval despite non-compliance with benchmark
Specific Outcome O10	As per the reasons set out in the findings on material questions of fact in section 1 of this notice.

4. RELEVANT MATTERS

Not applicable to this application.

5. MATTERS RAISED IN SUBMISSIONS

Not applicable to this application.

6. MATTERS PRESCRIBED BY REGULATION

The following matters were given regard to in undertaking the assessment of this development application:

(i) The State Planning Policy – Part E.

(ii) The Central Queensland Regional Plan.

(iii) The Industry Zone Code and the Special Management Area Code in *Livingstone Planning Scheme 2005* (reprint 7 as in force 10 July 2017).

(iv) The land, the subject of the application is used for industrial land uses and a Caretaker's residence to the Landscape supply operation.

(v) Surrounding use of adjacent premises in terms of commensurate and consistent development.

(vi) The common material, being the material submitted with the application.

Livingstone SHIRE COUNCIL

Attachment 3 – Appeal rights

Planning Act 2016 Extract from schedule 1 - Appeals

The extract is provided for information purposes only. Whilst care is taken to ensure the data is current, Council accepts no responsibility for reliance on this information where amendments to the legislation are not reflected in the information. The applicant must refer to the Act available on the Legislation Queensland website

Schedule 1 **Appeals** section 229

1 Appeal rights and parties to appeals

(1) Table 1 states the matters that may be appealed to—
- (a) the P&E court; or
- (b) a tribunal.

(2) Table 2 states the matters that may be appealed only to the P&E Court.

(3) Table 3 states the matters that may be appealed only to the tribunal.

(4) In each table—
- (a) column 1 states the appellant in the appeal; and
- (b) column 2 states the respondent in the appeal; and
- (c) column 3 states the co-respondent (if any) in the appeal; and
- (d) column 4 states the co-respondents by election (if any) in the appeal.

(5) If the chief executive receives a notice of appeal under section 230(3)(f), the chief executive may elect to be a co-respondent in the appeal.

Table 1
Appeals to the P&E Court and, for certain matters, to a tribunal

1. Development applications

For a development application other than a development application called in by the Minister, an appeal may be made against—
- (a) the refusal of all or part of the development application; or
- (b) the deemed refusal of the development application; or
- (c) a provision of the development approval; or
- (d) if a development permit was applied for—the decision to give a preliminary approval.

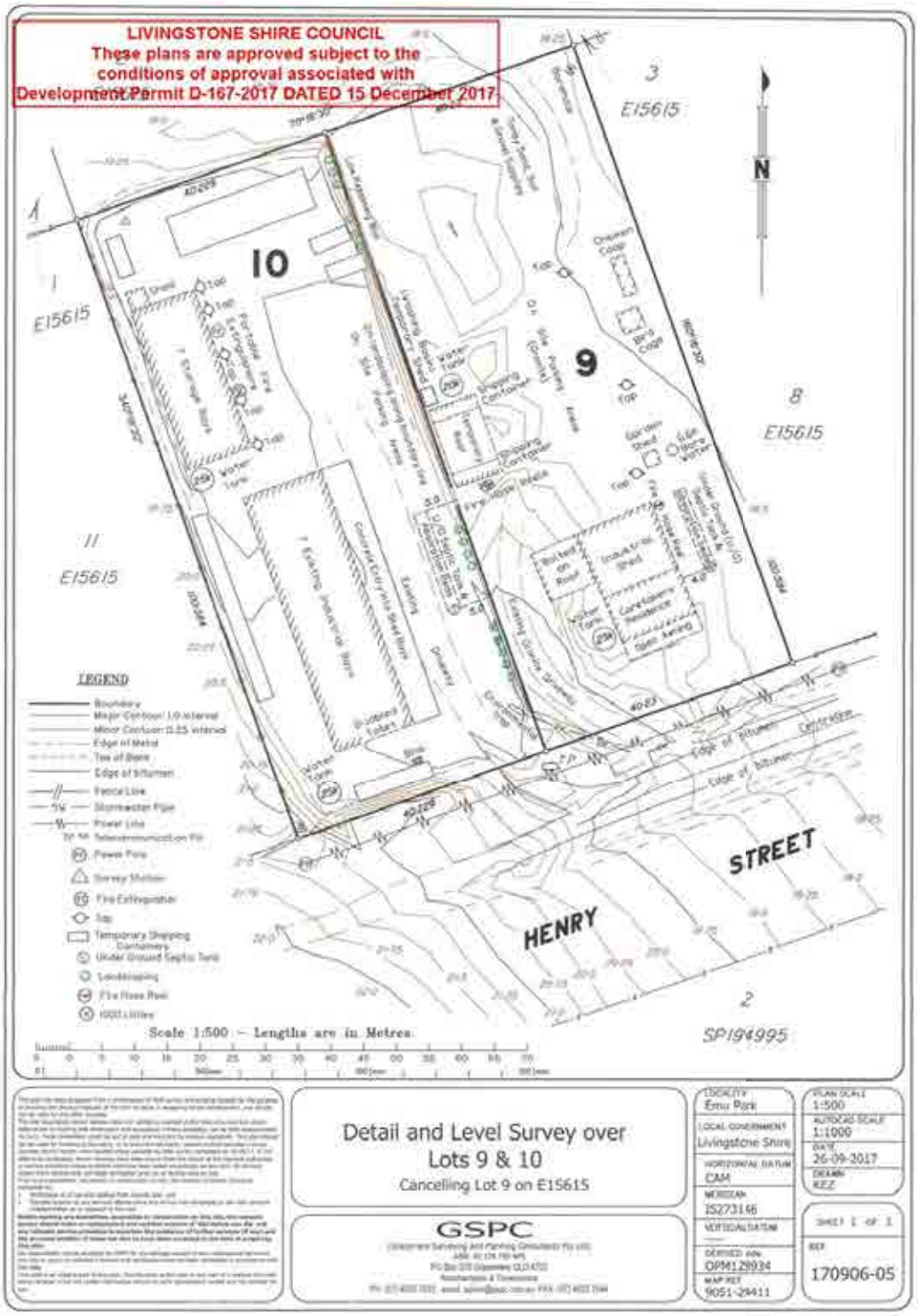
Table 1 Appeals to the P&E Court and, for certain matters, to a tribunal			
Column 1 Appellant	Column 2 Respondent	Column 3 Co-respondent (if any)	Column 4 Co-respondent by election (if any)
The applicant	The assessment manager	If the appeal is about a concurrence agency's referral response—the concurrence agency	1 A concurrence agency that is not a co-respondent 2 If a chosen assessment manager is the respondent—the prescribed assessment manager 3 Any eligible advice agency for the application 4 Any eligible submitter for the application

Table 2 Appeals to the P&E Court only			
1. Appeals from tribunal An appeal may be made against a decision of a tribunal, other than a decision under section 252, on the ground of— (a) an error or mistake in law on the part of the tribunal; or (b) jurisdictional error.			
Column 1 Appellant	Column 2 Respondent	Column 3 Co-respondent (if any)	Column 4 Co-respondent by election (if any)
A party to the proceedings for the decision	The other party to the proceedings for the decision	—	—

Livingstone SHIRE COUNCIL

Attachment 4 – Approved Plans

Planning Act 2016, section 63 (3)


LIVINGSTONE SHIRE COUNCIL
These plans are approved subject to the conditions of approval associated with
Development Permit D-167-2017 DATED 15 December 2017
10
9
E15615
STREET
HENRY
SP194995
LEGEND
Scale 1:500 – Lengths are in Metres
Detail and Level Survey over
Lots 9 & 10
Cancelling Lot 9 on E15615
GSPC
Emu Park
Livingstone Shire
CAM
IS273166
OPM129934
9051-29411
1:500
1:1000
26-09-2017
170906-05

12.11 - REQUEST FOR NEGOTIATED INFRASTRUCTURE CHARGES FOR A DEVELOPMENT PERMIT D-159-2017 FOR RECONFIGURING A LOT (ONE LOT INTO FIFTEEN LOTS)

Representations

Meeting Date: 17 July 2018

Attachment No: 4

18/12/17

CEO

Livingstone Shire Council

Yeppoon

Re:- Development Application D -167-2017

Attention CEO, Mayor and Councillors

Madam / Sir,

On the 29/11/17 we received a letter from your Senior Planning Officer Jenna Brosseuk requesting more time for your planners to complete their assessment of this application to present to council.

On Friday 15/12/17 I received the decision notice approval with conditions from your planning department.

These conditions are totally unreasonable and not viable, i.e.

Widening/ sealing and storm water drainage for Henry street and access to blocks (this road services 6 industrial blocks, 4 council blocks and 106 acres of rural land), fire safety requirements, storm water run-off on both blocks and subdivision fee$ 21,000.(Several million easy)

I am requesting deputation at the next available full council meeting to negotiate Council's decision in relation to the conditions required regarding to this applications and compensation in relation to the council enforcing these conditions on my first application in 2003 which were not lawful until 2005.

REASONS

1. This decision is not the decision Mayor Ludwig proposed on 08/08/17
2. We were not advised of any changes to the proposal we agreed to, mayor Ludwig refused the subdivision fee as it would be more beneficial to council for us to agree pay the same infrastructure charges as every- one else when the infrastructure was supplied to this area. He stated if we paid the infrastructure charge council could not apply any further charges. I have already paid for the road I have provided the entire infrastructure servicing this area... Now the council is charging me for the road again.(not lawful)
3. I did wish to attend the general meeting and have deposition with council for this proposal it would appear your planners had deliberately lied to avoid my objections to the changes.
4. I was advised by your planners the meeting would be on the 25/01/18
5. I requested clarification on 28/10/17 council decision to impose the same standard of infrastructure in 2003 as now applied under the 2005 planning scheme which did not become effective until 17/10/2005. Your planning department acted unlawfully with a clear intent to destroy the value of my industrial assets and stop my industrial activities to support their preferred use of residential.

6 The unlawful conditions placed on my first application in 2003 devalued my property and caused extensive financial loss as the property sold way less than my development cost. Mr Haigh now faces the same situation. The property being worthless because of the development cost council is enforcing on businesses wishing to operate in this lawful industrial area.

7 I have just spent the last ten years fighting your planning department to retain the lawful industrial use of this area allowable under the existing town plan; I had to threaten legal action for compensation to stop council preferred use of residential.

8 This council has no integrity and cannot be trusted .The conditions proposed for this subdivision will destroy any future growth, development and investment for the industrial growth required to service the future requirements of Emu Park.

9 My business has been discriminated against, I have been intimidated by your planning department and I have suffered financial loss for cost imposed for industrial development activities, whilst your planners have been allowed to operate contrary to their own town plan and push for their preferred use of residential.
Your council has never supported this industrial area, your planning department's unreasonable demands and unlawful actions will continue to restrict this area.

10 I request this application be dealt with under the 1991 superseded town plan as council did act unlawful against my application in 2003.

I will also be seeking legal advice with respect to council's unlawful use of it's by- laws in 2003 for compensation

Please Note All correspondence is to be sent directly to me keith@ruskinstorage.com

Regards

K Ruskin

Keith Ruskin

72 Bright St.

Emu Park

4710

0438388142

09/01/18

CEO

Livingstone shire Council

Yeppoon.

Re =- Submission for Deposition at council meeting 22/01/18

Ceo , Councillors and Planners

Madam/Sir

With respect to the development application D-167-2017 Reconfiguring lot 9 Henry St. Emu Park into 2 lots.

The council's decision On 15/12/17 is unreasonable, un fair and unlawful and under the Planning act 2018 Section 128 (4) (b) (1) and (2) places unreasonable impositions on both my industrial lawful activities and my lawfully approved buildings.

With reference to the Councils adopted infrastructure charges Resolution (no 3) 2018 which provides the LGIP which council can applied to this ROL.

Infrastructure Charge- Development located partly or entirely outside priority infrastructure3.4.2

1 Council can apply a total infrastructure charge of $21000.00 or
2 Request the supply of infrastructure no greater in value than this amount

Council has applied both in this approval $21000.00 + require infrastructure development to Henry st.,

The development notice supplied by council is contrary to council Infrastructure resolution no 3 and the planning act 2016

The planners have applied further development conditions to each lots of the proposed subdivision

Fire safety requirements and storm water control

These conditions are unlawful as all the buildings are lawfully approved and comply with council requirements at the time of development. Planners imposition of these requirements are contrary to our Existing use and rights protected 260 and 120 limitations of levied charges planning act 2016

Council imposition of their standard of infrastructure required for industrial activities(which are not binding 8.1 adopted infrastructure charges (c) on the landholders has

1 Restricted the growth and development in this industrial area
2 Devalued the land in this area
3 Reduced the value of the buildings and businesses operating in this area
4 Made operating from this industrial area not viable

I will be making a claim for compensation because the adverse planning changes now being applied by this council which will further destroy the value of my property as it did when council first applied these requirements unlawfully in 2003. (31 Planning act 2016.)

The planners have not advised the councillors that I have a credit of $52,000.00 for the infrastructure that I had to provide to be able to operate my lawful business my businesses in the Gazetted Emu Park industrial area.

1. Road from Emu Park/Rockhampton road to lot 9 + 2 access points into lot 9
2. Power from Hartley/wood street to lot 9
3. Telephone services were also provided by Telstra.
4. Council provided a single layer of tar around 15 years ago not to the standard they require for industrial development. Not to the standard the planners have enforced on me

In respect to this subdivision the existing part of lot 9 would remain as lot 9. The buildings shed and caretakers' residence the property of Mr Haigh and continuing operating the same lawful use it has for the last 11years. Constructed in 1979 and approved for the lawful industrial use. This development complies with 95% of the storm water requirement. Under the planning act a new town plan cannot restrict or alter the existing lawful approved use. Council cannot apply new development standards to this property.

The other half of this subdivision lot 10, the property of Mr Ruskin. All development on this section has been lawfully constructed and approved to comply with the standard required under the 2005 planning scheme. This development has complied with the fire services and storm water control requested by council. No changes to the Lawful approved use. Council cannot apply new development standards to this lawfully approved development. The planning departments impositions of development requirements on these approved development are unlawful.

No extra demand on the existing infrastructure that I provided.

I would also like to bring to your attention that council have been the major beneficiaries of the infrastructure I have provided.

1. Whilst this road only provides limited access to the Council land, the 3 back industrial allotments it provided access to the lots 8, 9, 11 and the 106 acres previously the old rifle range.
2. This road and power increased the valuation of the whole of this area allowing council to increase the rates. My rates up 900% which has added another cost to me of $40,000.00 + for providing the infrastructure to service this area.
3. The power I provided now supplies power to the new sports fields in Hartley Street.
4. Provided power for the council's sewerage plant.
5. This subdivision would provide another ratepayer total of 8

This original industrial development was a LSC and Lands Department subdivision (1890) without any infrastructure network. Council has collected rates on this area for 127 years and refused to supply any infrastructure making it a landholder responsibility.

Planning Act. Division 3 Development Conditions 65 (1) (a) must be relevant to, but not be an unreasonable imposition on the development or the use of the premises as a consequence of the development.

I also refer council attention to the draft infrastructure charges 2014 mentioned in the same meeting December 2017 requesting a 20% reduction in infrastructure cost to encourage lawful industrial development within the shire.

Our local member and mayor have pledge 23 million to restore jobs, growth and economic benefits for the community by developing Great Keppel Island whilst the Emu Park industrial estate stagnates.

I am requesting councillors reconsider this development application applying a reasonable infrastructure requirement that would not impose any unreasonable imposition on this development application or our existing lawful use of our premises.

I am also requesting council remove the entire planning department requirements placed on the existing lawful approved and operating buildings.

I am further requesting under section 126 (1) planning act 2016 regarding suspending relevant appeal period until a satisfactory agreement is reached between all parties.

Regards

K Ruskin

Keith Ruskin

72 Bright St.

Emu Park

4710

0438388142

12.12 DECISION ASSESSMENT FOR A DEVELOPMENT APPLICATION FOR A DEVELOPMENT PERMIT FOR A MATERIAL CHANGE OF USE FOR A SPECIAL USE (PET CREMATORIUM) AT 410 AND 424 TANBY POST OFFICE ROAD, BONDOOLA

File No: **D-66-2018**

Attachments:
1. **Locality Plan⇩**
2. **Site Plan⇩**
3. **Management Plan - Pet Crematorium operations⇩**
4. **Building Proposal Plans (shed)⇩**

Responsible Officer: **Erin McCabe - Co-ordinator Development Assessment**
David Battese - Manager Strategy & Development

Author: **Rhiannon Casey - Planning Officer**

SUMMARY

Applicant:	*Mervyn Charles Buchholz*
Real Property Address:	*Lot 31 and 32 on SP272608*
Common Property Address:	*410 and 424 Tanby Post Office Road, Bondoola*
Area of Site:	*Lot 32 (development site) 30 hectares and whole of Lot 31 (location of access easement) 34.1 hectares*
Planning Scheme:	*Livingstone Shire Planning Scheme 2005 (reprint 7, in force 10 July 2017)*
Planning Scheme Zone:	*Rural Zone*
Planning Scheme Overlays:	*Overlay Map O2 – Steep Land and Drainage Problem Area;* *Overlay Map O4 – Good Quality Agricultural Land;* *Overlay Map O5 – Bushfire Hazard Area; and* *Overlay Map O9 – Capricorn Coast Landscape Area (Precinct A)*
Planning Scheme Maps:	*Planning Scheme Map PSM2A – Class A2 and Class C2; and* *Planning Scheme Map 10A and 10B – Locally Significant Vegetation*
Existing Development:	*Lot 31 - vacant and Lot 32 - Dwelling house*
Level of Assessment:	*Impact assessable*
Submissions:	*Nil*
Referral matters:	*Not applicable*
Infrastructure Charge Area:	*Outside the Priority Infrastructure Area*

Application progress:

Pre-lodgement Meeting:	*21 March 2018*
Application received:	*20 April 2018*
Application properly made:	*23 April 2018*

Confirmation notice issued:	*1 May 2018*
No Information Request required letter issued:	*16 May 2018*
Notice of intention to commence public notification received:	*22 May 2018*
Public notification period:	*25 May 2018 to 15 June 2018*
Notice of compliance received:	*19 June 2018*
Council meeting date:	*17 July 2018*
Statutory determination date:	*24 July 2018*

OFFICER'S RECOMMENDATION

RECOMMENDATION A

THAT in relation to the application for a Development Permit for a Material Change of Use for a Special use (pet crematorium), made by Mervyn Charles Buchholz, on Lot 31 and Lot 32 on SP272608 and located at 410 and 424 Tanby Post Office Road, Bondoola, Council resolves to approve the application given pursuant to Section 45(5)(b) of the *Planning Act 2016*, the assessment manager may decide to approve the application even if the development does not comply with some of the assessment benchmarks and relevant matters, and reasons have been established in support of the development as follows:

(a) Due to the nature of the proposal, being a Special use (pet crematorium), it is more appropriately located within the rural zone due to the opportunity to appropriately buffer the use from surrounding properties.

(b) The use is proposed within a cleared portion of the subject site, approximately 500 metres from the nearest adjoining neighbour (to the south) and is not anticipated to be visible from adjoining properties.

(c) The development involves an activity located wholly indoors, within a shed structure which is a built form prevalent in a rural setting.

(d) The development does not impact upon the agricultural capacity of the subject site as a future rural use is able to occur concurrently on the site without conflict.

(e) No submissions were received in relation to the development.

RECOMMENDATION B

That in relation to the application for a Development Permit for a Material Change of Use for a Special use (pet crematorium), made by Mervyn Charles Buchholz, on Lot 31 and Lot 32 on SP272608 and located at 410 and 424 Tanby Post Office Road, Bondoola, Council resolves to approve the application subject to the following conditions:

1.0 ADMINISTRATION

1.1 The Developer is responsible for ensuring compliance with this approval and the Conditions of the approval by an employee, agent, contractor or invitee of the Developer.

1.2 Where these Conditions refer to "Council" in relation to requiring Council to approve or to be satisfied as to any matter, or conferring on the Council a function, power or discretion, that role of the Council may be fulfilled in whole or in part by a delegate appointed for that purpose by the Council.

1.3 All conditions of this approval must be undertaken and completed to the satisfaction

of Council, at no cost to Council.

1.4 All conditions, works, or requirements of this approval must be undertaken and completed prior to the commencement of use, unless otherwise stated.

1.5 Where applicable, infrastructure requirements of this approval must be contributed to the relevant authorities, at no cost to Council prior, to the commencement of use, unless otherwise stated.

1.6 The following further Development Permits must be obtained prior to the commencement of any works associated with its purposes:

1.6.1 Building Work.

1.7 Unless otherwise stated, all works must be designed, constructed and maintained in accordance with the relevant Council policies, guidelines and standards.

1.8 All engineering drawings/specifications, design and construction works must comply with the requirements of the relevant *Australian Standards* and must be approved, supervised and certified by a Registered Professional Engineer of Queensland.

2.0 APPROVED PLANS AND DOCUMENTS

2.1 The approved development must be completed, operated and maintained generally in accordance with the approved plans and documents, except where amended by the conditions of this permit:

Plan/Document Name	Plan/Document Reference	Dated
Site Plan	Not numbered	April 2018
Frame Roof Plan and Elevation Grid B	ROKH02/5241 Page 1/3	Not dated
Section Grid 4 and 6	ROKH02/5241 Page 2/3	Not dated
Elevation Grid A and 1 and Section Grid 2, 3 and 5	ROKH02/5241 Page 3/3	Not dated
Management Plan Pet Crematorium	Not numbered	Not dated

2.2 Where there is any conflict between the conditions of this approval and the details shown on the approved plans and documents, the conditions of approval must prevail.

2.3 Where conditions require the above plans or documents to be amended, the revised document(s) must be submitted for approval by Council prior to the submission of a Development Application for Building Works.

3.0 BUILDING WORKS

3.1 A Development Permit for Building Works must be obtained prior to the commencement of any building works on the site.

3.2 Any lighting devices associated with the development, such as sensory lighting, must be positioned on the site and shielded so as not to cause glare or other nuisance to nearby residents and motorists. Night lighting must be designed, constructed and operated in accordance with '*Australian Standard AS4282 – Control of the obtrusive effects of outdoor lighting*'.

4.0 SITE WORKS

4.1 All earthworks must be undertaken in accordance with *Australian Standard AS3798 "Guidelines on Earthworks for Commercial and Residential Developments".*

4.2 Site works must be constructed such that they do not, at any time, in any way adversely restrict, impair or change the natural flow of runoff water, or cause a nuisance or worsening to adjoining properties or damage infrastructure.

4.3 Any vegetation cleared or removed must be:

(i) mulched on-site and utilised on-site for landscaping purposes, in accordance with the landscaping plan approved by Council; or

(ii) removed for disposal at a location approved by Council;

within sixty (60) days of clearing. Any vegetation removed must not be burnt.

5.0 ELECTRICITY AND TELECOMMUNICATIONS

5.1 Electricity must be provided to the development to the standards of the relevant authorities.

6.0 ASSET MANAGEMENT

6.1 Any alteration necessary to electricity, telephone, water mains, sewerage mains, and/or public utility installations resulting from the development or in connection with the development, must be at full cost to the Developer.

6.2 Any damage to existing kerb and channel, pathway or roadway (including removal of concrete slurry from public land, pathway, roads, kerb and channel and stormwater gullies and drainage lines) which may occur during any works carried out in association with the approved development must be repaired. This must include the reinstatement of the existing traffic signs and pavement markings which may have been removed.

7.0 ENVIRONMENTAL

7.1 An Erosion Control and Stormwater Control Management Plan must be implemented and maintained on-site for the duration of the works, and until all exposed soil areas are permanently stabilised (for example, turfed, hydromulched, concreted, landscaped). The prepared Erosion Control and Stormwater Control Management Plan must be available on-site for inspection by Council Officers during those works.

7.2 The development must be undertaken in accordance with the recommendations in the approved Management Plan Pet Crematorium (refer condition 2.1).

8.0 OPERATING PROCEDURES

8.1 The operating hours of the Special use (pet crematorium) are restricted to;

8.1.1 0800 hours to 1800 hours, Monday to Friday; and

8.1.2 No operation on weekends or public holidays.

The hours of operation are for the cremator only. Pick-up and delivery outside of these hours is acceptable. The hours of operation do not include heating up and cooling down of the cremator.

8.2 Written documentation from a suitably qualified person detailing that the dual chamber incinerator is installed and operating to the specifications of the manufacture in regards to temperature and residence time, must be provided to Council, prior to commencement of use.

8.3 The use/operator must not exceed three (3) burns per hour, or maximum weight allowance for the incinerator and only burn domestic pet animals. Livestock and other animals that are not domestic pet animals must not be cremated in the incinerator.

8.4 All carcasses that are not cremated upon arrival at the crematorium must be stored in a freezer specific for that purpose.

8.5 The operator must ensure that scheduled maintenance is carried out on the furnace as per the manufactures specifications.

8.6 A log book recording the maintenance dates must be kept and must be made available for inspection by Council upon request.

8.7 The operator must complete and retain a log book recording the operating times for the furnace, including:

8.7.1 operating times, excluding heating up and cooling down of the cremator;

8.7.2 time and duration of each burn; and

8.7.3 details of each burn including weight and type of animal.

A copy of this log must be available for inspection by Council upon request.

8.8 The incinerator stack height and design must be installed in a manner that complies with the *Australian Standard AS 4323.1 – 1995 Stationary source emissions*.

8.9 Air pollution devices must be fitted to the furnace stack, to ensure that ground level concentrations of pollutants discharged from the stack do not exceed levels, as stated in the *Environmental Protection (Air) Policy 2008*, and the any other relevant environmental standard.

8.10 Emissions from the activity must not cause an odour, smoke, solvent or dust nuisance.

8.11 The stack outlet discharge rate must be at least ten (10) metres per second, unless otherwise approved.

8.12 The stack is to be fitted with a rain protection device that does not impede the discharge of exhaust gasses from the stack.

8.13 Waste generated from the activity must be disposed in a manner that is not released to the environment unless approved otherwise.

8.14 The disposal of cremated remains (ash) on site is permitted, provided that the disposal occurs during light wind conditions and leaching of materials into the water table, water way or stormwater does not occur or any other nuisance is created.

8.15 Where regulated waste is removed from the premises related to the activity, the holder of the development approval must monitor and record the following:

8.15.1 the date, quantity and type of waste removed;

8.15.2 name of the licensed regulated waste removalist and/or disposal operator and

8.15.3 the intended treatment/disposal destination of the waste.

Records must be maintained for a period of five (5) years for all regulated waste removal.

8.16 A complaints register must be kept at the premises and all complaints received in relation to the activity must be recorded in the register with the following details:

8.16.1 time, date and nature of complaint;

8.16.2 type of communication (telephone, letter, in person etc.);

8.16.3 name, contact address and contact phone number of the complainant (if the complainant does not wish to be identified then ‘not identified’ is to be recorded);

8.16.4 response and investigation undertaken in response to the complaint;

8.16.5 name of the person responsible for investigating the complaint; and

8.16.6 the action taken as a result of the complaint/investigation and the signature of or under the authorised holder.

The register must be made available to Council for inspection upon request.

8.17 An incidents register must be kept at the premises and it must record any incidents including (but not limited to):

8.17.1 Any fire at the premises relevant to operation of the approved use; and

8.17.2 Any release of contaminants not in accordance with the development approval conditions.

The register must be made available to Council for inspection upon request.

ADVISORY NOTES

NOTE 1. Aboriginal Cultural Heritage

It is advised that under Section 23 of the *Aboriginal Cultural Heritage Act 2003*, a person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal Cultural Heritage (the "cultural heritage duty of care"). Maximum penalties for breaching the duty of care are listed in the Aboriginal Cultural Heritage legislation. The information on Aboriginal Cultural Heritage is available on the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs website www.datsima.qld.gov.au

NOTE 2. General Environmental Duty

General environmental duty under the *Environmental Protection Act* prohibits unlawful environmental nuisance caused by noise, aerosols, particles dust, ash, fumes, light, odour or smoke beyond the boundaries of the property during all stages of the development including earthworks, construction and operation.

NOTE 3. General Safety Of Public During Construction

The *Workplace Health and Safety Act* and *Manual of Uniform Traffic Control Devices* must be complied with in carrying out any construction works, and to ensure safe traffic control and safe public access in respect of works being constructed on a road.

NOTE 4. Environmental

a. The land subject to the above development application must be free of invasive pest plants and animals; as declared at the date of development application in *Local Law No. 3 (Community & Environmental Management) 2011* and Schedule 1 of *Subordinate Local Law 3 (Community & Environmental Management) 2011* and in the *Biosecurity Act 2014* or as amended; to the satisfaction of Council's Pest Management Officer, prior to the commencement of any site works. Council will supply a free inspection and advice service on the request of the land owner.

b. It is advised that part of the subject site is mapped by the Department of Environment and Heritage Protection as containing Remnant Vegetation. The *Vegetation Management Act 1999* has requirements with regard to the clearing of vegetation. Information on Vegetation Management is available at: https://www.qld.gov.au/environment/land/vegetation/management/

c. It is advised that part of the subject site is mapped by the Department of Environment and Science as a high risk area for protected plants, which is administered under the *Nature Conservation Act 1992*. Further advice regarding protected plants can be sought from the Department of Environment and Science.

d. Suitable endemic plants are available from the Council Community Nursery to assist with landscaping and re-vegetation on the property.

BACKGROUND

Not applicable.

COMMENTARY

PROPOSAL

The proposal is for a pet crematorium, defined under the planning scheme as a Special use, on Lot 32 on SP272608, with access from Tanby Post Office Road being obtained through Easement D on RP618485 on Lot 31 on SP272608.

The pet crematorium is proposed within a single insulated building which measures a total area of 161.1 square metres, however the use will only be occurring within a ninety (90) square metre area, which will house the cremator and associated equipment such as freezers (storage), stock and an office.

The cremator has a capacity of a fifty (50) kilogram animal and a maximum of three (3) burns per hour (subject to weight).

The building is to be located approximately eighty (80) metres north of the existing Dwelling house and approximately ninety (90) metres south of the northern property boundary. Access to the building will occur through the existing access track located along the southern boundary of Lot 32 through Easement E on RP618485 and an internal track currently running north from the Dwelling house.

The business involves a collection and delivery service only, therefore no customers will be visiting the site unless in the event of an emergency. Ashes not required by the pet owner will be held for a period of time, then disposed of by burying on the property in a suitable location.

The business is proposed to operate from Monday to Friday from 8.00am to 6.00pm.

SITE AND LOCALITY

The subject sites are located south west of Yeppoon within the locality of Bondoola. Lot 32 (development site) measures 30 hectares and Lot 31, which contains the access easement measures 34.1 hectares.

Lot 32 (the development site) ranges from twenty-five (25) metres Australian Height Datum at the front (eastern) portion of the site to sixty-nine (69) metres Australian Height Datum at the rear (western) portion of the site, with the existing Dwelling house located at approximately fifty-one (51) metres Australian Height Datum and within the south western portion of the lot. Access to the site is through Easement D on RP618485 within Lot 31.

The site has been cleared with the exception of a waterway within the front portion of the site and the rear (western) portion, which contains dense, mature vegetation. The area where the existing Dwelling house and proposed development are located is clear of vegetation.

The locality is characterised by predominately rural uses on varying sized allotments and pineapple farming along Tanby Post Office Road, to the east of the subject sites.

Related permits (approvals or refusals) and approvals on adjoining properties including lawful use of premises. The related permits over the subject site and permits and development on adjoining properties are detailed in the following table:

Existing applications/development permit over the site	
424 Tanby Post Office Road, Bondoola Lot 32 on SP272608	B-448-2017 – Building Works for an Awning and Shed – approved with conditions 6 July 2017; and B-1072-2017 – Building Works for a Change of Classification – approved with conditions 21 March 2018.
410 Tanby Post Office Road, Bondoola	Nil

Lot 31 on SP272608	
Applications/development permits on adjoining properties	
384 Tanby Post Office Road, Bondoola Lot 22 on RP865964 (to the north)	B-787-2014 – Building Works for a Shed – approved with conditions 21 October 2014
410 Post Office Road, Bondoola Lot 30 on SP272608 (to the west)	867-2001-YPO – Building Works for a Dwelling – approved with conditions 8 November 2001; 185-2002-YPO – Building Works for a Pool – approved with conditions 18 March 2002; and 651-2002-YPO – Building Works for two retaining walls – approved with conditions 1 August 2002.
427 Tanby Post Office Road, Bondoola Lot 3 on RP618485 (to the south)	PMT 7250 – Building Works for a Dwelling – issued 13 October 1987
377 Tanby Post Office Road, Tanby Lot 5 on SP117399 (to the south)	BP4880 – Building Works for a Farmshed – issued 10 November 1981

ASSESSMENT INCLUDING BENCHMARKS AND RELEVANT MATTERS

This application has been assessed by relevant Council planning, engineering, environmental health, natural resource management and other technical officers as required. The assessment has been undertaken in accordance with Chapter 3 of the *Planning Act 2016*, Part 4 of the *Planning Regulation 2017* and the Development Assessment Rules under the *Planning Act 2016*.

The assessment has been carried out against the assessment benchmarks in the relevant categorising instrument/s for the development and having regard to the *Central Queensland Regional Pla*n, the *State Planning Policy*, any development approval for and any lawful use of the premises or adjoining premises, and the common material. The assessment has also had regard to other relevant matters (other than a person's personal circumstances, financial or otherwise) discussed further in this report

Benchmarks applying for the development	**Benchmark reference**
Shire Wide Outcomes Rural Zone Code Natural Features Code Capricorn Coast Landscape Code Clearing Code	Livingstone Planning Scheme 2005, reprint 7 as in force 10 July 2017
Chapter 4 – Regional outcomes and policies	*Central Queensland Regional Plan,* October 2013

Part E: State interest policies and assessment benchmarks	*State Planning Policy,* July 2017
Relevant matters considered	
Any development approval for, and any lawful use of, the premises or adjacent premises	The relevance of existing approvals on the subject site and adjoining properties.
The *Livingstone Planning Scheme 2018*	In respect of the policy direction for the new planning scheme.
The common material submitted with the application	In respect of the reports provided in the material including proposal plans and supporting information.
Submissions provided on the application	No submissions received.
Adopted Infrastructure Charges Resolution (No.3) 2018	In respect of trunk infrastructure provisions and charging for development.

Internal advice and assessment

Infrastructure Operations Unit – *1 May 2018*

Support, subject to standard conditions.

Natural Resource Management – *26 June 2018*

Support, subject to conditions.

Environmental Health – *26 April 2018 and 23 March 2018*

Support, subject to conditions regarding the operation of the use.

***State Planning Policy* – July 2017**

Part E of the State Planning Policy provides for interim development assessment benchmarks for local government until such time as the State Planning Policy is reflected within the planning scheme. The state interests identified are listed below.

Agriculture: No assessment benchmarks.

Class A and B Agricultural Land Classification

Biodiversity: No assessment benchmarks

Matters of State Environmental Significance (MSES) – Regulated vegetation (intersecting a watercourse)

Natural Hazards Risk and Resilience:

Bushfire prone area (high and medium potential bushfire intensity and potential impact buffer) and flood hazard area.

Assessment benchmarks - natural hazards, risk and resilience	
Erosion prone areas within a coastal management district:	
Development does not occur in an erosion prone area within a coastal management district unless the development cannot feasibly be located elsewhere and is: (a) coastal-dependent development; or (b) temporary, readily relocatable or able to be abandoned development;	**Not applicable** The subject site is not mapped as being erosion prone and is not within a coastal management district.

or (c) essential community infrastructure; or (d) minor redevelopment of an existing permanent building of structure cannot be relocated or abandoned.	
Development permitted in (1) above, mitigates the risks to people and property to an acceptable or tolerable level.	**Not applicable** The subject site is not mapped as being erosion prone and is not within a coastal management district.
Bushfire, flood, landslide, storm tide inundation, and erosion prone areas outside the coastal management district:	
Development other than that assessed against (1) above, avoids natural hazard areas, or where it is not possible to avoid the natural hazard area, development mitigates the risks to people and property to an acceptable or tolerable level.	**Complies** The proposed development being a Special use (pet crematorium) is appropriately located within a cleared section of the site, therefore it is not considered to be at a high risk of bushfire, and is located at approximately forty-three (43) metres Australian Height Datum, therefore is not considered to be within a flood area, therefore it is considered that the development mitigates the risks to people and property to a tolerable level. Furthermore, the applicant has submitted a Management Pan incorporating a Fire Safety Management Plan, which includes a maintenance schedule with items such as regular servicing of the pet cremator, fire breaks being maintained and water banks and bores being utilised, services and regular monitoring. The Fire Management Plan will be conditioned as part of any approval.
All natural hazard areas:	
Development supports and does not hinder disaster management response or recovery capacity and capabilities.	**Complies** The proposed development being a Special use (pet crematorium) is appropriately located within a cleared section of the site, therefore it is not considered to be at a high risk of bushfire, and is located at approximately forty-three (43) metres Australian Height Datum, therefore is not considered to be within a flood area, therefore it is not anticipated that the development will impact on the disaster management response or recovery capacity and capabilities. Furthermore, the applicant has submitted a

	Fire Safety Management Plan, which includes a maintenance schedule with items such as regular servicing of the pet cremator, fire breaks being maintained and water banks and bores being utilised, services and regular monitoring. The Fire Safety Management Plan will be conditioned as part of any approval.
Development directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties.	**Complies** As detailed above, the development is being appropriately located within a cleared section of the site, therefore it is not considered to be at a high risk of bushfire, and is located at approximately forty-three (43) metres Australian Height Datum, therefore is not considered to be within a flood area and as such is not considered to cause in increase in the severity of the natural hazards or potential for damage on the site or other properties. Furthermore, the applicant has submitted a Fire Safety Management Plan, which includes a maintenance schedule with items such as regular servicing of the pet cremator, fire breaks being maintained and water banks and bores being utilised, services and regular monitoring. The Fire Safety Management Plan will be conditioned as part of any approval.
Risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard are avoided.	**Complies** The submitted Management Plan, details that all emissions will be managed so as not to cause any risks to the public safety or the environment. Furthermore, appropriate environmental conditions will be included on any decision notice and the Environmental Protection Act provisions also ensures that risks to public safety and the environment will be avoided.
The natural processes and the protective function of landforms and the vegetation that can mitigate risks associated with the natural hazard are maintained or enhanced.	**Complies** The proposed development will not result in significant changes to the natural landforms as it is being located within a cleared area.

Central Queensland Regional Plan

The *Central Queensland Regional Plan* commenced in October 2013 and is not appropriately reflected within the *Livingstone Shire Planning Scheme 2005*. The regional plan aims to provide policy direction for decision making for the co-existence of extractive/mining industry, agriculture and priority living areas. In this regard, the four regional policies are not applicable to this application as it is not for an extractive/mining or agricultural land use.

Livingstone Shire Planning Scheme 2005

Planning Scheme Shire Wide Outcomes

The Shire Wide Desired Environmental Outcomes, as identified by section 2.2 of the *Livingstone Planning* Scheme *2005* are as follows:

(a) Development does not adversely affect the values of the Shire's natural environment including coastal areas, wetlands, beaches, headlands, waterways, protected areas, undeveloped hillslopes, and areas of significant native vegetation, from any adverse effects accruing from clearing, soil degradation and pollution, due to erosion and contamination, acidification, salinity, waste disposal and any modifications to natural processes.

Complies: The natural environment is not anticipated to be impacted by the development it will occur in accordance with the submitted management plan which details measures to mitigate any impact on the natural environment and any approval will include conditions pertaining to compliance with the management plan. The development is an internal operation and is not expected to have external impacts.

(b) Development does not adversely affect the quality and quantum of water available for a range of consumptive uses throughout the Shire.

Complies: The subject site is not connected to Council's reticulated water network; therefore, the proposal will not affect water availability throughout the Shire. Provision for on-site water would be necessary through tanks and/or bores.

(c) Risks to safety, property and the environment are not increased by the interaction of development and natural or other hazards, including flooding, bushfires, disturbance of acid sulfate soils, storm tide, cyclonic weather events and landslide.

Complies: The subject site is identified as containing bushfire hazard, however the proposed development is appropriately located within a cleared section of the site, therefore it is not considered to be at a high risk of bushfire.

Furthermore, the applicant has submitted a Fire Safety Management Plan, which includes a maintenance schedule with items such as regular servicing of the pet cremator, fire breaks being maintained and water banks and bores being utilised, services and regular monitoring. The Fire Safety Management Plan will be conditioned as part of any approval.

(d) Development protects the economic values of natural resources, including good quality agricultural land, extractive and mineral resources, vegetation, and water.

Complies: While the subject site is identified as containing good quality agricultural land, the proposed use is located within a cleared portion of the site and due to the size of the allotment, a future agricultural use could occur concurrently if required.

(e) Development provides a benefit to and satisfies an economic demand of residents of the area in which it is located.

Not applicable: The proposal is not of the scale of development which is subject to an economic demand analysis. The land use will service the wider region.

(f) Opportunities for maintaining and improving employment resulting from advancements in information technology and emerging business and industry trends are maximised.

Not applicable: The proposal is for a Special use (pet crematorium) and will not affect emerging business and industry trends.

(g) The Shire's tourism industry is strengthened and expanded based on the sustainable use of natural, cultural, and man-made assets, and the orderly provision of services and facilities.

Not applicable: The proposal is for a Special use (pet crematorium) and will not impact upon the Shire's tourism industry.

(h) Yeppoon continues to function as the main business centre and administrative hub for the Shire.

Complies: The proposal is for a Special use (pet crematorium) that could not be suitably located within the main business centre and is best suited within the rural location, on a larger parcel of land. Furthermore, the establishment of the use will not impact upon the main business centre function of Yeppoon.

(i) Development promotes the efficient use, and provides for the orderly expansion of the Shire's movement system, including motorised and non-motorised modes.

Not applicable: The proposal relies on vehicular access from Tanby Post Office Road, however it is not proposed that any customers will access the site as the business involves a delivery service.

(j) Development occurs in an area:

(i) which is intended for the development as identified by the outcomes for zoned land; and

(ii) in which services and facilities required in respect of the development are existing, planned or provided by the development.

Justified: The proposed development is not identified as a preferred use within the Rural Zone, however due to the nature of the proposal, being a pet crematorium located wholly in a rural shed structure, the use is more appropriately located within the rural zone due to the opportunity to buffer the use from any other adjoining land uses.

The development does not require any additional infrastructure/services as it is considered that the existing infrastructure, being Tanby Post Office Road, is existing. As the operators will be using a collection and delivery service, the impact on the road will be minimal.

(k) Development does not adversely affect:

(i) the community's health and safety; or

(ii) the amenity enjoyed by people in different areas of the Shire.

Complies: The proposal is not considered to adversely impact upon the community's health and safety due to the use being operated in accordance with a management plan and appropriate environmental conditions. The proposed use is being appropriately located within a cleared portion of the site and approximately 500 metres from the closest Dwelling house (to the south) and as such is not anticipated to impact on the amenity enjoyed by people within the shire.

(l) Development reflects the community's reasonable expectations and harmonises with the natural environment and does not prejudice the Shire's existing scenic amenity, particularly along the Capricorn Coast.

Complies: Although a Special use (pet crematorium) is not a reasonable expectation of the rural zone, it is considered that the use harmonises with the natural environment as there is no clearing involved and there is sufficient separation between the use and surrounding properties. The proposed development is located outside of the scenic amenity area and due to the surrounding vegetation is not anticipated to be visible by any adjoining neighbours.

(m) The community values of places and landscapes reflecting the community's history and identity are not detrimentally affected by development.

Not applicable: The subject site is not identified as containing known historic values.

The performance assessment of the proposal demonstrates that the development will compromise the Planning Scheme Shire Wide Desired Environmental Outcome (j), however the development has been justified as suitably located, despite the conflict with the zone.

Rural Zone Code

The Overall Outcomes applicable to the Rural Zone are set out at section 3.5 of the scheme as follows:

(a) The purpose of the Rural Zone Code is the achievement of the overall outcomes sought for the Rural zone.

(b) The overall outcomes sought for the Rural Zone are:

(i) Preferred land use:

(A) is any rural purpose (as defined in the planning scheme).

(ii) Land use (other than preferred land use) occurs only if:

(A) it is a recreational or community facility that is more appropriately located in the rural area; and

(B) is one of the following:

a. a local utility; or

b. a major utility; or

c. outdoor recreation; or

d. telecommunications facility (medium impact); or

(C) it is a land use which:

a. is compatible with surrounding rural purposes by being of similar scale, intensity and character; and

b. supports a rural purpose; and

c does not adversely affect the amenity of the locality; and is one of the following:

i. a residential purpose being a dwelling house, home based business, or host farm; or

ii. an arts and craft centre; or

iii. an extractive industry; or

iv. a garden centre; or

v. landscape supplies.

(iii) Land used for rural activities such as grazing, agriculture and horticulture is protected from development, which would significantly infringe on the landscape setting and rural amenity of the Shire.

(iv) Land with productive capacity is preserved for a range of existing and emerging agricultural activities significant to the economy of the Shire.

(v) Large tracts of bushland identified as having significant environmental value are protected from development.

(vi) Agriculture, including both extensive and intensive activities is protected from land use conflicts resulting from the location of non-rural activities on rural land.

(vii) Uses and works are located and designed to maximise the efficient use and extension and safe operation of infrastructure.

(viii) Residential purposes are ancillary to the primary rural purposes in the rural area.

(ix) Mineral and extractive resources and transport routes associated with

(x) Buildings and structures that are not associated with rural purposes have heights that are low-rise and not exceeding 12 metres.

(xi) Development is provided with adequate infrastructure and essential services.

The proposed development is not for a consistent or preferred use within the Rural Zone, however, due to the nature of the proposal, being a Special use (pet crematorium), is more appropriately located within this zone due to the opportunity to buffer the use from any other adjoining land uses and the scale of the building is consistent with the expectations of a rural locality.

The development is proposed within a cleared portion of the lot, approximately 500 metres from the nearest adjoining neighbour (to the south) and is not anticipated to be visible from adjoining properties. Furthermore, the development proposes to use a collection and delivery service, therefore with minimal impact upon Tanby Post Office Road. Therefore, the proposal is suitable to locate within the Rural Zone and will not compromise the purpose and overall outcomes and purpose of the Rural Zone code.

Further grounds to support the proposal area addressed through the below code assessment and summary of assessment section.

Rural Zone Code Requirements

The following is an assessment of the proposal against the Rural Zone Code, which includes an assessment of the development against the relevant specific outcomes of the code.

Specific Outcomes		**Response**
Land use		
O1	Land use is: (a) a rural purpose (as defined in the planning scheme); or (b) a use which provides recreational or essential community facilities that are more appropriately located in the rural area (as identified in the overall outcomes of this code); or (c) a use (as identified in the overall outcomes of this code) which: (i) is compatible with and supports a use within the rural purpose group; and (ii) is compatible with and does not limit or compromise surrounding rural purposes; and (iii) does not adversely affect the amenity of the locality.	**Justified to comply with the Purpose and Overall Outcomes** The proposed development is not for a preferred use within the Rural Zone, however, due to the nature of the proposal, being a Special use (pet crematorium), is more appropriately located within this zone due to the opportunity to buffer the use from any other adjoining land uses and the scale of the building is consistent with the expectations of a rural locality. The development is proposed within a cleared portion of the lot, approximately 500 metres from the nearest adjoining neighbour (to the south) and is not anticipated to be visible from adjoining properties and as such is not anticipated to adversely affect the amenity of the locality.
Subdivision design		
O2	Reconfigured lots are designed and developed: • with sufficient area and suitable proportions for preferred or consistent uses; • with adequate frontage for safe and convenient vehicular and pedestrian access;	**Not applicable** The proposal is not for subdivision.

<table>
<tr><th colspan="2">Specific Outcomes</th><th>Response</th></tr>
<tr><td></td><td>

with suitable areas within each lot for the location of relevant activities and works,
in a manner that does not expose people and works to unacceptable risks from flooding or other hazards; and
with lots having sizes and dimensions commensurate with the characteristics of the site having regard to the surrounding land use, natural features, hazards, infrastructure availability and agricultural land class, in accordance with Table S2 below.

<table>
<tr><th>Agricultural Land Classification</th><th>Minimum Area (ha)</th></tr>
<tr><td colspan="2">CAPRICORN COAST:</td></tr>
<tr><td>Classes A1, A2, C1, C2</td><td>10 ha</td></tr>
<tr><td>Class C3</td><td>40 ha</td></tr>
<tr><td>Other</td><td>Subject to meeting specific outcomes</td></tr>
<tr><td colspan="2">BALANCE OF SHIRE:</td></tr>
<tr><td>Class A1</td><td>60ha</td></tr>
<tr><td>Class A2</td><td>30ha</td></tr>
<tr><td>Classes C1, C2, C3, Other</td><td>150 ha</td></tr>
</table>
</td><td></td></tr>
<tr><td colspan="3">Built Form</td></tr>
<tr><td>O3</td><td>Uses and works are located, designed and operated to minimise adverse impacts on:

existing environmental conditions relating to air, water and soil,
the amenity of adjacent properties and public spaces,
visual quality of landscapes in terms of:
reducing ribbon development and sprawl,
loss of green break separations,
obstructing significant local and distant views of prominent natural features and landmarks, and

</td><td>Complies
The proposed development involves the construction of single insulated building which measures a total area of 161.1 square metres, however the use will only be occurring within a ninety (90) square metre area, which will house the cremator and associated equipment such as freezers (storage), stock and an office. The building is proposed to be located within a cleared area on the site.
It will be conditioned that the development obtains the relevant Development Permit for building works to ensure the health and safety of people using the premises is maintained.
Furthermore, the use will be operated in accordance with the management plan which</td></tr>
</table>

Specific Outcomes		Response
	• the health and safety of people using the premises and adjacent premises.	details how the use will mitigate any impacts on adjoining properties, and the appropriate environmental conditions.
O4	Buildings and structures are: • of a type and scale which have an attractive, functional appearance; • constructed of materials and finishes compatible with other development in the area; • integrated with the physical attributes of the site, including appropriate provision for access to natural light and ventilation, privacy, noise attenuation, drainage, landscaping, outlook and off-street parking; and • designed to adequately screen materials stored outside buildings when viewed from adjacent premises and public spaces	**Complies** The proposed development involves the construction of a single, insulated building measuring 100 square metres in area, which is to be constructed of Trimdek, which is considered consistent with most sheds within the rural area. The building is proposed to be located within an existing cleared area on the site and is not anticipated to be visible from any adjoining properties, therefore is considered to be integrated with the physical attributes of the site.
O5	For a noise sensitive place, activities are laid out and buildings are designed and constructed to mitigate to a level, that does not unreasonably adversely affect the health and safety of people using premises, the effects of noise from: • Traffic on major roads (including State controlled roads); or • Operations within railway corridors.	**Not Applicable** The site is not a noise sensitive place.
Cultural Heritage Values		
O6	Cultural heritage values associated with the landscape features of a site and its surroundings or relics of past activities found during development of the site are respected and are not subjected to changes that would significantly reduce the capacity to appreciate those areas, places and sites, their character or the memories or history they represent, in terms of visual detraction, public accessibility or physical change, damage or removal.	**Not Applicable** The subject site and adjoining properties are not identified as a Heritage Place special management area listed in Schedule 3 of the *Planning Scheme 2005*.
Flood Immunity		
O7	Development is immune to flood events which result in unacceptable risk to health and safety or unacceptable risk of property damage.	**Complies** The development is located outside of the drainage problem area and is considered to be immune to flood events which result in

Specific Outcomes		Response
		unacceptable risk to health and safety or risk of property damage.
Vehicle Parking and Movement		
O8	Development is provided with an on-site parking and movement system designed and constructed to: • be integrated with the site layout including: i. direct access to a road providing a level of service required to accommodate traffic generated by the use; and ii. appropriately designed footpath crossovers; and iii. provision for safe pedestrian movement between public footpath and facility entry points; and • accommodate all modes of transport (including motor vehicles and bicycles) generated by the use; and • facilitate non-discriminatory accessibility; and • provide for safe and efficient loading and unloading of goods; and • allow for vehicle queuing necessary for the use; and • provide for passenger set down/pick up necessary for the use; and • facilitate public access to the foreshore and riparian open space networks.	**Complies** The proposed use involves a collection and delivery service; therefore, no customers will be visiting the site. It is considered that the existing internal access track is sufficient for the proposed use. The site currently obtains access from Tanby Post Office Road being obtained through Easement D on RP618485 on Lot 31 on SP272608.
Infrastructure		
O9	Water supply, sewerage, drainage, roads, power and communications are provided to meet the appropriate standards of service and construction at least whole-of-life cost, which: • comprise components and materials that are: i. readily accessible and available; and ii. robust and reliable in terms of operational life and purpose; and iii. easily maintained without	**Complies** The subject site is only connected to the roads network (being Tanby Post Office Road), which is considered sufficient. All other services are on site and will be conditioned accordingly.

Specific Outcomes		Response
	unnecessarily requiring specialist expertise or equipment; and • are integrated with the design, construction and operation of existing systems and facilitate orderly provision of future systems.	

As evident from the above assessment, the proposal complies with the various requirements of the Rural Zone Code, however the proposal fails to comply with Specific Outcome O1 due to the use being an inconsistent use within the Rural Zone. Despite the conflict with Specific Outcome O1 the development has been justified against the overall outcomes of the code.

Special Management Areas Codes The subject site is affected by the Scenic Amenity Overlay (Precinct A), and four (4) of the elements within the Natural Features Code, including:

(i) Bushfire Hazard (Overlay Map O5);

(ii) Steep Land (Overlay Map O2);

(iii) Drainage Problem (Overlay Map O2); and

(iv) Good Quality Agricultural Land (Overlay Map O4).

Natural Features Code

The purpose of the Natural Features Code is the achievement of the overall outcomes sought for the special management areas shown on Overlay Maps O1 to O8 as identified in this code.

The overall outcomes sought for the special management areas shown on Overlay Maps O1 to O8 as identified in this code are;

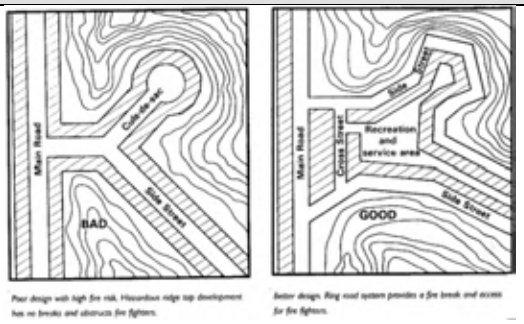
(i) that development is managed to protect the significant values of the various natural features and resources in terms of:

(ii) development avoids or minimises, within acceptable levels, risk to the natural or built environment or human health or safety.

The following is an assessment of the proposal against the Natural Features Code, which includes an assessment of the development against the relevant specific outcomes of the code.

Specific Outcomes		Response
Bushfire Hazard Special Management Area		
O5	Public safety, lives and property are not placed at unacceptable levels of risk.	**Complies** The applicant has submitted a Fire Safety Management Plan, which includes a maintenance schedule with items such as regular servicing of the pet cremator, fire breaks being maintained and water banks and bores being utilised, services and regular monitoring. The Fire Safety Management Plan will be conditioned as part of any approval and therefore it is considered that public safety, lives and property are not placed at unacceptable levels of risk.

Specific Outcomes		Response
O6	The highest intensity of use occurs in those parts of the site which are least bushfire prone and limits the intensity of use elsewhere	**Complies** The development is proposed to be located within a cleared portion of the site with a setback of approximately 140 metres to the closest vegetation, therefore it is considered that the development is sited in the most suitable part of the site. Furthermore, the applicant has submitted a Fire Safety Management Plan, which includes a maintenance schedule with items such as regular servicing of the pet cremator, fire breaks being maintained and water banks and bores being utilised, services and regular monitoring. The Fire Safety Management Plan will be conditioned as part of any approval.
O7	Purposes resulting in high concentrations of people on a site (including child care centre, educational establishment, hospital, residential purposes comprising multi-unit long term accommodation and short term accommodation, commercial and industrial purposes) being exposed to unacceptable levels of risk are inconsistent with the outcomes sought for this special management area	**Not applicable** The proposal involves a collection and delivery service with no customers visiting the site, therefore the proposal does not result in high concentrations of people on site.
O8	Development is sited and designed to minimise bushfire risk having regard to: (a) aspect, (b) elevation, (c) slope, and (d) vegetation	**Complies** The development is proposed to be located within a cleared portion of the site with a setback of approximately 140 metres to the closest vegetation, therefore it is considered that the development is sited in the most suitable part of the site. Furthermore, the applicant has submitted a Fire Safety Management Plan, which includes a maintenance schedule with items such as regular servicing of the pet cremator, fire breaks being maintained and water banks and bores being utilised, services and regular monitoring. The Fire Safety Management Plan will be conditioned as part of any approval.
O9	Road layouts facilitate easy and safe movement in the event of encroaching fire and provides for alternative safe access if one direction is blocked in the event of fire (Refer Figure A below).	**Complies** The proposal does not involve the construction of new roads however the existing access to Tanby Post Office Road is considered sufficient.

Specific Outcomes		Response
	 Figure A	
O10	A sufficient supply of water is available for firefighting purposes	**Complies** The subject site currently has water tanks and a bore, which as detailed within the Fire Safety Management Plan, will be regularly maintained. The Fire Safety Management Plan will be conditioned as part of any approval.
Steep Land Special Management Area		
O11	Buildings and structures are located on a site with natural ground level slopes that do not exceed 15%.	**Complies** The proposed development is to be located within a cleared portion of the site which measures approximately eight (8) per cent slope.
O12	Public safety, lives and property are not placed at unacceptable levels of risk.	**Complies** The proposed development is to be located within a cleared portion of the site which measures approximately eight (8) per cent slope, therefore public safety, lives and property are not placed at unacceptable levels of risk.
O13	Development occurs in those parts of the site which are geologically stable and limits the intensity of use elsewhere.	**Complies** The proposed development is to be located within a cleared portion of the site which measures approximately eight (8) per cent slope.
O14	Buildings and structures are designed, sited and erected to maintain: (a) natural landform; (b) natural drainage patterns; (c) existing vegetation.	**Complies** The proposed development is to be located within a cleared portion of the site which measures approximately eight (8) per cent slope, therefore the development will maintain the existing natural landform, natural drainage patters and existing vegetation.
Drainage Problem Special Management Area		
O18	Development levels are set above the	**Complies**

Specific Outcomes		Response
	design flood level to reduce property damage and, where applicable, ensure public safety.	The development is being appropriately located at approximately forty-three (43) metres Australian Height Datum within the middle of the site, therefore is it considered that the development is not liable to flooding and ensures public safety.
Good Quality Agricultural Land Special Management Area		
O24	Good quality agricultural land is retained for rural purposes by: (a) conducting other uses only if they are not irreversible and do not reduce the productive capacity of the land or alienate its use for rural purposes or result in land use conflicts with adjacent existing rural uses; (b) avoiding the use of identified land for other uses unless it can be proven that: (i) the land is not actually good quality agricultural land; or (ii) there is an overriding need in terms of public benefit for the proposal and the proposal cannot be located on alternative sites that are not identified as good quality agricultural land, including if: – the proposed location has features that make it desirable for the proposal; and – the features are not available in areas not identified as good quality agricultural land	**Complies** The subject site is mapped as containing good quality agricultural land, however the development is proposed to be located within a cleared portion of the site, and due to the size of the building (measuring 100 square metres in area) and the available area on the subject site, a future rural use could occur on the site concurrently to the development without conflict.
O25	Subdivision of good quality agricultural land does not reduce the productive capacity of the land	**Not applicable** The proposal is not for subdivision.

As evident from the above assessment, the proposal complies with all requirements of the Natural Features Code.

Capricorn Coast Landscape Code

The subject site is also identified as being within the Capricorn Coast Landscape Management (Precinct A and B) (Overlay Map O9).

Purpose

(a) The purpose of the Capricorn Coast Landscape Code is the achievement of the overall outcomes sought for the special management area identified on Overlay Map O9.

(b) The overall outcomes sought for the Capricorn Coast Landscape special management areas are:

(i) Development integrates all aspects of engineering and architecture with the natural features and characteristics of the site to minimise any adverse effects on the environment and landscape.

(ii) Areas identified as having landscape values are protected from development or the effects of development that may reduce those values in terms of physical changes to the natural environment, damage or removal of vegetation, prominence of the development within its landscape setting and the extent of associated visual detraction.

(i) Vegetation outside the immediate envelope of a building or structure is preserved.

(iv) Development is not visually detractive when viewed from a Level 1 Viewer Place in terms of:

(A) scarring by exposed earthworks; or

(B) canopy removal on hilltops, prominent headlands, ridges and hillslopes; or

(C) modification of the natural environment which dominates the landscape.

(v) Development does not adversely impinge on the integrity of identified 'green break' areas which provide a green-belt of natural landscape defining the limits of each of the coastal towns/localities.

(vi) In landscape special management area – Precinct A, reconfiguring a lot only occurs if the resulting lots have regular dimensions and are equal to or larger than the minimum lot size specified for the underlying zone for the site with the only exception being within the residential zone where the lot size must be at least 1,500 square metres in area.

The following is an assessment of the proposal against the Capricorn Coast Landscape Code, which includes an assessment of the development against the relevant specific outcomes of the code.

Specific Outcomes		**Response**
O1	The height of buildings and structures, except in the Yeppoon Central zone is not greater than: • 9 metres if within 20 metres of the frontage to the Scenic Highway, Farnborough Road, Yeppoon Road, Tanby Road and Emu Park Road; or • elsewhere, 12 metres.	**Complies** The proposed building measures 3.7 metres in height.
O2	The slope of natural ground level of any development site is not greater than 15%.	**Complies** The area where the proposed development is to be located measures approximately eight (8) per cent slope.
O3	Clearing except in association with other assessable site development is inconsistent development.	**Not applicable** No clearing is proposed as part of the development.

Specific Outcomes		Response
O4	Buildings and structures are not sited above 50m AHD.	**Complies** The proposed building is located at approximately forty-three (43) metres Australian Height Datum.
O5	Buildings and structures are constructed primarily of non-reflective materials or if reflective materials form part of a building or structure, the level of light reflectivity of the material is not greater than 10%.	**Complies** The proposed building is to be constructed of trimdek and is to be constructed of a darker tones and therefore not of reflective materials.
O6	Buildings and structures including infrastructure are constructed in materials that complement the coastal location and blend with the surrounding area in terms of colour and texture.	**Complies** The proposed building is to be constructed of trimdek, which is considered consistent to blend in with the surround area, which is rural and is consistent with surrounding structures. furthermore, the building is not anticipated to be visible from any adjoining properties.
O7	Retaining walls are restricted to a maximum of 1.5 metres vertical height.	**Not applicable** No retaining walls are proposed as part of the development.
O8	Earthworks do not result in batter slopes that: • have a vertical height greater than 3 metres; or • are steeper than 25%.	**Not applicable** No works are proposed as part of the development.
O9	Earthworks and buildings are not located: • across or result in the redirection of watercourses and natural drainage lines; or • to require the removal of vegetation which defines watercourses and natural drainage lines.	**Not applicable** No works are proposed as part of the development.
O10	In Landscape special management area – Precinct A, despite applicable minimum lot size and minimum frontage outcomes nominated in the Residential zone code, new lots are not less than 1 500 m^2 in area and comprise at least one discrete area of not less than 500 m^2 which: • has a minimum dimension of 20 metres; and • is located at least 15 metres from	**Not applicable** The subject sites are not located within the Residential Zone and the proposal is not for subdivision.

Specific Outcomes		Response
	the road fronting the lot; and • has a natural ground level slope not greater than 15%.to require the removal of vegetation which	

As evident from the above assessment, the proposal complies with the various requirements of the Capricorn Coast Landscape Code.

Clearing Code

The proposed development is located outside of the mapped Locally Significant Vegetation and as such, an assessment has not been undertaken.

***Livingstone Planning Scheme 2018*:**

The *Livingstone Planning Scheme 2018* was adopted by Council on 5 April 2018 and commenced on 1 May 2018. Significant weight can be given to the *Livingstone Planning Scheme 2018* in the assessment of applications given the 'Coty Principle'. The Coty principle arises from the case of *Coty (England) Pty Ltd –v- Sydney City Council* (1957) which provides that weight may be given to a new planning document (which arises after the lodgment date), depending on how far it is along the legislative path to adoption. Queensland Planning and Environment Court decisions have also established that the weight to be given to draft laws or policies depends to a large extent on the maturity of the document and its stage along the statutory path to gazettal.

The subject site is identified as being within the Rural Zone and the use is not a consistent or preferred use, however it is considered that the use can meet the Overall Outcomes of the Rural Zone Code.

PUBLIC NOTIFICATION

The proposal was the subject of public notification between 25 May 2018 and 15 June 2018, as per the requirements of the *Planning Act 2016*, and no submissions were received.

SUMMARY OF ASSESSMENT

Pursuant to Section 45(5)(b) of the *Planning Act 2016*, the assessment manager may carry out an assessment against, or have regard to, any other relevant matter (other than a person's personal circumstances, financial or otherwise), which may include relevant matters that favour Council exercising its discretion to approve the application even though the development does not comply with some of the assessment benchmarks.

The relevant matters are as follows:

(a) Due to the nature of the proposal, being a Special use (pet crematorium), it is more appropriately located within the rural zone due to the opportunity to appropriately buffer the use from surrounding properties.

(b) The use is proposed within a cleared portion of the subject site, approximately 500 metres from the nearest adjoining neighbour (to the south) and is not anticipated to be visible from adjoining properties.

(c) The development involves an activity located wholly indoors, within a shed structure which is a built form prevalent in a rural setting.

(d) The development does not impact upon the agricultural capacity of the subject site as a future rural use is able to occur concurrently on the site without conflict.

(e) No submissions were received in relation to the development.

Having regard to all of the above, it is recommended Council, from a land use perspective, consider the proposed development favourably as, pursuant to Section 45(5)(b) of the *Planning Act 2016*, there are considered to be relevant matters that favour Council exercising its discretion to approve the alternative land uses proposed herein and the development is capable of occurring in a manner that is not likely to conflict with Council's Shire Wide Outcomes.

REASONS OF THE DECISION AND ASSESSMENT BENCHMARKS

Further to the assessment summary above and pursuant to section 63 (5) of the *Planning Act 2016*, the reasons for the decision are based on findings on material questions of fact and must be included in the statement of reasons accompanying the decision notice as follows:

(i) The development does not comply with Specific Outcome O1 of the Rural Zone Code and Desired Environment Outcome (j) and as the use is not a preferred use within the Rural Zone.

(ii) Despite the non-compliance with the abovementioned benchmarks, the development is occurring within the appropriate rural setbacks, is not anticipated to impact on amenity of the area and the activity is located wholly indoors within a shed structure which is a built form that is prevalent in a rural setting.

(iii) The development does not compromise the achievement of the state interest – natural hazards, risk and resilience outlined in the *State Planning Policy*.

(iv) The development does not compromise the achievement of regional outcomes outlined in the *Central Queensland Regional Plan*.

(v) On balance, the application should be approved because the circumstances favour Council exercising its discretion to approve the application even though the development does not comply with one aspect of the assessment benchmarks.

INFRASTRUCTURE CHARGES

Infrastructure charges are levied pursuant to the *Adopted Infrastructure Charges Resolution (No.3) 2018.* In accordance with Table 4 – Adopted charge for development uses within the Priority Infrastructure area, a Special use (crematorium) is listed as having nil charge.

Infrastructure charges are levied pursuant to the *Adopted Infrastructure Charges Resolution (No.3)*

PREVIOUS DECISIONS

There are no previous decisions relevant to the assessment of this application.

BUDGET IMPLICATIONS

Management of this application has been within the existing budget allocations.

LEGISLATIVE CONTEXT

The application has been assessed pursuant to the *Planning Act 2016* and all subordinate legislation and policies.

LEGAL IMPLICATIONS

The legal implications of deciding this development application favorably or unfavorably is the risk of appeal from the applicant (should Council refuse the development application). These potential legal implications also bring unknown budget implications.

STAFFING IMPLICATIONS

No staffing implications have been identified in the assessment.

RISK ASSESSMENT

The risks associated with this assessment have been appropriately addressed in the body of this report. Specifically, the risk of appeal to any decision made by Council and any financial/budget implications such action may have. It should be noted that these risks are difficult to quantify at the assessment stage.

CORPORATE/OPERATIONAL PLAN

Strategy GO4 of the Corporate Plan is relevant to the assessment of this application and states: *'Provide transparent and accountable decision making reflecting positive leadership to the community.'* Strategy GO4: Provide transparent and accountable decision making reflecting positive leadership to the community.

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

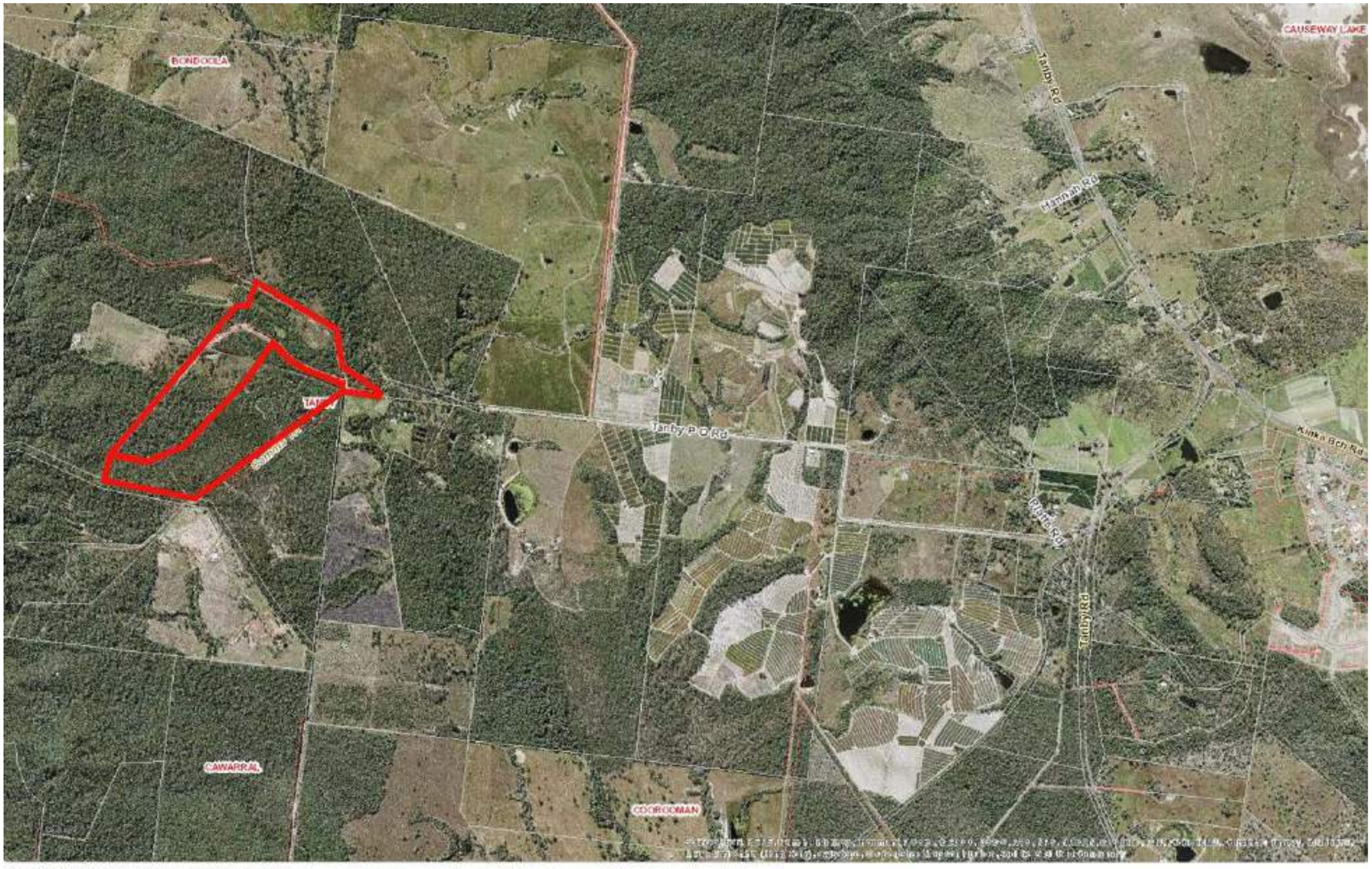
The proposed development, being for a Material Change of Use for a Special use (pet crematorium) is not a consistent or preferred use within the rural zone, however as demonstrated within the above assessment does not conflict with the Desired Environmental Outcomes and satisfies the overall outcomes within the Rural Zone Code under the *Livingstone Shire Planning Scheme 2005.* In this regard, a performance based assessment has been undertaken and the non-compliance is not considered to detract from the achievement of the Shire Wide Desired Environmental Outcomes. Accordingly, the proposal can be supported, subject to reasonable and relevant conditions outlined in the recommendation.

12.12 - DECISION ASSESSMENT FOR A DEVELOPMENT APPLICATION FOR A DEVELOPMENT PERMIT FOR A MATERIAL CHANGE OF USE FOR A SPECIAL USE (PET CREMATORIUM) AT 410 AND 424 TANBY POST OFFICE ROAD, BONDOOLA

Locality Plan

Meeting Date: 17 July 2018

Attachment No: 1



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The State Government of Queensland (Dept. of Natural Resources and Mines) 2015.
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ArcGIS Web Map

Map Created by: Web AppBuilder for ArcGIS

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Livingstone Shire Council

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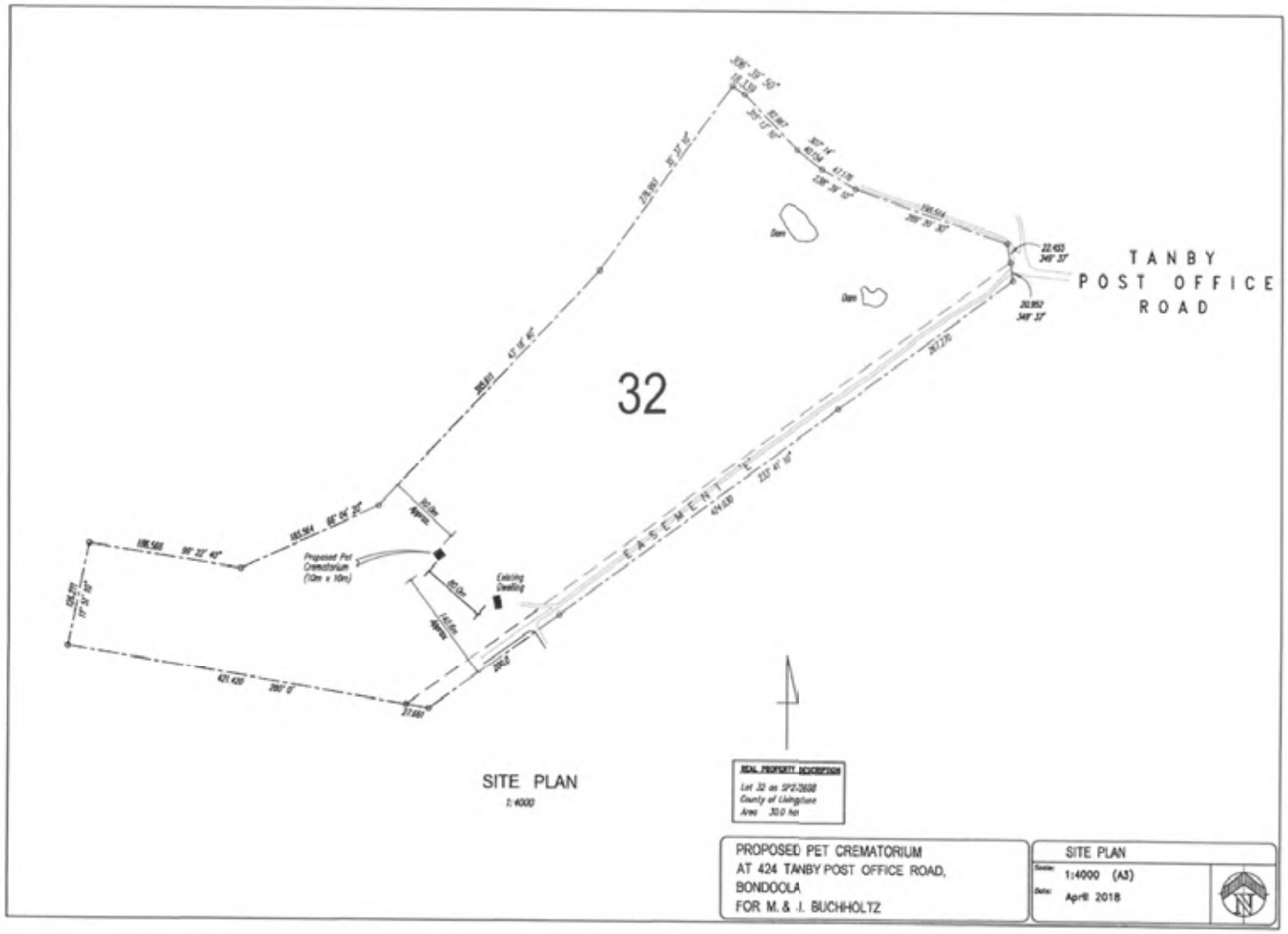
12.12 - DECISION ASSESSMENT FOR A DEVELOPMENT APPLICATION FOR A DEVELOPMENT PERMIT FOR A MATERIAL CHANGE OF USE FOR A SPECIAL USE (PET CREMATORIUM) AT 410 AND 424 TANBY POST OFFICE ROAD, BONDOOLA

Site Plan

Meeting Date: 17 July 2018

Attachment No: 2


32
TANBY POST OFFICE ROAD
Dam
Dam
Proposed Pet Crematorium (10m x 10m)
Existing Dwelling
EASEMENT "E"
SITE PLAN
1:4000
REAL PROPERTY DESCRIPTION
Lot 32 on SP212658
County of Livingstone
Area 30.0 ha
PROPOSED PET CREMATORIUM
AT 424 TANBY POST OFFICE ROAD,
BONDOOLA
FOR M. & J. BUCHHOLTZ
SITE PLAN
1:4000 (A3)
April 2018

12.12 - DECISION ASSESSMENT FOR A DEVELOPMENT APPLICATION FOR A DEVELOPMENT PERMIT FOR A MATERIAL CHANGE OF USE FOR A SPECIAL USE (PET CREMATORIUM) AT 410 AND 424 TANBY POST OFFICE ROAD, BONDOOLA

Management Plan - Pet Crematorium operations

Meeting Date: 17 July 2018

Attachment No: 3

Management Plan

Pet Crematorium – 424 Tanby Post Office Road, Bondoola

MERVYN & JENNIFER BUCHHOLZ

424 Tanby Post Office Road
Bondoola, QLD, 4703

p. 0434 575 804

jb@mehrconsulting.com.au
[Web address]

Table of Contents

I. **Introduction** 2

II. **Description of Business** 2

Environmental Policy

Location

Site Description

Hours of Operation – Burn Time only

Air Management Plan

Fire Management Plan

Introduction

The following information comprises the management plan for the purchase of Angels for Pets, Manns Road, Emu Park and to relocate the pet cremator to 424 Tanby Post Office Road, Bondoola, QLD, 4703, on a rural property of 30 hectares.

Description of Business

Purchase of Angels for Pets, currently located on Manns Road Emu Park. The cremator is to be relocated to 424 Tanby Post Office Road Bondoola.

The MK5 Dual Chamber Pet cremator has a bottom chamber for burn of carcass and top chamber for burn of any odour and smoke. There is a limit of 50kg maximum per burn.

Pet crematorium offering collection and delivery service only. There will be no clients entering the property.

Logbook will be completed for each burn with the following information –

- Date
- Time
- Weight
- Pet burned
- Burn time

Ashes not required by the pet owner will held for a period of time (owner may change mind) then disposed of by burying on the property away from any water courses.

Environmental Policy

Environmental Protection Regulation 2008 – Pet Cremation is not listed as an environmental activity.

We are committed to protecting the environment in all of our day to day activities. We aim to conduct all activities, not only in accordance with the requirements of relevant legislation, but also to demonstrate an environmentally responsible duty to both customers and the industry. We believe that being an environmentally responsible business not only protects the environment in which we live, but also presents to the customer and gereral public a proud and responsible business.

Location

The business is to be located at 424 Tanby Post Office Road, Bondoola. The site is located in a rural area on a 30-hectare block. The business premises will be located 96 metres from the owner's residence on designated white zone buffered by surrounding green zone. Further planting of relevant trees as advised by LSC Nursery will continue.

Site Description

The business will consist of one building 10 x 10 metres, two roller doors, one personal access door, two windows approximately 96 metres from the main residence. The building will be insulated. It will house the MK 5 dual chamber pet cremator (limit of 50kg per burn), two freezers and stock. The cremator is designed with a dual chamber, bottom chamber for carcass burn and top chamber to burn of and odour and smoke.

There are three adjoining properties, however all residences are some distance away buffered by thickly vegetated treed areas and green zone.

Hours of Operation – Burn Time only

The business will operate pet cremation burn times from 8am to 6pm Monday to Friday. In an emergency only, whereby freezers are full, a burn may have to take place outside these hours.

Air Management Plan

As of 2008 the EPA deemed pet crematoriums are not an environmental relevant activity. The cremator meets all requirements for environmental air management. It will be serviced regularly to ensure this is maintained.

Fire Management Plan

A fire management plan will be put into place for the building and surrounding area (attached).

Fire Safety Management Plan

1. Building Information	
Building Location & Name:	424 Tanby Post Office Road, Bondoola, QLD 4703 Angels for Pets – Pet Crematorium
Building Owner:	Mervyn Charles Buchholz
Building Occupier:	Angels for Pets
Building Manager:	Mervyn Charles Buchholz
Building Construction:	Trimdeck Iron Shed – Insulated – Concrete floor
Floor Area:	100 sq metres

2 Building and				
Building	**Room size**	**Max No of Occupants (2.5 sq mt/person)**	**900mm travel path (Yes or No)**	**Comments**
Shed - Trimdeck	100 sq metres	1	Y	
	Total number of occupants:		2	

3. Proposed Maintenance Schedule
Regular service of MK5 pet cremator to ensure safe functioning at all times. Fire breaks to be maintained at all times. Fire extinguishers to be serviced and tested as required. Approved burn off when required in conjunction with RFS located on Tanby Post Office Road. Water tank is kept at a minimum of ¾ full from bore at all times. Bore pump and water tank pump to be serviced regularly. Generator to be serviced regularly. Ensure hoses are maintained and of length to reach all areas of the building and surrounding land. List of neighbors on RFS phone numbers to be reviewed and updated 6 monthly.

4. Fire and Evacuation Plan

CALL FIRE AND RESCUE ON 000
ENSURE ALL PERSONS HAVE EVACUATED TO ASSEMBLY AREA
REMAIN IN ASSEMBLY AREA – ACCOUNTING FOR ALL PERSONS
FIGHT FIRE IF TRAINED AND ONLY IF SAFE TO DO SO
AWAIT ARRIVAL OF FIRE SERVICE
BRIEF FIRE OFFICER IMMEDIATELY ON ARRIVAL

Fire and Evacuation Plan – Signage

Copies of the Emergency Evacuation Procedure shall be conspicuously displayed in a common area of the building

Tanby Fire Warden - Phone: 0408 199 943

5. List of Fire Safety Installations

Emergency Power			
		Brand name	Model no.
Generator		Honda	

Fire Extinguishers - Installed in accordance with A8 of the Fire Safety Standard			
Ext. no.	Date installed	Brand name	Extinguisher type
TBA	With building		

Hose – Water Tank with pump from bore - installed at the time of building construction			
Date installed	Date Installed	Brand name	Model no.
TBA	With building		

Page 4 of 5

6. Building Plans

Attached

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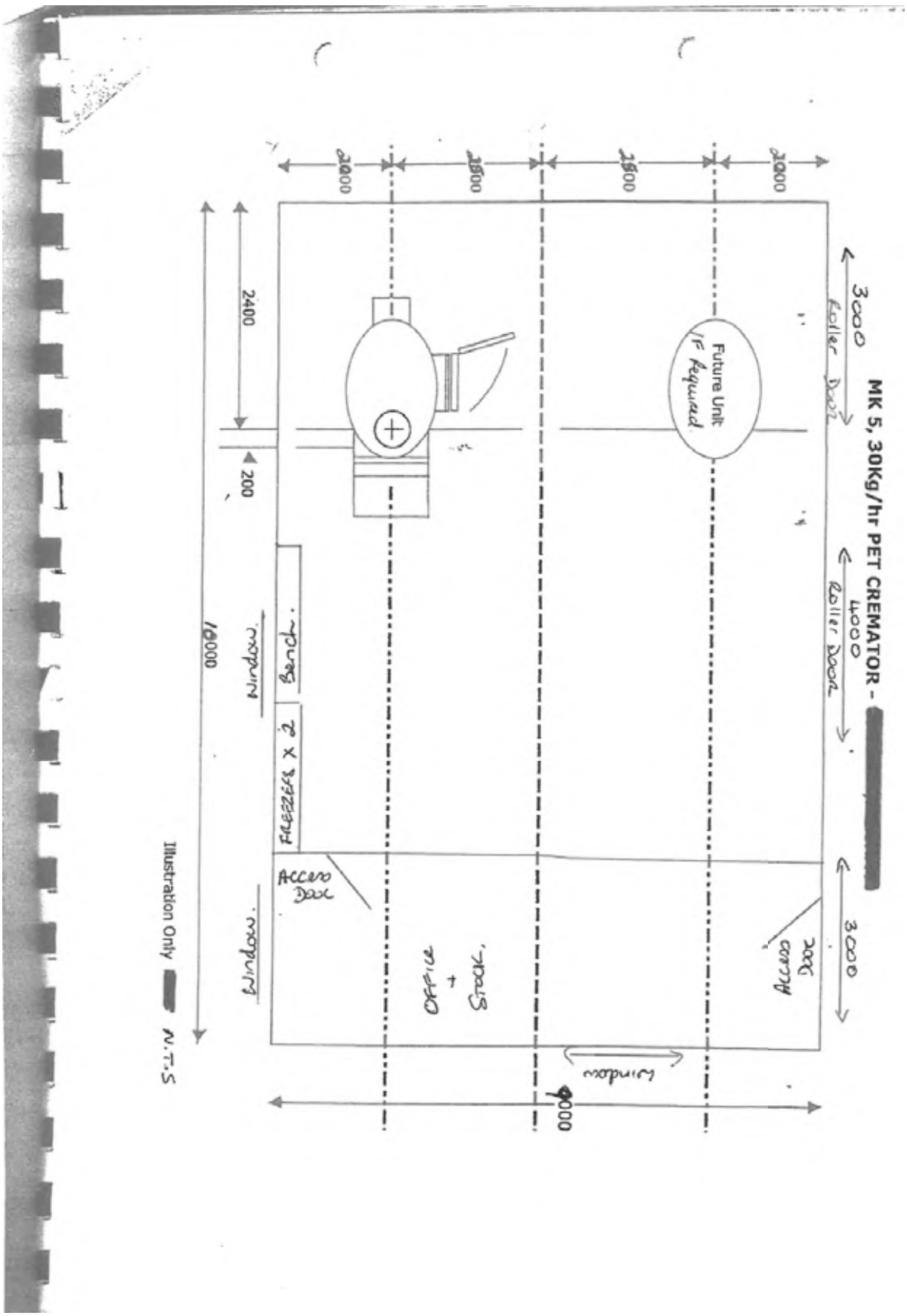
MK 5, 30Kg/hr PET CREMATOR -
Future Unit if Required
3000 Roller Door
4000 Roller Door
3000 Roller Door
2400
200
10000
Window
Bench
FREEZERS X 2
Access Door
OFFICE + STORE
Window
Window
Access Door
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Illustration Only
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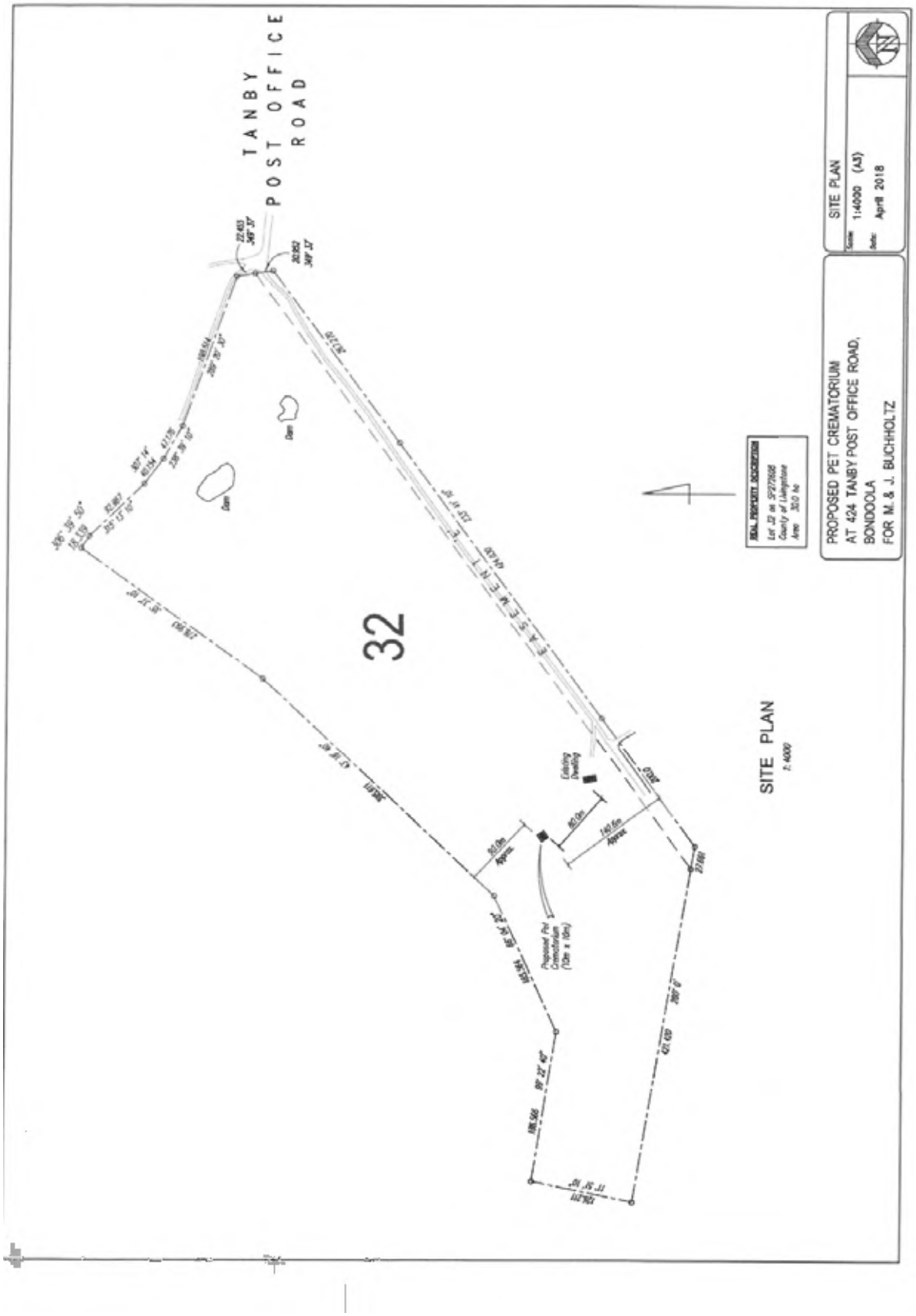
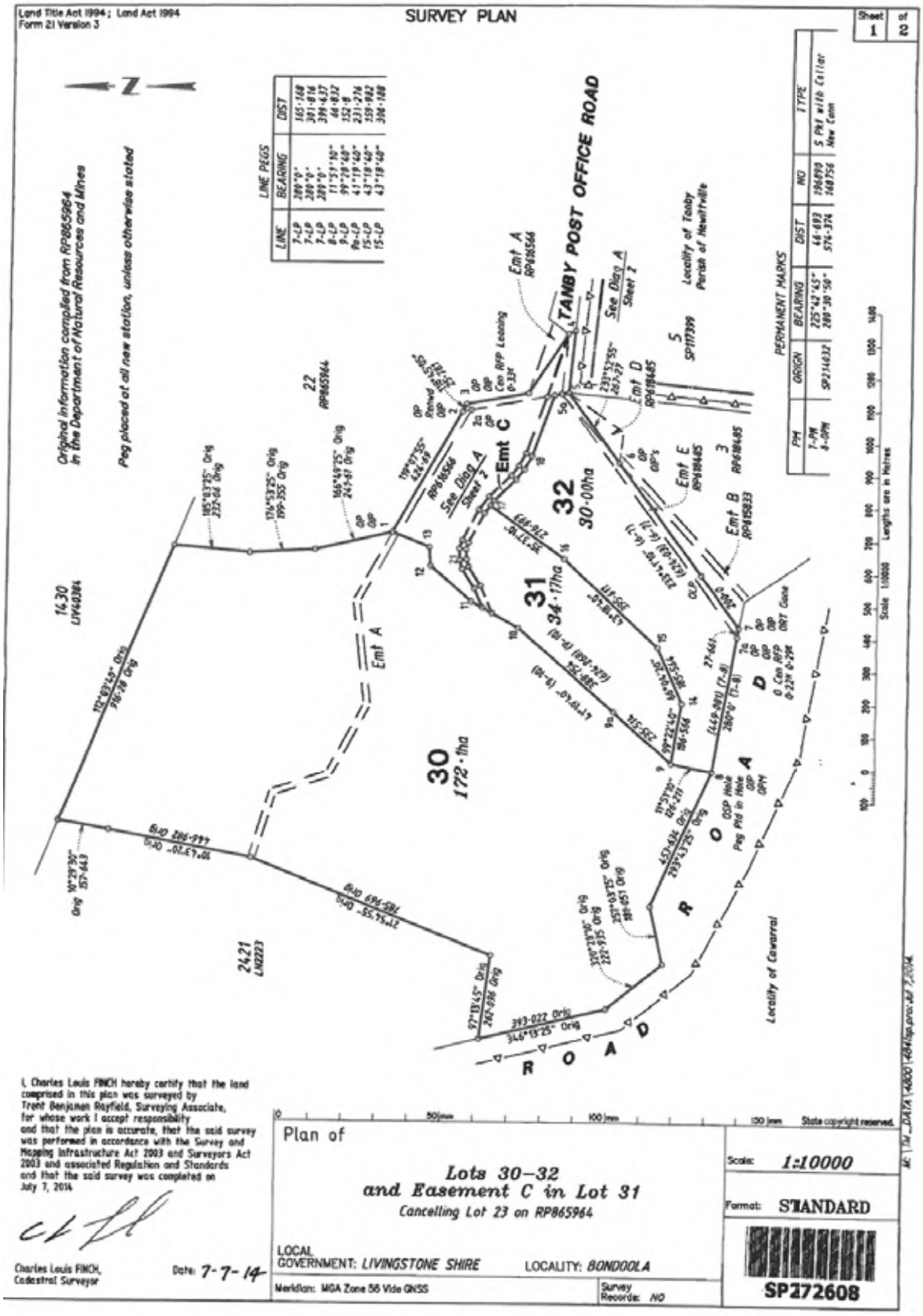

TANBY POST OFFICE ROAD
32
SITE PLAN
PROPOSED PET CREMATORIUM
AT 424 TANBY POST OFFICE ROAD,
BONDOOLA
FOR M. & J. BUCHHOLTZ
SITE PLAN
Scale 1:4000 (A3)
Date April 2018
Existing Dwelling
Proposed Pet Crematorium (10m x 10m)
Dam
Dam



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3. Lodged by

ROBERT HARRIS RIVETT
LAWYERS
P O BOX 544
YEPPOON QLD 4703
Ph (07) 4939 3533

(Include address, phone number, reference, and Lodger Code)

4. Certificate of Registered Owners or Lessees.

I/We BRUCE DONALD MCINTYRE
CARMEN AURORA MCINTYRE

(Names in full)

as Registered Owners of this land agree to this plan and dedicate the Public Use Land as shown hereon in accordance with Section 50 of the Land Title Act 1994.

~~as Lessees of this land agree to this plan.~~

Signature of Registered Owners ~~Lessees~~

BRUCE DONALD MCINTYRE

CARMEN AURORA MCINTYRE

* Rule out whichever is inapplicable

5. Existing / Created

Title Reference	Lot	Plan	Lots	Emts	Road
50007769	23	RP865964	30–32	C	nil

Easements	Lots to be Encumbered
601225513 Emt A on RP616566	30,31
601225512 Emt B on RP615833	31,32
601225514 Emt E on RP618485	31,32
712112649 Emt E on RP618485	31,32

Mortgage	Lots Fully Encumbered	Lots Partially Encumbered
707819309	30–32	–
714675697	30–32	–

Administrative Advice	Lots to be Encumbered
712713393 (Veg Notice)	30–32

2. Planning Body Approval

* LIVINGSTONE SHIRE COUNCIL

hereby approves this plan in accordance with the :

% SUSTAINABLE PLANNING ACT 2009

Dated this ELEVENTH day of JULY 2014

COORDINATOR DEVELOPMENT ASSESSMENT (DELEGATED OFFICER) LIVINSTONE SHIRE COUNCIL

Insert the name of the Planning Body.
Insert designation of signatory or delegation

% Insert applicable approving legislation

Lots	Orig
30–32	Por 22

7. Orig Grant Allocation :

8. Map Reference :
9051–42242

9. Parish: Cawarral

10. County: Livingstone

11. Passed & Endorsed :
By: C L FINCH
Date: 7-7-14
Signed:
Designation: CADASTRAL SURVEYOR

12. Building Format Plans only.
I certify that :
As far as it is practical to determine, no part of the building shown on this plan encroaches onto adjoining lots or roads.
Part of the building shown on this plan encroaches onto adjoining lots and road

Cadastral Surveyor/Director Date
delete words not required

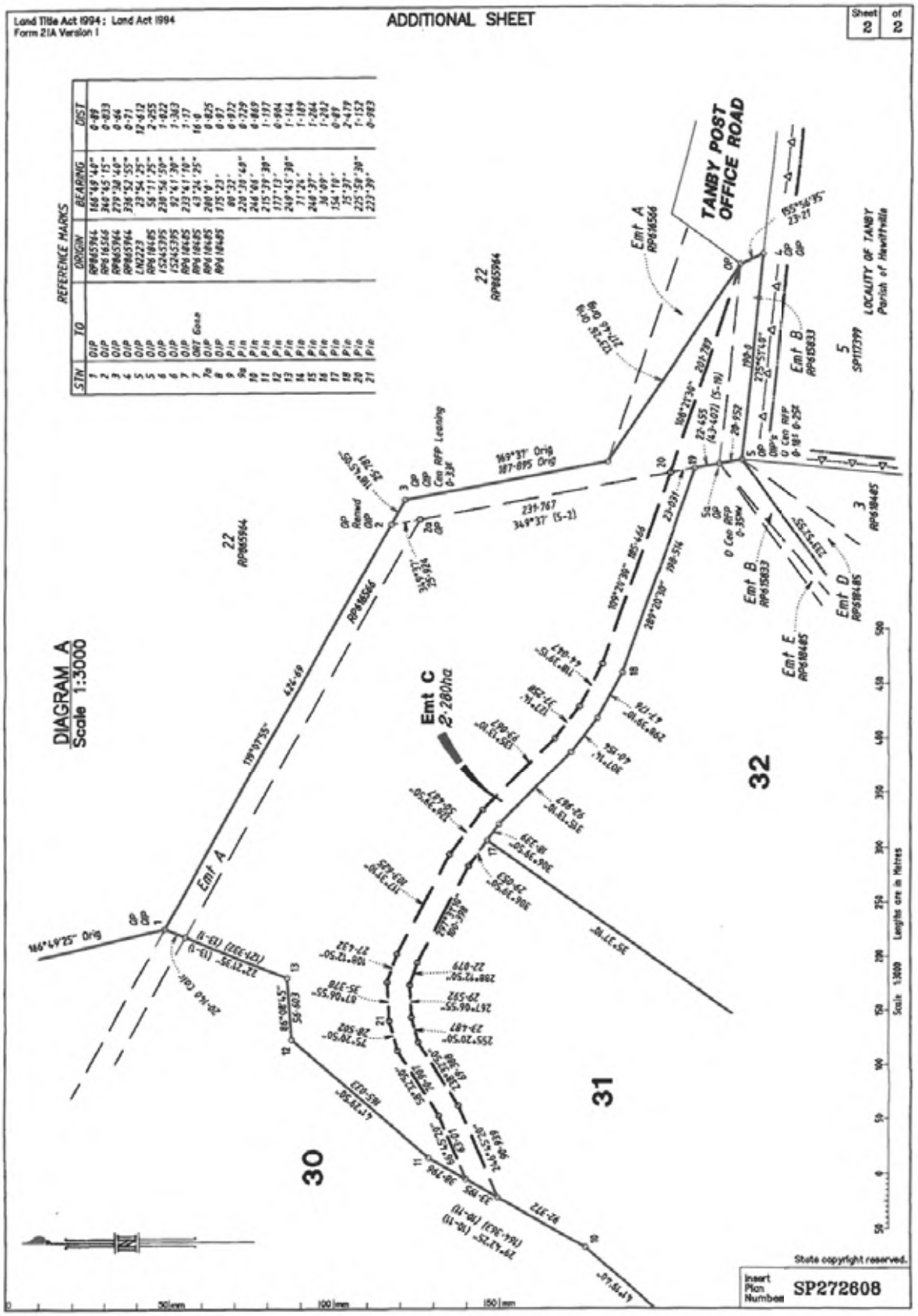
13. Lodgement Fees :

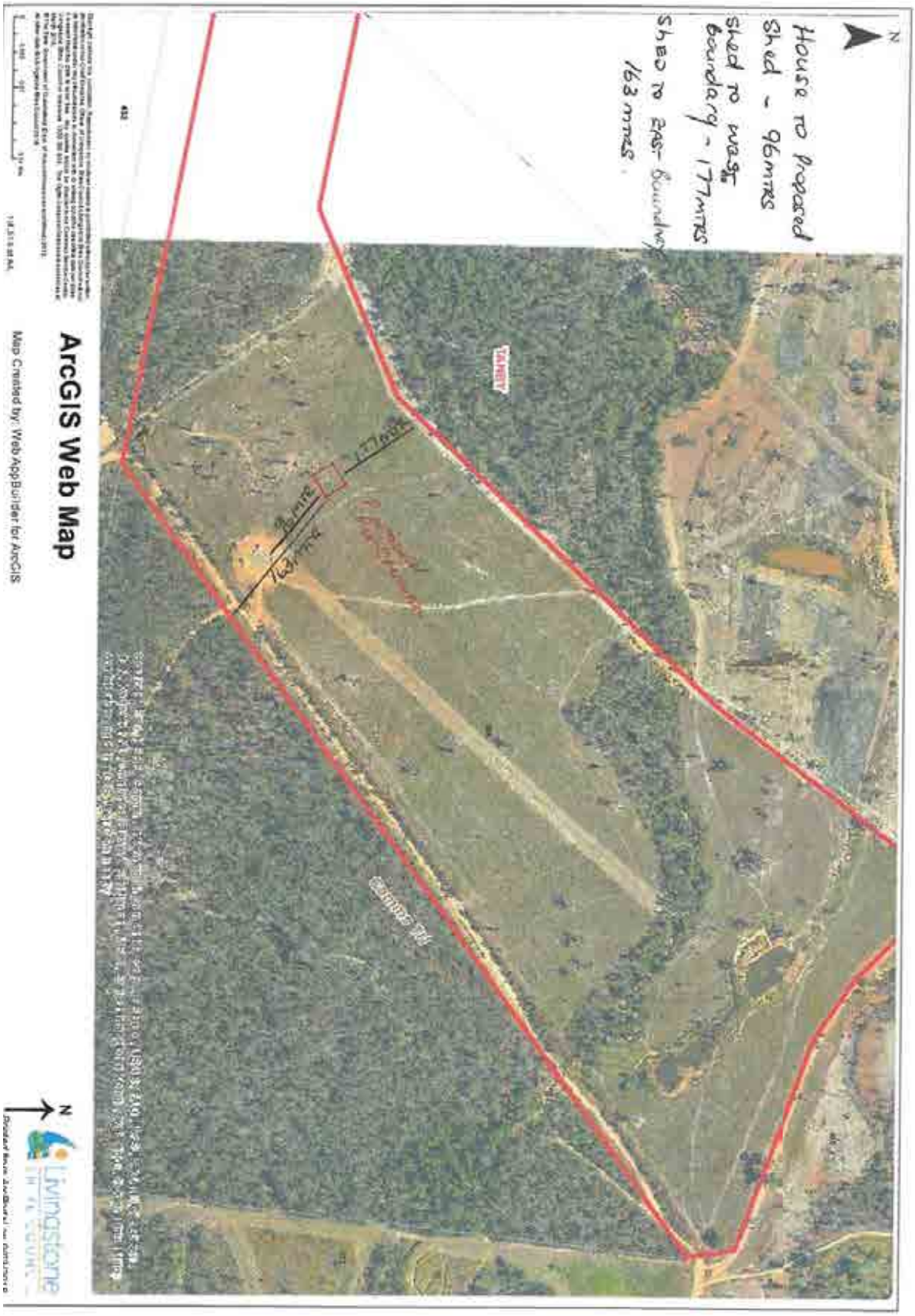
Survey Deposit	$
Lodgement	$
New Titles	$
Photocopy	$
Postage	$
TOTAL	$

14. Insert Plan Number SP272608

5. Plans with Community Management Statement :
CMS Number :
Name :

6. References :
Dept File :
Local Govt : D/15–2014
Surveyor : 484ISP


Land Title Act 1994 : Land Act 1994
Form 21A Version 1
ADDITIONAL SHEET
Sheet 2 of 2
TANBY POST OFFICE ROAD
LOCALITY OF TANBY
Parish of Hawthville
DIAGRAM A
Scale 1:3000
Emt A
Emt B
Emt C
2·260ha
Emt D
Emt E
22
RP865964
32
31
30
REFERENCE MARKS
STN TO ORIGIN BEARING DIST
SP272608
Insert Plan Number
State copyright reserved.

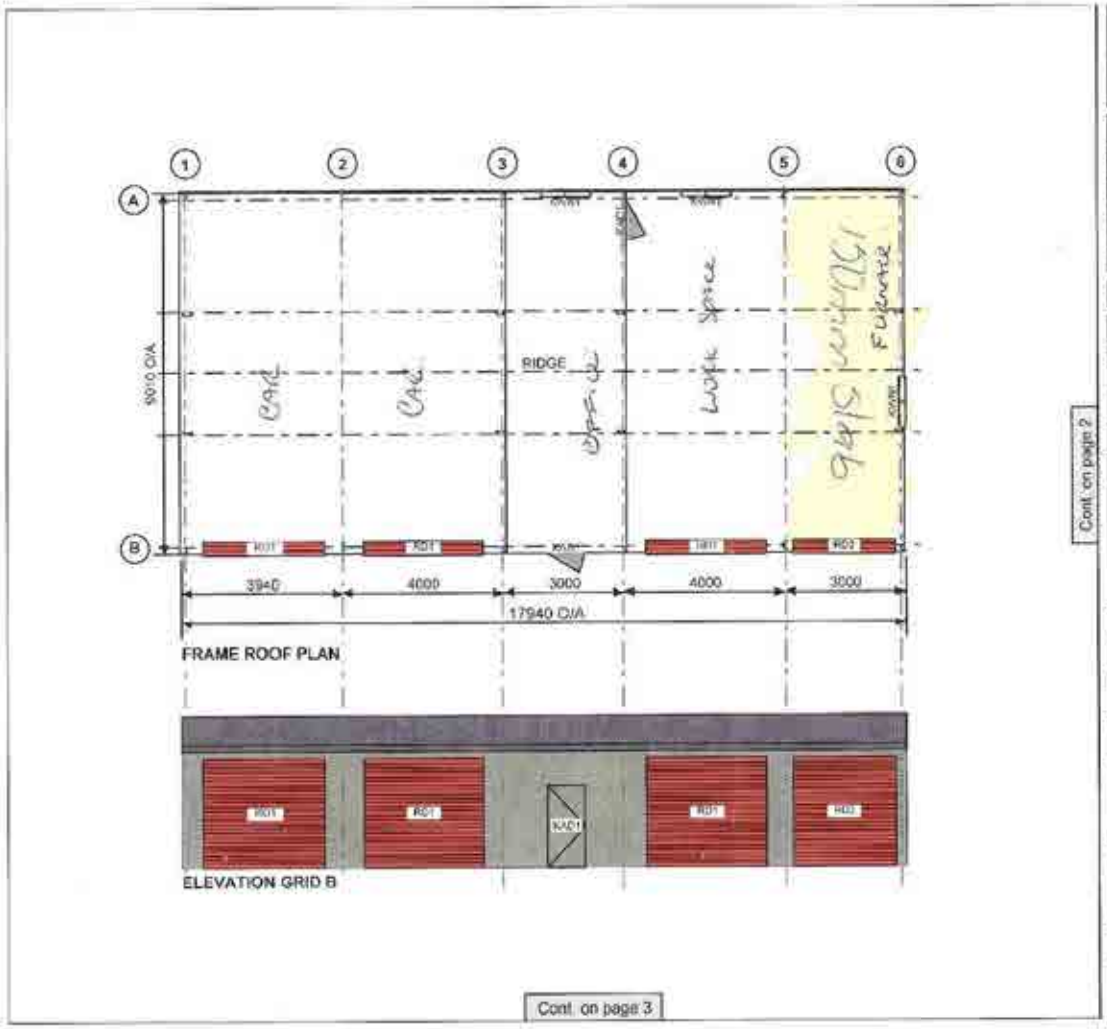

House to Prepared Shed - 96mtrs
Shed to west boundary - 177mtrs
Shed to East Boundary 163 mtrs
ArcGIS Web Map
Map Created by: Web AppBuilder for ArcGIS
Livingstone

12.12 - DECISION ASSESSMENT FOR A DEVELOPMENT APPLICATION FOR A DEVELOPMENT PERMIT FOR A MATERIAL CHANGE OF USE FOR A SPECIAL USE (PET CREMATORIUM) AT 410 AND 424 TANBY POST OFFICE ROAD, BONDOOLA

Building Proposal Plans (shed)

Meeting Date: 17 July 2018

Attachment No: 4



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Lysaght Building Solutions Pty Ltd trading as RANBUILD

CLADDING

ITEM	PROFILE (mm)	FINISH	COLOUR
BODY	TRIMDEK 0.42 BMT	CB	BY
WALLS	TRIMDEK 0.42 BMT	CB	CV
CORNERS	-	CB	CV
BARGE		CH	BY
GUTTER	6 MILINE	CB	BY

0.35bmt=0.40tct; 0.42bmt=0.47tct; 0.48bmt=0.53tct

ACCESSORY SCHEDULE & LEGEND

QTY	MARK	DESCRIPTION
1	RD1	B&D, Freedoor, R.D. "RIB"-WAKcol", 2987mm x 2978 wide Clear Opening width
2	KAD1	Precision (TAF000) Access Door Kit, CB (c) (Set Anodised in W32)
1	RD2	B&D, Freedoor, R.D. "RIB"-WAKcol", 2003 high x 2540 wide Clear Opening width
3	KW01	Classic Window Kit, 900h x 1210W (C2) Window Precision, W Std Fly Screen (S)

ARCHITECTURAL DRAWING ONLY. NOT FOR CONSTRUCTION USE

WIND DESIGN

IMPORTANCE LEVEL	REGION	TERRAIN	Ms
2	C	2.0	0.85

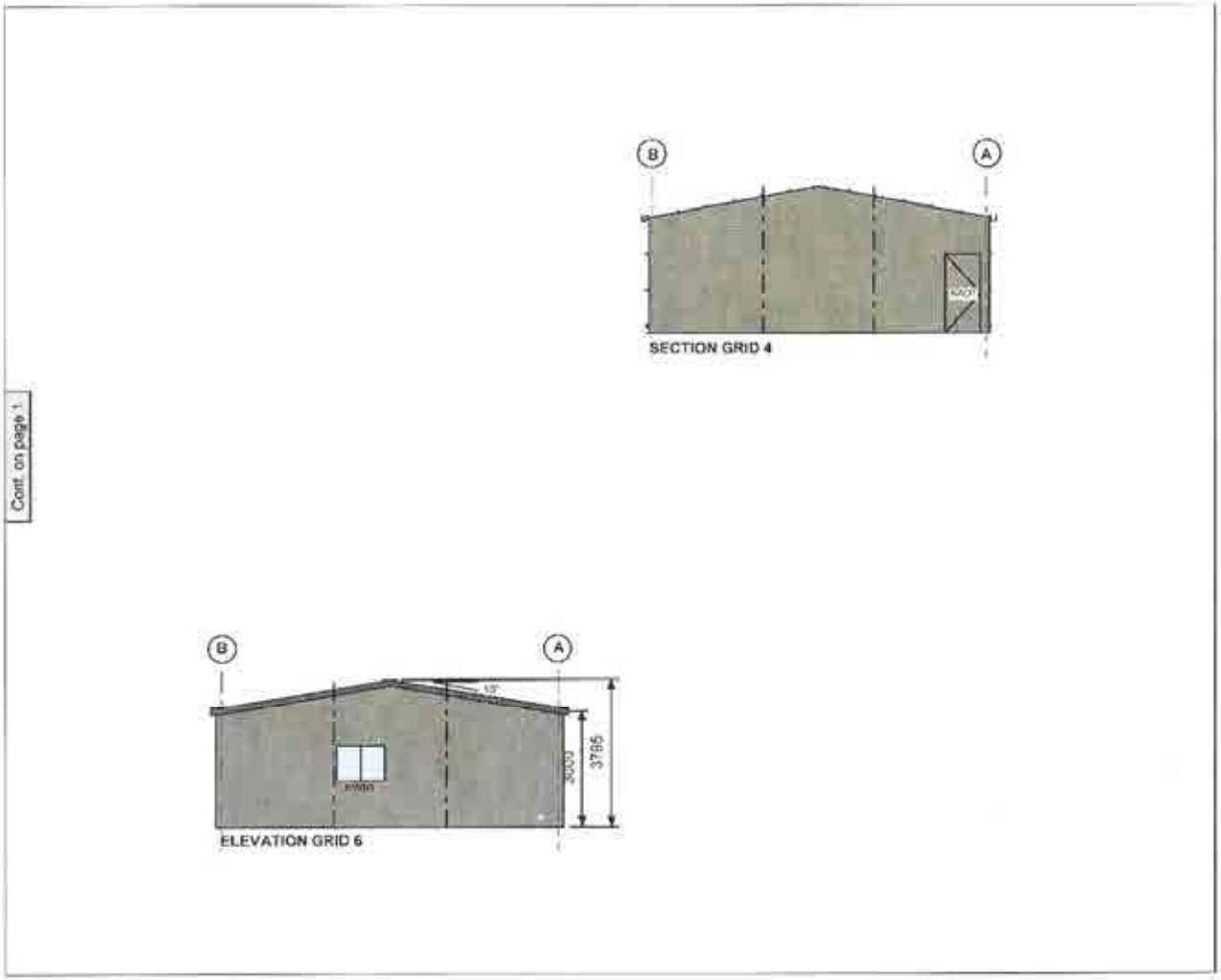
CLIENT
Jen & Merv Pet Crem

SITE
424 Tenby Post Office Road
BONDOOLA QLD 4703

BUILDING
SUNDOWN DELUXE
9010 SPAN x 3000 EAVE x 17940 LONG

TITLE
GENERAL ARRANGEMENT

SCALE	DRAWING NUMBER	PAGE
AT SHEET X 1:100	ROKH02-5241	1/3


B
A
SECTION GRID 4
Cont. on page 1
B
A
3785
3000
ELEVATION GRID 6
RANBUILD
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Lysaght Building
Solutions Pty Ltd
trading as RANBUILD
ROKH02-5241
2/3

12.13 DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

File No: D-174-2015

Attachments:
1. Locality Plan⇩
2. Proposal Plans⇩
3. Environmental Management Plan⇩
4. Environmental Assessment Report⇩
5. Ecological Assessment Report⇩
6. Bushfire Management Plan⇩
7. Hydrology Assessment Report⇩
8. Road Section Plan⇩
9. State Response⇩
10. Environmental Authority Permit⇩
11. Passing Bay Proposal Plan⇩
12. Second Carriageway Proposal Plan⇩

Responsible Officer: David Battese - Manager Strategy & Development

Author: Erin McCabe - Co-ordinator Development Assessment
Rhiannon Casey - Planning Officer

SUMMARY

Applicant:	Belmont Sands Pty Ltd (c/- Groundwork Plus)
Real Property Address:	Lot 5 on RP601603, Lot 6 on RP601603, Lot 8 on RP601603, Lot 10 on SP142291 and Lot 3 on RP601603
Common Property Address:	Lot 5, Lot 6, Lot 8 and Lot 10 Meldrum Road and 887 Etna Creek Road, Etna Creek
Area of Site:	1,524 hectares
Planning Scheme:	*Livingstone Shire Planning Scheme 2005* (Reprint 6, 9 June 2009)
Planning Scheme Zoning:	Rural Zone
Planning Scheme Overlays:	Overlay Map O2 - Drainage Problem; Overlay Map O3 - Wetlands and 1waterways Overlay Map O4 - Good Quality Agricultural Land Overlay Map O5 - Stormtide Hazard Overlay Map O5 - Bushfire Hazard Overlay Map O8 – Potential Acid Sulfate Soils (land below five (5) metres Australian Height Datum)
Planning Scheme Maps:	Planning Scheme Map 2A – Agricultural Land Classification Map – Shire Balance (Class C2, Class C1 and Class A1) Planning Scheme Map 10 – Locally Significant

	Vegetation
Existing Development:	Belmont Research Station Agriculture (grazing), Caretaker's Residence and Dwelling houses
Approval Sought:	Development permit for making a material change of use of premises for an extractive industry for sand and gravel and associated activities and making a material change of use of premises for concurrence environmentally relevant activity 16(3) 2(b) extracting and 3(b) screening sand and gravel (more than 100,000 tonnes but not more than 1,000,000 tonnes in a calendar year)
Level of Assessment:	Impact Assessable
Submissions:	Thirty-nine (39) submissions (Thirty-eight (38) properly made and one (1) not properly made)
Referral Agency(s):	Department of Infrastructure, Local Government and Planning
Adopted Infrastructure Charges Area:	Outside the Priority Infrastructure Area

Application Progress:

Application Lodged:	7 August 2015
Application Properly Made:	7 August 2015
Acknowledgement Notice sent:	14 August 2015 18 August 2015 (amended)
Application referred to State agency:	19 August 2015
State agency Information Request period extended: (until 16 September 2015)	27 August 2015
Information Request issued:	1 September 2015
State agency Information Request issued:	10 September 2015
Information Request Response received:	13 November 2015
State agency Information Response received:	13 November 2015
State Agency extension to decision stage: (until 18 January 2016)	10 December 2015
State Agency Response:	18 January 2016
Notice of Commencement received:	24 November 2015
Submission period commenced:	23 November 2015
Submission period end:	16 December 2015
Notice of Compliance received:	17 December 2015
Council extension to decision stage: (until 16 March 2016)	9 February 2016
Extension by agreement: (until 7 April 2016)	1 March 2016
Extension by agreement:	15 April 2016

(until 17 May 2016)	
Council Workshop: (applicant deputation)	19 April 2016
Extension by agreement: (until 1 July 2016)	17 May 2016
Extension by agreement: (until 26 August 2016)	30 June 2016
Extension by agreement: (until 26 October 2016)	26 August 2016
Extension by agreement: (until 23 December 2016)	24 October 2016
Extension by agreement: (until 23 February 2017)	21 December 2016
Extension by agreement: (until 24 April 2017)	23 February 2017
Extension by agreement: (until 30 June 2017)	21 April 2017
Extension by agreement: (until 18 August 2017)	29 June 2017
Extension by agreement: (until 29 September 2017)	11 August 2017
Extension by agreement: (until November 2017)	26 September 2017
Extension by agreement: (until 22 December 2017)	30 November 2017
Extension by agreement: (until 28 February 2018)	18 December 2017
Extension by agreement: (until 28 March 2018)	21 February 2018
Extension by agreement: (until 30 April 2018)	28 March 2018
Council Workshop (application update):	16 April 2018
Extension by agreement: (until 31 May 2018)	30 April 2018
Extension by agreement: (until 18 July 2018)	1 June 2018
Council Meeting Date:	17 July 2018
Statutory determination date:	18 July 2018

OFFICER'S RECOMMENDATION

RECOMMENDATION A

THAT in relation to the application for a development permit for making a material change of

use of premises for an extractive industry for sand and gravel and associated activities and making a material change of use of premises for concurrence environmentally relevant activity 16(3) 2(b) extracting and 3(b) screening sand and gravel (more than 100,000 tonnes but not more than 1,000,000 tonnes in a calendar year), made by Belmont Sands Pty Ltd (c/- Groundwork Plus), on Lot 5, Lot 6 and Lot 8 on RP601603, Lot 10 on SP142291 and Lot 3 on RP601603 and located at Lot 5, Lot 6, Lot 8 and Lot 10 Meldrum Road and 887 Etna Creek Road, Etna Creek, Council resolves that it is satisfied under section 304 of the *Sustainable Planning Act 2009*, that the following non-compliance with notification procedures have not adversely affected the awareness of the public or restricted the opportunity of the public to make properly made submissions:

(a) One (1) of the public notification signs had fallen down during the public notification period due to weather conditions. The applicant advised that they became aware of the matter on Friday 11 December 2015, and the sign was re-erected on the afternoon of Saturday 12 December 2015. As the applicant allowed eighteen (18) business days for the public notification period, it is considered that the requirements of section 297 (1) and 298 of the *Sustainable Planning Act 2009* in respect of placing a sign on the land for the minimum period of fifteen (15) business days were still met and the notification period occurred for a total of seventeen (17) business days.

RECOMMENDATION B

THAT in relation to the application for a development permit for making a material change of use of premises for an extractive industry for sand and gravel and associated activities and making a material change of use of premises for concurrence environmentally relevant activity 16(3) 2(b) extracting and 3(b) screening sand and gravel (more than 100,000 tonnes but not more than 1,000,000 tonnes in a calendar year), made by Belmont Sands Pty Ltd (c/- Groundwork Plus), on Lot 5, Lot 6 and Lot 8 on RP601603, Lot 10 on SP142291 and Lot 3 on RP601603 and located at Lot 5, Lot 6, Lot 8 and Lot 10 Meldrum Road and 887 Etna Creek Road, Etna Creek, Council resolves to approve the application despite its conflict with the planning scheme and provide the following grounds to justify the decision despite the conflict:

(a) The approval includes conditions that require Etna Creek Road, as the haul route for the development, to be designed and constructed to a standard satisfactory to accommodate the traffic generated by the development, and without those conditions, the application would be refused.

(b) The development will not hinder other current agricultural pursuits on site, and will not irreversibly affect the agricultural nature of the land for future agricultural pursuits.

(c) The approval includes conditions imposed by Council and a State Department to reduce the potential for the use to have significant adverse impacts on the surrounding community in terms of traffic, noise and dust.

(d) The development, provided that there is compliance with the conditions as imposed, will not conflict with:

- the *Livingstone Shire Planning Scheme 2005*; or
- relevant aspects of the applicable State Planning Policies.

RECOMMENDATION C

THAT in relation to the application for a development permit for making a material change of use of premises for an extractive industry for sand and gravel and associated activities and making a material change of use of premises for concurrence environmentally relevant activity 16(3) 2(b) extracting and 3(b) screening sand and gravel (more than 100,000 tonnes but not more than 1,000,000 tonnes in a calendar year), made by Belmont Sands Pty Ltd (c/-

Groundwork Plus), on Lot 5, Lot 6 and Lot 8 on RP601603, Lot 10 on SP142291 and Lot 3 on RP601603 and located at Lot 5, Lot 6, Lot 8 and Lot 10 Meldrum Road and 887 Etna Creek Road, Etna Creek, Council resolves to state a relevant period of six (6) years in accordance with section 341 (1)(b) of the *Sustainable Planning Act 2009* for the development permit.

RECOMMENDATION D

THAT in relation to the application for a development permit for making a material change of use of premises for an extractive industry for sand and gravel and associated activities and making a material change of use of premises for concurrence environmentally relevant activity 16(3) 2(b) extracting and 3(b) screening sand and gravel (more than 100,000 tonnes but not more than 1,000,000 tonnes in a calendar year), made by Belmont Sands Pty Ltd (c/- Groundwork Plus), on Lot 5, Lot 6 and Lot 8 on RP601603, Lot 10 on SP142291 and Lot 3 on RP601603 and located at Lot 5, Lot 6, Lot 8 and Lot 10 Meldrum Road and 887 Etna Creek Road, Etna Creek, Council resolves to approve the application subject to the following conditions:

1.0 APPROVED DEVELOPMENT

1.1 The approved development is:

1.1.1 making a material change of use of premises for an extractive industry for sand and gravel, at an extraction rate of not more than 1,000,000 tonnes of sand and gravel (combined extraction limit) per calendar year, including the following associated activities:

(a) screening extracted material (for this development, extracted material is the total material extracted, including sand, gravel, clay, silt and waste material);

(b) washing extracted material;

(c) stockpiling extracted material;

(d) processing plant;

(e) transporting sand and gravel off-site;

(f) weighbridge facilities;

(g) storage shed; and

(h) office facilities;

and

1.1.2 making a material change of use of premises for concurrence ERA 16(3) 2(b) extracting and 3(b) screening sand and gravel (more than 100,000 tonnes but not more than 1,000,000 tonnes in a calendar year)),

on the subject premises, which must be in accordance with the endorsed plans (refer to condition 3.1).

1.2 The extraction rate limit of 1,000,000 tonnes per calendar year applies to the total amount of sand and gravel (combined) extracted. The extraction rate limit of 1,000,000 tonnes of sand and gravel (combined) per calendar year applies unless a lesser extraction rate limit is confirmed with Council as part of any development application for carrying out operational work for road works and that lesser extraction limit is the subject of a successful change application to vary this approval.

1.3 Extraction of material is limited to the locations identified as Resource Area 1 and Resource Area 2 on the approved conceptual site layout plan (refer to condition 3.1).

2.0 ADMINISTRATION

2.1 The Developer is responsible for ensuring compliance with this approval and the

Conditions of the approval by an employee, agent, contractor or invitee of the Developer.

2.2 Where these Conditions refer to "Council" in relation to requiring Council to approve or to be satisfied as to any matter, or conferring on the Council a function, power or discretion, that role of the Council may be fulfilled in whole or in part by a delegate appointed for that purpose by the Council.

2.3 All conditions of this approval must be undertaken and completed to the satisfaction of Council, at no cost to Council.

2.4 All conditions, works, or requirements of this approval must be undertaken and completed prior to the commencement of use, unless otherwise stated.

2.5 Where applicable, infrastructure requirements of this approval must be contributed to the relevant authorities, at no cost to Council prior, to the commencement of use, unless otherwise stated.

2.6 The following further Development Permits must be obtained prior to the commencement of any works associated with its purposes:

2.6.1 Operational Works:

(i) Road Works;

(ii) Access works;

2.6.2 Plumbing and Drainage Work; and

2.6.3 Building Works.

2.7 Unless otherwise stated, all works must be designed, constructed and maintained in accordance with the relevant development permits, Council policies, guidelines and standards.

2.8 All engineering drawings/specifications, design and construction works must comply with the requirements of the relevant Australian Standards and must be approved, supervised and certified by a Registered Professional Engineer of Queensland (RPEQ).

3.0 APPROVED PLANS AND DOCUMENTS

3.1 The approved development must commence, and be maintained, operated and completed generally in accordance with the approved plans and documents, except where amended by the conditions of this permit:

Plan/Document Name	Plan/Document Reference	Dated
Conceptual Site Layout Plan	1810.026B Revision 9	28 October 2015
Example Site Office Layout	1810.035	6 July 2015
Example Storage Shed Layout	1810.036	6 July 2015
Road section plan	D-174-2015	1 July 2018
Environmental Management Plan	1810.610.001r1 Issue 1	12 November 2015
Bushfire Management Plan	15-059 Report	October 2015
Hydrology Assessment Report	1810.610.002 Issue 0	12 November 2015
Ecological Assessment	Not numbered	July 2015

3.2 Where there is any conflict between the conditions of this approval and the details shown on the approved plans and documents, the conditions of approval must prevail.

3.3 Where conditions require the above plans or documents to be amended, the revised document(s) must be submitted for approval by Council prior to the submission of a Development Application for Operational Works.

4.0 ROAD WORKS

4.1 The haul route for the development is Etna Creek Road from the site access to the intersection of Etna Creek Road and the Bruce Highway. Vehicles associated with the development must not use any other route.

4.2 The developer must design and construct the haul route (Etna Creek Road), including pavement and road drainage works (cross drains and roadside drainage) in accordance with this condition 4.0.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

4.3 The haul route, except section E (refer to approved plan "road section plan"), must be designed and constructed to:

4.3.1 have a minimum formation width of eight (8) metres; and

4.3.2 have a minimum sealed width of 6.5 metres; and

4.3.3 a standard (including geometric, structural and drainage aspects) that is suitable for the traffic generated by the development operating at the maximum extraction rate of 1,000,000 tonnes of sand and gravel (combined) per calendar year; and

4.3.4 a standard supported by a pavement design report that is certified by a suitability qualified RPEQ experienced in pavement engineering that includes a geotechnical investigation certified by a suitability qualified RPEQ experienced in geotechnical engineering.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

Note: The minimum formation width (8 metres) and the minimum sealed width (6.5 metres) are formulated on the basis that the site may extract up to 1,000,000 tonnes of sand and gravel (combined) per calendar year. Accordingly the haul route referred to in condition 4.0 must be designed and constructed with a pavement appropriate for the 1,000,000 tonne maximum extraction rate of sand and gravel (combined) unless a lesser extraction rate is confirmed with Council as detailed in condition 1.2 and is the subject of a successful change application for this approval.

4.4 Section E of the haul route (refer to approved plan "road section plan"), must be designed and constructed to:

4.4.1 have a minimum formation width of eight (8) metres;

4.4.2 have, either:

(a) a minimum sealed width of 6.5 metres; or

(b) a minimum unsealed width of 6.5 metres;

and

4.4.3 a standard (including geometric, structural and drainage aspects) that is suitable for the traffic generated by the development operating at the maximum extraction rate of 1,000,000 tonnes of sand and gravel (combined) per calendar year; and

4.4.4 a standard supported by a pavement design report that is certified by a

suitability qualified RPEQ experienced in pavement engineering that includes a geotechnical investigation certified by a suitability qualified RPEQ experienced in geotechnical engineering.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

Note: The minimum formation width (8 metres) and the minimum sealed or unsealed width (6.5 metres) are formulated on the basis that the site may extract up to 1,000,000 tonnes of sand and gravel (combined) per calendar year. Accordingly the haul route referred to in condition 4.0 must be designed and constructed with a pavement appropriate for the 1,000,000 tonnes maximum extraction rate of sand and gravel (combined) unless a lesser extraction rate is confirmed with Council as detailed in condition 1.2 and is the subject of a successful change application for this approval.

4.5 A Development Permit for Operational works (road works) must be obtained prior to the commencement of any works on a Council controlled road.

4.6 All works must be designed and constructed in accordance with the approved plans (refer to condition 3.1), this condition 4.0, the *Capricorn Municipal Development Guidelines*, relevant Australian Standards and the provisions of a Development Permit for Operational Works (road works).

4.7 Ancillary road drainage works (for example, cross drains and roadside drainage) associated with any road works must be designed and constructed in accordance with the *Capricorn Municipal Development Guidelines* and the *Queensland Urban Drainage Manual*.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

4.8 Traffic signs and pavement markings including any alterations must be provided in accordance with the *Transport Operations (Road Use Management Act 1995)* and the *Manual of Uniform Traffic Control Devices (Queensland)*.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

5.0 ACCESS WORKS

5.1 Vehicle access to the subject site from Etna Creek Road must be designed and constructed to cater for the largest design vehicle associated with the development operating at the maximum extraction rate.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

5.2 Once constructed in accordance with this condition 5.0, the vehicle access must be maintained to comply with this condition 5.0 at all times while the extractive industry use (including the associated activities and the ERAs) is occurring.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

5.3 A Development Permit for Operational Works (access works) must be obtained prior to the commencement of any access works for the site.

5.4 All works must be designed and constructed in accordance with the approved plans (refer to condition 3.1), *Capricorn Municipal Development Guidelines* and the provisions of a Development Permit for Operational Works (access works).

6.0 PLUMBING AND DRAINAGE WORKS

6.1 On-site sewage treatment and disposal must be provided in accordance with the *Queensland Plumbing and Wastewater Code* and Council's Plumbing and Drainage

Policies.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

6.2 On-site water supply for domestic (potable) and fire-fighting purposes must be provided and may include the provision of a bore, dams, water storage tanks or a combination of each.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

6.3 A Development Permit for Plumbing and Drainage Works must be obtained prior to the commencement of any plumbing and drainage work associated with the development.

6.4 All plumbing and sanitary drainage works must be in accordance with regulated work under the *Plumbing and Drainage Act*, any relevant development permit for carrying out plumbing or drainage work, and Council's Plumbing and Drainage Policies.

7.0 SITE WORKS

7.1 Site works must be undertaken such that they do not, at any time, in any way restrict, impair or change the natural flow of runoff water, or that cause an actionable nuisance or worsening to adjoining properties or infrastructure.

7.2 Any vegetation cleared or removed must be:

7.2.1 Mulched on-site and utilised on-site for landscaping purposes; or

7.2.2 Removed for disposal at a location approved by Council;

Within sixty (60) days of clearing. Any vegetation removed must not be burnt unless authorised by a relevant fire permit.

8.0 BUILDING WORKS

8.1 A Development Permit for Building Works must be obtained prior to the commencement of any building works on the site.

8.2 The minimum habitable floor height for new buildings must be 17.2 metres Australian Height Datum.

8.3 All electrical outlets and distribution boxes must be located above the predicted flood level of 16.9 metres Australian Height Datum.

9.0 ENVIRONMENTAL

9.1 All applications for a Development Permit for Operational Works (road works and access works) must be accompanied by a detailed Construction Environmental Management Plan prepared by a suitably qualified RPEQ (civil or environmental engineering), which addresses, but is not limited to, the following matters:

(i) water quality and drainage;
(ii) erosion and silt/sedimentation management;
(iii) acid sulphate soils;
(iv) fauna management;
(v) vegetation management and clearing;
(vi) top soil management;
(vii) interim drainage plan during construction;
(viii) construction programme;
(ix) geotechnical issues;
(x) weed control;
(xi) bushfire management;

(xii) emergency vehicle access;
(xiii) noise and dust suppression; and
(xiv) waste management.

9.2 All applications for a Development Permit for Operational Works (road works and access works) must be accompanied by a detailed Erosion and Sediment Control Plan, which addresses, but is not limited to, the following:

(i) site location/topography/soil type;
(ii) objectives;
(iii) concept;
(iv) design details;
(v) implementation procedures for construction and post construction phases;
(vi) vegetation;
(vii) interim drainage plan during construction;
(viii) dust suppression;
(ix) top soil management;
(x) acid sulphate soils; and
(xi) erosion susceptibility and risk.

9.3 The erosion and sediment control device(s) referenced in the Environmental Management Plan (refer condition 3.1), as approved and amended pursuant to this approval, must be installed and maintained at all times while the extractive industry use (including the associated activities and the ERAs) is occurring and for the duration of rehabilitation works.

This condition is imposed pursuant to section 665 of the *Sustainable Planning Act 2009*.

9.4 Vegetation must not be cleared, removed or damaged unless it is in accordance with the approved plans (refer condition 3.1).

9.5 The development must include:

9.5.1 A storage area for hazardous contaminants that has a secondary containment system to prevent any release of contaminants from the system, or container within the system, to land, groundwater, or surface waters; and

9.5.2 Containers for hazardous contaminants that are secured at all times to prevent movement and leaking during any flood event.

9.5.3 A storage area for hazardous contaminants that is above the minimum two (2) per cent Annual Exceedance Probability (AEP) event flood level.

10.0 ASSET MANAGEMENT

10.1 Any alteration necessary to electricity, telephone, water mains, sewerage mains, and/or public utility installations resulting from the development or in connection with the development, must be at full cost to the Developer.

10.2 Any damage to existing kerb and channel, pathway or roadway (including removal of concrete slurry from public land, pathway, roads, kerb and channel and stormwater gullies and drainage lines) which may occur during any works carried out in association with the approved development must be repaired. This must include the reinstatement of the existing traffic signs and pavement markings which may have been removed.

10.3 'As constructed' information pertaining to assets to be handed over to Council and those which may have an impact on Council's existing and future assets must be provided prior to the commencement of use. This information must be provided in accordance with the Manual for Submission of Digital As Constructed Information.

11.0 OPERATING PROCEDURES

11.1 The hours of operations for the development must be limited to:

11.2 Prior to the commencement of use, the *Environmental Management Plan* (refer condition 3.1)

(i) 0600 hours to 1800 hours Mondays to Saturdays (not including public holidays); and

(ii) No operations on Sundays or Public Holidays

11.3 Prior to the commencement of use, the *Environmental Management Plan* (refer condition 3.1) must be amended to, incorporate the recommendations of the *Bushfire Management Plan* (refer to condition 3.1); the *Hydrology Assessment Report* (refer to condition 3.1); include the conditions imposed by the Environmental Authority; and include the requirements of this development permit.

11.4 The amended *Environmental Management Plan* (refer condition 3.1), required by 11.3, must be given to Council prior to the commencement of use.

11.5 A detailed record of the extraction operations must be maintained on site at all times and must be available for inspection by Council. Records must be kept for a minimum of 5 years. The record of extraction operations must include the following information:

11.5.1 date of extraction;

11.5.2 quantity of material extracted;

11.5.3 quantity of sand and quantity of gravel extracted;

11.5.4 quantity of sand and gravel transported from subject site; and

11.5.5 quantity of extracted material screened.

ADVISORY NOTES

NOTE 1. Aboriginal Cultural Heritage

It is advised that under Section 23 of the *Aboriginal Cultural Heritage Act*, a person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal Cultural Heritage (the "cultural heritage duty of care"). Maximum penalties for breaching the duty of care are listed in the Aboriginal Cultural Heritage legislation. The information on Aboriginal Cultural Heritage is available on the Department of Aboriginal and Torres Strait Islander Partnerships website www.datsip.qld.gov.au

NOTE 2. General Environmental Duty

a. General environmental duty under the *Environmental Protection Act 1994* prohibits unlawful environmental nuisance caused by noise, aerosols, particles dust, ash, fumes, light, odour or smoke beyond the boundaries of the property during all stages of the development including earthworks, construction and operation.

b. The development must be undertaken in a manner that does not allow environmental nuisance or water contamination caused by construction material, noise, aerosols, particles dust, ash, fumes, light, odour and smoke, which must not go beyond the boundaries of the property during all stages of the development including earthworks, construction and operation as stated in the *Environmental Protection Act 1994* and subordinate legislation.

NOTE 3. General Safety Of Public During Construction

The *Workplace Health and Safety Act* and *Manual of Uniform Traffic Control Devices* must be complied with in carrying out any construction works, and to ensure safe traffic control and safe public access in respect of works being

constructed on a road.

NOTE 4. Road

Council is not obliged at any stage in the future to open the road on the currently closed and unformed road reserve, or to form and construct the road to service the development.

NOTE 5. Flood Levels and Immunity

It is advised that the immunity from flood events shall be provided to a minimum of one (1) per cent Annual Exceedance Probability of 16.9 metres Australian Height Datum, plus a reasonable freeboard allowance (minimum 300 millimetres) for the finished floor levels of the site office, storage shed and for any electrical switchboard.

NOTE 6. Environmental

a. The land subject to the above development application must be free of declared pest plants and animals; as declared at the date of development application in *Local Law No. 3 (Community & Environmental Management) 2011* and Schedule 1 of *Subordinate Local Law 3 (Community & Environmental Management) 2011* and in the *Land Protection (Pest and Stock Route Management) Act 2002* or as amended; to the satisfaction of Council's Pest Management Officer, prior to the commencement of any site works. Council will supply a free inspection and advice service on the request of the land owner.

b. It is advised that part of the subject site is mapped by the Department of Environment and Heritage Protection as containing Regulated Vegetation. The *Vegetation Management Act 1999* has requirements with regard to the clearing of vegetation. Information on Vegetation Management is available at: https://www.qld.gov.au/environment/land/vegetation/management/

BACKGROUND

As detailed in the summary, the subject application was lodged with Council on 7 August 2015 and has been under extended assessment from March 2016 with negotiations focusing, primarily on the haul route, being Etna Creek Road.

COMMENTARY

PROPOSAL IN DETAIL

The application is seeking a Development Permit for a sand and gravel quarry to operate over Lot 8, Lot 5, Lot 10 and Lot 6 Meldrum Road and 887 Etna Creek Road, Etna Creek. The proposed operation is for the extraction of sand and gravel and includes screening, washing, stockpiling and transportation of material off site, via Etna Creek Road.

The proposed activity will occur over 128 hectares and involves two (2) resource areas, a processing area and a stockpile area. Resource Area 1 is located within the north western portion of Lot 8 on RP601603 and Resource Area 2 is located within the southern portion of Lot 5 on RP601603 and involves the processing area. The stockpile area is located within Lot 10 on SP142291.

The proposal seeks to extract up to 1,000,000 tonnes of sand and gravel as per the environmentally relevant activity thresholds outlined below however the application details that an average annual extraction rate of 80,000 tonnes per calendar year is anticipated. The application goes on to detail that flexibility in the extraction rate is required to allow for project-based activities and variations in market demand and that fluctuations in extraction volumes can occur with such operations.

Machinery and equipment associated with the activities includes excavators, haulage vehicles, processing plant (inclusive of a hopper and feeding conveyor, static screen, density tank, sand pump, tower and hydrocyclone), spray bar, wash down pad and weighbridge. Ancillary facilities will include an office and amenities building and storage shed. Quarry material will be transported by thirty-six (36) tonne capacity trucks with dog trailers

In addition, the application includes a concurrence referral for two (2) environmentally relevant activities under the *Environmental Protection Act 1994*being the following:

- 16(3) 2(b): extracting, other than by dredging, in a year, the following quantity of material – more than 100,000 tonnes but not more than 1,000,000 tonnes; and
- 16(3) (3)(b): screening, in a year, the following quantity of material – more than 100,000 tonnes but not more than 1,000,000 tonnes.

The operation will occur between 0600 hours and 1800 hours Monday to Saturday with no operations on Sundays and Public Holidays and will have a maximum of three (3) employees on the site per shift.

Haul route – Etna Creek Road

Given that all materials will be transported by road (Etna Creek Road initially) from the site, the application included a traffic and pavement assessment on lodgement. The findings of the assessment confirmed that the operation will have no notable operational impacts on the intersection of Etna Creek Road and the Bruce Highway (Yaamba Road). The assessment outlined that the operation was likely to bring forward upgrade requirements for the narrow section of Etna Creek Road and that the general maintenance costs for Etna Creek Road will increase and that negotiations with Council about a reasonable contribution would need to transpire.

Subsequent to the application material provided on lodgement, three other haul route proposals were presented to Council for consideration, with the first being a proposal for a road maintenance contribution. This proposal was given to Council in November 2015 as part of the response to the information request issued by Council and included a revised road impact assessment. Discussions then transpired around a possible road maintenance agreement and works occurring on sections of Etna Creek Road.

Council, in August 2016, then received correspondence from the applicant, which involved changing the haul route to traverse land not originally forming part of the application, south of the Etna Creek Road alignment, from the extractive industry site and connecting to Etna Creek Road approximately 2.3 kilometres from the intersection with the Bruce Highway.

Council advised that such a change to the haul route could not be considered a minor change because the change was substantially different development and the change would cause the application to be referred to a new referral agency, namely, Ergon Energy, and therefore, public notification of the proposed development would need to be repeated. The applicant advised Council they did not wish to pursue this option.

In April 2017 a passing bay proposal was presented to Council by the applicant and their traffic engineer as follows:

a. Passing bays be constructed every 500 metres along Etna Creek Road. One (1) to three (3) passing bays to be constructed prior to and in conjunction with the commencement of the use. The remaining passing bays are to be constructed incrementally at a rate of one (1) for every 50,000 tonne of material extracted. The westbound traffic are to give way to the eastbound traffic and signage to this effect is to be erected. Deceleration and acceleration areas for the passing bays will not be provided.

b. Based on the current state of Etna Creek Road, the current traffic on that road, and the expected vehicle and tonnage associated with the extractive industry use, the impact of the use on Etna Creek Road will be $395,000.00 in today's dollars. This amount would be paid towards the maintenance and upgrade of Etna Creek Road at a rate of $0.27 per tonne, with an expected total extraction being 1,480,000 tonne.

The gravel portions of Etna Creek Road would be graded annually and the shoulders to be mowed fortnightly or as needed.

Following consideration of the proposal including consultation with consultant engineers engaged by Council it was determined that the proposal itself is not appropriate because it is not possible to control the traffic not associated with the extractive industry use to ensure that those vehicles stop in the passing bays to allow vehicles travelling in the opposite direction to remain on the sealed pavement. The proposal would likely exacerbate damage to the sealed pavement and the road edge which would in turn increase the maintenance and safety concerns. Ultimately officers could not recommend support for the proposal.

Further discussions with Council officers and the applicant occurred on 18 January 2018, and on 23 March 2018 Council received an updated proposal from the applicant which involved a revised haul route for the extractive industry comprising

a. Construction of a new carriageway that is separate from, and immediately north of, the existing Etna Creek Road carriageway (refer second carriageway proposal attachment) intended to be used by both quarry-related vehicles and non-quarry related vehicles travelling east; and

b. The use of the existing Etna Creek Road pavement for all western bound traffic.

Council considered the proposal in detail and advised on 11 May 2018 that it was not supportive of the proposed haul route due to, among other things:

1. The practicalities of managing (including maintaining), and ongoing safety concerns associated with, two carriageways within the same road reserve that are physically separated, including the potential for road users to cross between the old and new pavements.

2. Design factors, including issues associated with drainage, pavement structure, formation level, access for existing properties, bus stop locations and existing private infrastructure.

3. Potential adverse amenity impacts, including noise, dust and lighting impacts for properties on the northern side of Etna Creek Road.

As part of this correspondence, Council advised the applicant that it will not engage consultants to undertake any further review of the proposal or partake in further discussions on the matter and it wishes to proceed to a Council decision on the matter. The applicant was asked to confirm the final haul route for the proposed extractive industry for the development. The applicant provided confirmation on 12 June 2018 that the original proposed haul route is to be assessed. The applicant also requested Council consider imposing a condition which provides flexibility in the scale of works and/or the timing/staging for delivery of this infrastructure, being the haul route.

SITE AND LOCALITY

The site is currently owned by Agforce Queensland Farmers Ltd and is used as a cattle breeding facility (approximately 1,200 head of cattle), inclusive of research and education facilities. The property has been divided into numerous paddocks, varying in size and includes pasturing and cultivation activities. The site has a flat and low lying topography whereby the southern handle of the site is prone to flood waters from the Fitzroy River when peaking above thirteen (13) metres.

Vegetation of State and Local significance exist on site. The areas proposed for extraction avoid existing environmental values and have the ability to co-exist with the agricultural/pastoral activity on site.

The proposed operation is setback 100 metres from the Fitzroy River. The site contains four (4) water bores and enjoys an irrigation licence through Fitzroy River Water. There are 4 identified natural drainage lines that cross the site (on Lot 5 on RP601603 and Lot 8 on RP601603) from Fitzroy River on the west to the Boomerang Lagoon and overflow to the Fitzroy River on the east.

There are no immediate neighbouring dwellings to the proposed extraction resources areas. The closest residences are located across the Fitzroy River, approximately 1.5 kilometres from the extraction area (Resource Area 1). A local community exists to the north of the subject site on Lindleys Road. The community on Lindleys Road comprises of approximately twenty (20) land parcels ranging between four (4) and seven (7) hectares in size. The closest residence to the extractive resource area is approximately four (4) kilometres and approximately 1.6 kilometres to the stockpile area. The site access to the premises is approximately 500 metres to the closest residence.

Etna Creek Road is a Council controlled road, measuring 8.65 kilometres in total length, varying in width and quality. The existing state of the road and associated drainage infrastructure demonstrates poor quality; however, Council considers that the road is servicing the needs of the existing community.

The related permits over the subject site are detailed in the following table:

Existing applications/development permit over the site	
Lot 5 Meldrum Road, Etna Creek Lot 5 on RP601603	B-1152-2012 – Building Works for a Retaining Wall - approved with conditions 23 May 2012
Lot 10 Meldrum Road, Etna Creek Lot 10 on SP142291	D-Y/2000-970 – Reconfiguring a Lot for a Boundary Realignment – approved with conditions 7 March 2001
887 Etna Creek Road, Etna Creek Lot 3 on RP603603	D-Y/2000-970 – Reconfiguring a Lot for a Boundary Realignment – approved with conditions 7 March 2001 72-2002-YPO – Building Works for a Class 8 – new building – research facility – approved with conditions 16 April 2002; D-Y/2002-95 – Development Permit for Operational Works – approved with conditions (not dated)

MATTERS FOR CONSIDERATION

This application has been assessed by relevant Council planning, engineering, environmental health, and other technical officers as required. The assessment has been in accordance with the Integrated Development Assessment System provisions of the *Sustainable Planning Act 2009*, based on consideration of the State Planning Policy; State Government guidelines; the Council's Town Planning Scheme, Planning Policies and other general policies and procedures, as well as other documents as considered relevant.

Internal advice and assessment

Infrastructure Operation Unit Comments – *13 July 2018*

Support, subject to conditions, specifically, an upgrade of sections of Etna Creek Road to a sealed 6.5-metre-wide pavement. Infrastructure recommends that approval of the application can only occur provided an Infrastructure Agreement be entered in association with appropriate conditioning in order to facilitate works on the nominated sections of Etna Creek Road.

Environmental Health Comments – *11 August 2015*

Support, subject to advice.

Natural Resource Management Comments – *3 November 2015*

Support, subject to conditions.

External referral

The application was referred to the Department of Infrastructure, Local Government and Planning as a concurrence agency in accordance with Schedule 7, Table 2, Item 1— Environmentally relevant activity and Schedule 7, Table 3, Item 2— Development impacting on State transport infrastructure of the *Sustainable Planning Regulation 2009* on 19 August 2015.

The department assessed the application and requested further information on 10 September 2015. Following a response to the information request, the Department provided their State referral response including conditions on 18 January 2016.

Conditions including carrying out of the development in accordance with the relevant plans, development and implementation of a site-based pest management plan, heavy vehicle haul routes of state interest within the region, recording the quantity of product being transported and payment of an annual monetary contribution to the Department of Transport and Main Roads, which is based on the amount of material extracted per annum.

TOWN PLANNING COMMENTS

State Planning Policy – July 2014

Part E of the State Planning Policy provides for interim development assessment provisions for local government until such time as the State Planning Policy is reflected within the planning scheme. The state interests identified are listed below.

Liveable communities: Not applicable as the proposal does not involve community title.

Mining and extractive resources: Not applicable as the proposed Material Change of Use is not within a resource/processing area of a KRA or the separation area for the resource/processing area of a KRA.

Biodiversity: The purpose of the Biodiversity State Interest is to ensure matters of environmental significance are valued and protected, and the health and resilience of biodiversity is maintained or enhanced to support ecological integrity. The application triggers assessment against the state interest due to the site being mapped as containing matters of state environmental significance.

Development:	
(1) Enhances matters of state environmental significance where possible, and	The proposed development has been sited to avoid any clearing of mapped remnant vegetation.
(2) Identifies any potential significant adverse environmental impacts on matters of state environmental significance	The proposed development has been strategically sited to avoid any clearing of mapped remnant vegetation. High Ecological Significant Wetlands have been identified on site, however the proposed extraction, processing and stockpile areas are located more than 500 metres from these areas. This is evidence to suggest the proposed development has identified and avoided matters of state environmental significance.
(3) Manages the significant adverse environmental impacts on matters of state environmental significance from, or otherwise mitigating, those impacts.	The Environmental Management Plan includes a Water Quality Management Plan to support the application, with intention to manage and mitigate any matters of state environmental significance.

Coastal environment: Not applicable as the subject sites are not located within a coastal management district.

Water quality: The purpose of the Water Quality State Interest is to ensure that the planning, design, construction and operation of development should be undertaken in a manner that protects environmental values and maintains or enhances water quality. The site is mapped as containing 'MSES – Regulated vegetation', 'MSES – Regulated vegetation (intersecting a watercourse)', and 'MSES – High Ecological Significance wetlands', therefore assessment against this state interest is required.

Development:	
(1) Avoids or otherwise minimises adverse impacts on the environmental values of receiving water arising from: (a) altered stormwater quality or flow, and (b) water (other than contaminated stormwater and sewerage), and (c) the creation or expansion of non-tidal artificial waterways, and	In terms of potential acid sulfate soils, the applicant advised as part of their application that the resource investigation conducted in early 2015, found no acid sulfate soils or potential acid sulfate soils in the proposed resource areas. High Ecological Significant Wetlands and regulated vegetation associated with a watercourse have been avoided by the siting of the proposed development. The applicant has submitted an Environmental Management Plan that includes a Water Quality Management Plan to support the application and also a Hydrology Assessment Report which details how stormwater runoff and on site water will be managed appropriately with no impact on the nearby waterways and wetlands. Conditions are included in the recommendation requiring the development to commence, and be maintained, operated and completed generally in accordance with the approved plans and documents. The Environmental Authority and the ERA response issued by the State also impose conditions requiring compliance with supporting reports and operation of the activity to reduce the potential for the use to have significant adverse impacts.
(2) Complies with the SPP Code: Water quality.	The submitted Hydrology assessment report indicated that the development will ensure all captured runoff within the resources areas will be adequately treated onsite to meet the water quality objectives of the policy. Conditions are included in the recommendation requiring the development to commence, and be maintained, operated and completed generally in accordance with the

	approved plans and documents. The Environmental Authority and the ERA response issued by the State also impose conditions requiring compliance with supporting reports and operation of the activity to reduce the potential for the use to have significant adverse impacts.

Emissions and hazardous activities: Not applicable as the subject site is not located within a management area.

Natural hazards: The purpose of the Natural Hazards, Risk and Resilience State Interest is to ensure natural hazards are properly considered, community resilience is increased, and hazards are avoided or the risks are mitigated to an acceptable or tolerable level. The proposed development requires assessment against this state interest as the site is located within a flood hazard and bushfire hazard area.

Development:	
(1) Avoid natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and	The proposal is susceptible to flooding due to the low lying nature of the development and proximity to the Fitzroy River that is known to flood the subject site. In preparation to avoid and manage flooding of the proposed development, the applicant has advised it will utilise the Bureau of Meteorology flood warning system to ensure the site is appropriately evacuated prior to a flood event. The nature of the proposed development is considered resilient in a flood event and will not increase a risk to lives and property. In terms of bushfire risk, the applicant compiled a Bushfire Management Plan which identified the majority of the site being low hazard. This assessment takes into consideration slope, aspect and vegetation, and contributing mitigation characteristics include the site is flat and maintained by grazing. The risk of a bushfire internally to the property is low due to the site being bound by the Fitzroy River banks.
(2) Supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and	There are two (2) locations on Etna Creek Road that are subject to flooding at peak times and subsequently closed for access. Despite this, the applicant has prepared a pre and post Flood Management Plan that indicates all buildings and structures will be located within the northern stockpile area on a high point of the site. The proposed development includes one (1) internal access for ingress and egress from the site. According to the Bushfire Management Plan, it is not envisaged a high intensity fire is possible allowing time for safe

	and unobstructed evacuation from the site.
(3) Directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and	The proposal will avoid an increase in the severity of bushfire and flood risk.
(4) Avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard, and	Fuel storage will be located within the northern stockpile area which is located above the one (1) in fifty (50) year flood event level.
(5) Maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard	The proposed development has been strategically sited to avoid any clearing of mapped remnant vegetation, therefore considered to maintain natural processes and the protective function of the land.

State transport infrastructure: The State Assessment and Referral Agency response provides conditions relevant to Strate transport matters.

Strategic airports and aviation facilities: Not applicable as the subject site is not proximal to identified aviation facilities.

Planning Scheme Shire Wide Outcomes

The Shire Wide Desired Environmental Outcomes, as identified by section 2.2 of the *Livingstone Planning* Scheme *2005* are as follows:

(a) Development does not adversely affect the values of the Shire's natural environment including coastal areas, wetlands, beaches, headlands, waterways, protected areas, undeveloped hillslopes, and areas of significant native vegetation, from any adverse effects accruing from clearing, soil degradation and pollution, due to erosion and contamination, acidification, salinity, waste disposal and any modifications to natural processes.

Complies:

The Fitzroy River envelopes the subject site along the eastern, southern and western boundaries. The site also contains wetlands, remnant vegetation and locally significant vegetation. The siting of the resource, processing and stockpile areas is strategically placed outside mapped areas and positioned with a one hundred (100) metre buffer to the Fitzroy River.

The proposal is supported by an Environmental Management Plan that aims to support natural values of the Shire's environment and details measures to safeguard the surrounding environment including detailed plans in relation to environmental matters such as water and air quality, hydrocarbons and chemicals, waste and weeds, rehabilitation and flooding. Furthermore, the Environmental Management Plan is conditioned as an approved plan in th recommendation in addition to compliance with the *Environmental Protection Act 1994*.

(b) Development does not adversely affect the quality and quantum of water available for a range of consumptive uses throughout the Shire.

Complies:

The proposed development will not affect the Shire's natural water supply. The site is not serviced by the reticulated water supply network and contains four (4) water bores on site and connection pipe from the Fitzroy River for irrigation.

Furthermore, the development is supported by a Water Quality Management Plan within the Environmental Management Plan which details measures to ensure any potential adverse impacts on water quality is mitigated appropriately.

(c) *Risks to safety, property and the environment are not increased by the interaction of development and natural or other hazards, including flooding, bushfires, disturbance of acid sulfate soils, storm tide, cyclonic weather events and landslide.*

Complies:

The subject sites are susceptible to flooding, bushfire, stormtide hazard and are mapped for potential or known acid sulfate soils. The proposal is accompanied by an Environmental Management Plan which includes a Pre and Post Flood Management Plan, which aims to control potential environmental impacts occurring as a result of the site being mapped within a flood area. There are two (2) locations on Etna Creek Road that are subject to flooding at peak times and subsequently closed for access, however it is noted that local flood warnings are issued regularly in a potential flood event which would be utilised by operators to ensure the risk is minimised.

In terms of bushfire risk, the applicant compiled a Bushfire Management Plan which identified the majority of the site being low hazard. This assessment takes into consideration slope, aspect and vegetation, and concludes that the risk of a bushfire internally to the property is low due to the site being bound by the Fitzroy River banks.

(d) *Development protects the economic values of natural resources, including good quality agricultural land, extractive and mineral resources, vegetation, and water.*

Complies:

The existing rural use will continue in synergy with the proposed development. The proposed development encompasses a total of area of 128 hectares and is not anticipated to hinder the agricultural and research activities on the site.

The site comprises a significant sand and gravel resource that is to be utilised by the local and regional community. The extractive industry will stimulate economic circulation and is anticipated to support the local building and construction industry. Supply will be used for roads, domestic, commercial and community wide infrastructure needs.

(e) *Development provides a benefit to and satisfies an economic demand of residents of the area in which it is located.*

Complies:

There is no known benefit resulting from the extractive industry use. The site comprises a significant sand and gravel resource that is to be utilised by the local and regional community. The extractive industry will stimulate economic circulation and is anticipated to support the local building and construction industry. Supply will be used for roads, domestic, commercial and community wide infrastructure needs.

(f) *Opportunities for maintaining and improving employment resulting from advancements in information technology and emerging business and industry trends are maximised.*

Complies:

The proposed development will have approximately two (2) to three (3) employees per shift however is not anticipated to provide significant advancements in information technology and emerging business.

(g) *The Shire's tourism industry is strengthened and expanded based on the sustainable use of natural, cultural, and man-made assets, and the orderly provision of services and facilities.*

Not applicable:

The proposal is not linked to changes in the tourism industry.

(h) Yeppoon continues to function as the main business centre and administrative hub for the Shire.

Complies:

The proposed development will not compromise the town centre functions of Yeppoon.

(i) Development promotes the efficient use, and provides for the orderly expansion of the Shire's movement system, including motorised and non-motorised modes.

Compliance achieved through condition 4.0:

The haulage route (Etna Creek Road) must cater for the proposed development by design and construction to a standard that is suitable for the traffic generated by the development operating at the maximum extraction rate as imposed through condition 4.0 in the recommendation. The condition ensures the safe and efficient operation of the haulage route. The proposed haulage route from Etna Creek Road intersects the Bruce Highway, the main arterial road through the Shire.

(j) Development occurs in an area:

(i) which is intended for the development as identified by the outcomes for zoned land; and

(ii) in which services and facilities required in respect of the development are existing, planned or provided by the development.

Compliance achieved through condition 4.0:

The proposed extractive industry is not a preferred use in the rural zone and could not be considered a consistent use but for the haul route road works condition 4.0 in the recommendation. Without the road works being designed and constructed to the minimum formation and width and to a standard (including geometric, structural and drainage aspects) that is suitable for the traffic generated by the development operating at the maximum extraction rate, the development would not be providing the services (haul route) required in response of the type of development. Further, without condition 4.0 the outcomes for the zone would be compromised as the development would create an adverse impact on the amenity of the locality in terms of haul vehicle movements on Etna Creek Road creating road and traffic safety impacts.

It is acknowledged that the reality of extractive activities is that the operation can only occur where the resource is present however the development must ensure services and facilities required in respect of the development are provided by the development where they are not existing or planned.

(k) Development does not adversely affect:

(i) the community's health and safety; or

(ii) the amenity enjoyed by people in different areas of the Shire.

Partial compliance and where conflict exists, compliance achieved through condition 4.0:

It is considered that the impact of haul vehicle movements on Etna Creek Road will lead to traffic safety and road impacts which would affect the immediate community. Subsequently, in order for the development to be supported, suitable road works conditions have been included in condition 4.0 of the recommendation.

A detailed Environmental Management Plan has been provided and is recommended for approval including implementation of measures, to ensure the extractive activity reduces the potential for the use to have significant adverse impacts community

health, safety, or amenity values. Mitigation strategies include dampening potential dust generating areas by water spraying, maintaining road surfaces, covering loads and progressive rehabilitation. It is considered that the buffer to neighbouring residences, being in excess of one (1) kilometre, will reduce amenity concerns with the operation.

(l) Development reflects the community's reasonable expectations and harmonises with the natural environment and does not prejudice the Shire's existing scenic amenity, particularly along the Capricorn Coast.

Complies:

The proposed development has been planned to co-exist with existing rural pursuits on the subject site. Further, all remnant vegetation mapped on site has been strategically avoided by the resource, processing and stockpiling areas. The proposal will also include progressive rehabilitation.

Further it is reasonable to expect the community to understand that extractive operations can only occur where the resource is present, however it is also considered to be a reasonable expectation of the community that a development ensures services and facilities required in respect of the development are provided by the development.

(m) The community values of places and landscapes reflecting the community's history and identity are not detrimentally affected by development.

Complies:

There are no mapped cultural features identified on the site and subsequently, the proposed development is not anticipated to impact on the community's history and identity.

Summary of Desired Environmental Outcome assessment

The performance assessment of the proposal demonstrates that the development will not compromise the Planning Scheme Shire Wide Desired Environmental Outcomes. However, compliance with Desired Environmental Outcome (i), (j) and (k) is only achieved through road works conditions included in condition 4.0 of the recommendation and without for these conditions the development does not provide services (a haul route) required in respect of the development, inhibits the efficient use of the movement system (road) and has the potential to create significant adverse impacts on the surrounding community in terms of road impacts and traffic safety impacts.

Rural Zone Outcomes

The Overall Outcomes applicable to the Rural Zone are set out at section 3.3 of the scheme as follows:

(1) Purpose

(a) The purpose of the Rural Zone Code is the achievement of the overall outcomes sought for the Rural Zone.

(b) The overall outcomes sought for the whole of the Rural Zone are:

(i) Land used for rural activities such as grazing, agriculture and horticulture is protected from development, which in Council's opinion would significantly infringe on the landscape setting and rural amenity of the Shire;

(ii) Land with productive capacity is preserved for a range of existing and emerging agricultural activities significant to the economy of the Shire;

(iii) Large tracts of bushland identified as having significant environmental value are protected from development;

(iv) Agriculture, including both extensive and intensive activities is protected from land use conflicts resulting from the location of non-rural activities on rural land;

(v) Uses and works are located and designed to maximise the efficient use and extension and safe operation of infrastructure;

(vi) Residential purposes are ancillary to the primary rural purposes in the rural area; and

(vii) Mineral and extractive resources and transport routes associated with resources are protected from incompatible development.

The consistent and inconsistent land uses in the Rural zone are as follows:

O1 (a) Only uses consistent with the overall outcomes for, and preferred for development within the Rural zone are established in the zone.

(b) The following uses and use classes are consistent with, and preferred within the Rural zone:

(i) All Rural Purposes

O2 Provided the following uses are *developed:*

- *to be compatible with surrounding Rural Purposes by being of similar scale, intensity and character, and*
- *to support preferred uses, and*
- *to not adversely affect the amenity of the locality; or*
- *to provide recreational or community facilities that are more appropriately located in the rural area;*

they are consistent uses within the Rural zone:

(a) Residential Purposes comprising:

a. a single dwelling house per lot,

b. Home-based business,

c. Host farm.

(b) Arts and craft centre,

(c) Extractive industry,

(d) Garden centre,

(e) Landscape supplies,

(f) Local utility,

(g) Major utility,

(h) Outdoor recreation, and

(i) Telecommunications facility (medium impact)

O3 Uses other than:

- *preferred uses nominated in O1, or*
- *consistent uses developed to comply with the provisions set out in O2;*

do not establish in the Rural Zone, do not comply with the overall outcomes sought for the Rural Zone and conflict with this code.

The proposed extractive industry is not a preferred use in the rural zone and cannot be considered a consistent use without for the haul route road works condition 4.0 in the recommendation. Without the road works being designed and constructed to the minimum formation and width and to a standard (including geometric, structural and drainage aspects)

that is suitable for the traffic generated by the development operating at the maximum extraction rate, the development would create an adverse impact on the amenity of the locality in terms of haul vehicle movements on Etna Creek Road creating road and traffic safety impacts.

Without the road works condition 4.0 the development conflicts with the rural zone purpose in terms of a conflict with:

- overall outcome (1)(b)(v) in respect of being a use and including works (as proposed) that are not designed to ensure efficient use, extension and safe operation of infrastructure and instead have adverse impacts on the safe operation of infrastructure (being the haul route); and
- specific outcome O2 dot point 3 in respect of the amenity of the locality and the development of the use (as proposed) would have the potential to create significant adverse impacts on the surrounding community in terms of road impacts and traffic safety impacts.

In terms of the on-site operation of the extractive industry activity, the proposed development has been planned to co-exist with the existing rural activities on the site without impeding on their existing operation.

The large tracts of significant vegetation/bushland are proposed to be retained on site and the development site has been strategically sited to as avoid any clearing and protected from development by mitigation measures detailed within the Environmental Management Plan.

The closest residence to the extractive resource area is approximately four (4) kilometres and approximately 1.6 kilometres to the stockpile area. The site access to the premises is approximately 500 metres to the closest residence. No adverse noise impacts are anticipated as the development has been conditioned to comply with environmental standards. The Environmental Management Plan includes a Noise Management Plan for onsite operations and haulage vehicles. Subsequently, no adverse noise impacts are anticipated by the development.

Rural Zone Code Requirements

The following is an assessment of the proposal against the Rural Zone Code, which includes an assessment of the development against the relevant specific outcomes of the code.

Specific Outcomes		**Response**
Subdivision Design		
O4	Reconfigured lots are designed and developed with: sufficient area and suitable proportions for preferred or consistent uses; • adequate frontage for safe and convenient vehicular and pedestrian access; • suitable areas within each lot for the location of relevant activities and works, and: • do not expose people and works to unacceptable risks from flooding or other hazards.	**Not applicable** The proposed development does not involve subdivision of land.
Character and Amenity		
O5	Uses and works are located, designed and operated to minimise adverse	**Complies** The application has been accompanied by an

Specific Outcomes		Response
	impacts on: • existing environmental conditions relating to air, water and soil, • the amenity of adjacent properties and public spaces, • visual quality of landscapes in terms of: – reducing ribbon development and sprawl, – loss of green break separations, • obstructing significant local and distant views of prominent natural features and landmarks, and • the health and safety of people using the premises and adjacent premises.	Ecological Assessment, Environmental Assessment Report and Management Report that are considered to address any on and offsite impacts of the proposed development on the natural environment and the adjacent properties. Furthermore, the siting of the resource, processing and stockpiling areas has been strategically sited to avoid remnant vegetation and have a buffer in excess of 100 metres to the Fitzroy River. The proposal will not have any impact on visual quality, considering the minor footprint, and flat topography. Furthermore, the proposal cannot be viewed from public places. In terms of on and offsite health and safety, it is considered there are adequate separation distances between the proposed extraction area and adjoining residential development, in excess of one (1) kilometre. In order to reduce impacts on the haulage route (Etna Creek Road) and ensure the health and safety of people using the premises and adjacent premises, suitable roadworks conditions have been included in condition 4.0 of the recommendation.
O6	Buildings and structures are: • of a type and scale which have an attractive, functional appearance; • constructed of materials and finishes compatible with other development in the area; • integrated with the physical attributes of the site, including appropriate provision for access to natural light and ventilation, privacy, noise attenuation, drainage, landscaping, outlook and off-street parking; and • designed to adequately screen materials stored outside buildings when viewed from adjacent premises and public spaces	**Complies** A site office inclusive of amenities is proposed as a part of the application. The site office will be in the form of temporary demountable building and will not be visible from neighbouring premises. It is noted that the processing plant conveyors, may approach fifteen (15) to twenty (20) metres in height, however, it is not anticipated that the conveyors will be visible from public places and due to the large scale of the site and the setback distances, will not be intrusive when viewed from adjoining properties.
O7	For a noise sensitive place, activities are laid out and buildings are designed and constructed to mitigate to a level, that does not unreasonably adversely affect the health and safety of people using premises, the effects of noise from: • Traffic on major roads (including State-controlled Roads); or	**Not applicable** The subject sites are not mapped as being a noise sensitive place in accordance with Schedule 1 – Dictionary.

Specific Outcomes		Response
	• Operations within railway corridors.	
Cultural Heritage Values		
O8	Cultural heritage values associated with the landscape features of a site and its surroundings or relics of past activities found during development of the site are respected and are not subjected to changes that would significantly reduce the capacity to appreciate those areas, places and sites, their character or the memories or history they represent, in terms of visual detraction, public accessibility or physical change, damage or removal.	**Complies** The subject site is not identified as containing any known cultural heritage values mapped in Schedule 3 of the scheme.
Flood Immunity		
O9	Development is immune to flood events which result in unacceptable risk to health and safety or unacceptable risk of property damage.	**Complies.** The proposal is susceptible to flooding due to the low lying nature of the subject sites and proximity to the Fitzroy River that is known to flood the subject site. In preparation to avoid flooding of the proposed development, the applicant has advised it will utilise the Bureau of Meteorology flood warning system to ensure the site is appropriately evacuated prior to a flood event. Furthermore, a Pre and Post Flood Water Quality Management Plan and a Water Quality Management Plan have been prepared as part of the Environmental Management Plan in addition to a Hydrology Assessment Report, which will be conditioned accordingly as part of the recommendation.
Vehicle Parking and Movement		
O10	Development is provided with an on-site parking and movement system designed and constructed to: • be integrated with the site layout including: – direct access to a road providing a level of service required to accommodate traffic generated by the use; and – appropriately designed footpath crossovers; and – provision for safe pedestrian movement between public footpath and facility entry points; and • accommodate all modes of transport (including motor vehicles and bicycles) generated by the use;	**Complies** All parking and vehicle movements are accommodated on site. The existing access to the site will be utilised by the proposed development.

Specific Outcomes		Response
	and • facilitate non-discriminatory accessibility; and • provide for safe and efficient loading and unloading of goods; and • allow for vehicle queuing necessary for the use; and • provide for passenger set down/pick up necessary for the use; and • facilitate public access to the foreshore and riparian open space networks.	
Infrastructure		
O1	Water supply, sewerage, drainage, roads, power and communications are provided to meet the appropriate standards of service and construction at least whole-of-life cost, which: • comprise components and materials that are: – readily accessible and available; and – robust and reliable in terms of operational life and purpose; and – easily maintained without unnecessarily requiring specialist expertise or equipment; and • are integrated with the design, construction and operation of existing systems and facilitate orderly provision of future systems.	**Partial compliance and where conflict exists, compliance achieved through condition 4.0:** The site is not serviced by the reticulated water or sewerage supply networks. The operation of the Extractive industry will be largely self-sufficient utilising on-site water via existing water bores. The Planning Assessment Report also indicates that using pond water that will be formed within the extraction area. Used water will be returned to the pond where suspended particles will settle through sedimentation, and the water will be re-used. Wastewater from the toilet of the proposed site office must be disposed of on site and will be conditioned accordingly. Condition 4.0 in the recommendation requires road works to be designed and constructed to the minimum formation and width and to a standard (including geometric, structural and drainage aspects) that is suitable for the traffic generated by the development operating at the maximum extraction rate. But for the haul route road works condition 4.0, the development would not provide road infrastructure to meet the relevant standards and in terms of haul vehicle movements on Etna Creek Road, would create road and traffic safety impacts.

As evident from the above assessment, the proposal generally complies with the various requirements of the Rural Zone Code. Where there are deviations from the Specific Outcomes, suitable justification and alternatives have been provided, in support of the proposal.

Special Management Areas Codes

The subject site is affected by seven (7) of the elements within the Natural Features Code:

(i) Acid Sulfate Soils (land below five (5) metres Australian Height Datum) (Overlay Map O8);

(ii) Bushfire Hazard (Overlay Map O5);

(iii) Wetland (Overlay Map O3);

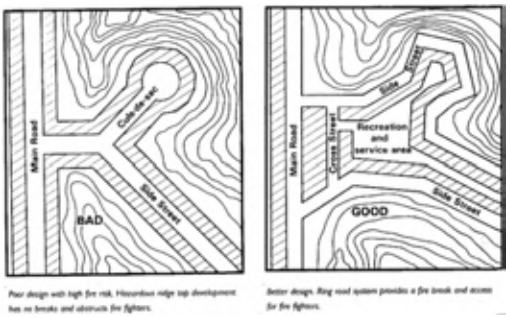
(iv) Waterway (Overlay Map O3);

(v) Drainage Problem (Overlay Map O2);

(vi) Storm Tide Hazard (Overlay Map O5); and

(vii) Good Quality Agricultural Land (Overlay Map O4).

Specific Outcomes		**Response**
Acid Sulfate Soils Special Management Area		
O4	Natural or built environments and human health are not harmed by the production of acidic leachate resulting from development in areas of known and potential acid sulfate soils by: (a) Avoiding disturbance to areas of acid sulfate soils that would produce or contribute to acidic leachate; (b) Treating and managing the disturbance of acid sulfate soils to minimise generation of acidic leachate within manageable levels; (c) Treating and managing surface and groundwater flows from areas of acid sulfate soils to minimise environmental hard.	**Complies** The applicant advised as part of their application that the resource investigation conducted in early 2015, found no acid sulfate soils or potential acid sulfate soils in the proposed resource areas.
Bushfire Hazard Special Management Area		
O5	Public safety, lives and property are not placed at unacceptable levels of risk.	**Complies** The application includes a Bushfire Management Plan which identified the majority of the site being low hazard. This assessment takes into consideration slope, aspect and vegetation, and concludes that the risk of a bushfire internally to the property is low due to the site being bound by the Fitzroy River banks. Therefore, it is considered that public safety, lives and property are not placed at unacceptable levels of risk. Furthermore, the Bushfire Management Plan will be conditioned as part of any approval.
O6	The highest intensity of use occurs in those parts of the site which are least bushfire prone and limits the intensity of use elsewhere	**Complies** The findings of the Bushfire Hazard Assessment determined the bushfire risk is low due to the site being bound by the Fitzroy River banks. Furthermore, the Bushfire Management Plan will be conditioned as part of any approval.

O7	Purposes resulting in high concentrations of people on a site (including child care centre, educational establishment, hospital, residential purposes comprising multi-unit long term accommodation and short term accommodation, commercial and industrial purposes) being exposed to unacceptable levels of risk are inconsistent with the outcomes sought for this special management area	**Not applicable** The proposed extractive industry will have approximately two (2) to three (3) employees on the site per shift and therefore not resulting in high concentrations of people.
O8	Development is sited and designed to minimise bushfire risk having regard to: (a) aspect, (b) elevation, (c) slope, and (d) vegetation	**Complies** The Bushfire Hazard Assessment and Management Plan takes into consideration the topography of the land, however considering it is relatively flat and cleared, it is considered the risk is minimal. Furthermore, the Bushfire Management Plan will be conditioned as part of any approval.
O9	Road layouts facilitate easy and safe movement in the event of encroaching fire and provides for alternative safe access if one direction is blocked in the event of fire (Refer Figure A below).  Figure A	**Complies** Safe evacuation via internal the access route is considered sufficient for employees due to the low risk of bushfire.
O10	A sufficient supply of water is available for firefighting purposes	**Complies** There is ample supply of water for firefighting purposes considering the four (4) existing bores and irrigation pump from the Fitzroy River.
Wetland Special Management Area		
O15	There are no significant adverse effects on identified wetlands in terms of: (a) habitat; (b) water quality; (c) landscape quality.	**Complies** The proposed development has been designed so that the operation areas avoid mapped wetlands and maintain a 100 metres buffer from the Fitzroy River. Furthermore, the Environmental Management Plan details appropriate actions to ensure the development does not impact on the wetlands, such as maintaining the water quality of nearby wetlands through the diversion of clean overland flow using a

		series of suitable bunds and/or diversion drains. The Environmental Management Plan will be conditioned as part of an approval.
Waterway Special Management Area		
O16	There are no significant adverse effects on identified waterways in terms of: (a) habitat; (b) riparian vegetation; (c) water quality; (d) water flow; (e) landscape quality and amenity; and (f) recreational value.	**Complies** The proposed development has been designed so that the operation areas avoid mapped wetlands and maintain a 100 metres buffer from the Fitzroy River. Furthermore, the Environmental Management Plan details appropriate actions to ensure the development does not impact on the waterway and will be conditioned as part of an approval.
O17	Riparian land is preserved for public use where the land is required for ecological, open space or recreation functions including: (a) public use; (b) access for maintenance; (c) linking core and remnant habitat areas (d) protecting water quality and ecological processes; and (e) other public benefit.	**Not applicable** The land is freehold and is not available for public use. Furthermore, the extraction site is setback 100 metres from the Fitzroy River.
Drainage Problem Special Management Area		
O18	Development levels are set above the design flood level to reduce property damage and, where applicable, ensure public safety.	**Complies** The subject sites are susceptible to flooding due to the low lying nature of the subject sites and proximity to the Fitzroy River that is known to flood the subject sites. In preparation to avoid flooding of the proposed development, the applicant has advised it will utilise the Bureau of Meteorology flood warning system to ensure the site is appropriately evacuated prior to a flood event. Furthermore, a Pre and Post Flood Water Quality Management Plan and a Water Quality Management Plan have been prepared as part of the Environmental Management Plan in addition to a Hydrology Assessment Report, which will be conditioned accordingly as part of the recommendation. Furthermore, Council's Infrastructure Unit have reviewed the proposal and are supportive of the measures detailed within the abovementioned reports.
Storm Tide Hazard Special Management Area		

O19	Development levels are set above the design flood level to reduce property damage and, where applicable, ensure public safety.	**Complies** The subject sites are susceptible to flooding due to the low lying nature of the subject sites and proximity to the Fitzroy River that is known to flood the subject sites. In preparation to avoid flooding of the proposed development, the applicant has advised it will utilise the Bureau of Meteorology flood warning system to ensure the site is appropriately evacuated prior to a flood event. Furthermore, a Pre and Post Flood Water Quality Management Plan and a Water Quality Management Plan have been prepared as part of the Environmental Management Plan in addition to a Hydrology Assessment Report, which will be conditioned accordingly as part of the recommendation. Furthermore, Council's Infrastructure Unit have reviewed the proposal and are supportive of the measures detailed within the abovementioned reports.
Good Quality Agricultural Land Special Management Area		
O24	Good quality agricultural land is retained for rural purposes by: (a) conducting other uses only if they are not irreversible and do not reduce the productive capacity of the land or alienate its use for rural purposes or result in land use conflicts with adjacent existing rural uses; (b) avoiding the use of identified land for other uses unless it can be proven that: (i) the land is not actually good quality agricultural land; or (ii) there is an overriding need in terms of public benefit for the proposal and the proposal cannot be located on alternative sites that are not identified as good quality agricultural land, including if: – the proposed location has features that make it desirable for the proposal; and – the features are not available in areas not identified as good quality agricultural land	**Complies** The proposed development has been planned to co-exist with the existing rural use on site without impeding on existing operation. The proposal will not involve blasting or crushing of material which may result in noise induced stress on animals. The proposed development will utilise an existing access track that bypasses existing cattle grazing. Considering the small development footprint of 128 hectares, it is not considered to impinge on the 1,524 hectare subject site. Subsequently, the proposal will not interfere with the productive capacity of the land, nor alienate existing or potential rural purposes.
O25	Subdivision of good quality agricultural land does not reduce the productive	**Not applicable**

	capacity of the land	The proposal is not for the subdivision of land.

HAUL ROUTE DETAILS

Etna Creek Road forms the haul route from the development site to the Bruce Highway (State-controlled road). Etna Creek Road is a Council controlled road, measuring approximately 8.65 kilometres in length and varies in formation and seal width. The haul route can be divided into five (5) sections based on the existing pavement and can be described as follows:

Section A:

This section commences from the Yaamba Road (Bruce Highway) intersection, measures approximately 1.3 kilometres in length, is sealed and is approximately 6.2 metres wide, however it is noted that this section extends to fourteen (14) metres wide at the intersection of Yaamba Road. This section is recently constructed.

Section B:

This section immediately adjoins Section A to the west and measures 1.6 kilometres in length, is sealed and is approximately 6.5 metres wide. This section has recently been reconditioned.

Section C:

This section immediately adjoins Section B to the west and measures 3.8 kilometres in length, is sealed and is approximately 3.5 metres wide. This section has been resealed a couple of times, is deteriorated by way of potholes, the pavement has rutting and shoving exhibited along the wheel tracks, there is fretting of the pavement edges, damage to the pavement shoulders and wheel tracks in the natural soil to the sides of the pavement due to vehicles having to leave the pavement to pass other vehicles travelling in the opposite direction.

This section was constructed, has been resealed and maintained, based on limited traffic movements and the surrounding land uses. It was not constructed or maintained to accommodate heavy vehicles, particularly those that would be generated by the proposed development.

Section D:

This section immediately adjoins Section C to the west and measures 1.7 kilometres in length, is sealed and is 6.5 metres wide. This section has recently been reconditioned.

Section E:

This section immediately adjoins Section D to the west and forms the final part of the haul route. This section measures 800 metres in length, is unsealed gravel and is approximately six (6) metres wide. This section is in a condition reflective of the currently low traffic volumes.

Summary

The proposed development will generate substantial additional traffic loads greater than the existing traffic. The proposed hauling trucks are proposed to have a carrying capacity of thirty-six (36) tonnes, are expected to be nineteen (19) metres in length (truck and dog), with a standard width of 2.5 metres and are anticipated to make up to twenty-two (22) movements per day (eleven (11) vehicles each way).

Section A, B and D:

For the current traffic volumes are adequate and have no apparent safety concerns at present. For the traffic volumes if the development is approved (as detailed above), will be adequate, with no apparent safety concerns at present, but such traffic volumes will generate additional maintenance and reduce the service life of those sections.

Section C:

For the current traffic volumes, is substandard and has a number of features that may be a safety concern (for example, pot holes, fretting, shoulder damage, and wheel tracks to the side). For the traffic volumes if the development is approved (whether at 20,000 tonnes per annum or 80,000 tonnes per annum), would not be adequate and the safety concerns would be exacerbated.

Section E:

For the current traffic volumes, is, with regular maintenance equivalent to that for an unsealed gravel road, adequate and there are no apparent safety concerns at present. For the traffic values if the development is approved, would not be adequate, and given it is a school bus route, would likely involve safety concerns in the form of reduced visibility due to dust generated by heavy vehicles, and potholes and accelerated deterioration of the road, particularly during wet weather.

As detailed within this report, ongoing discussions between the applicant, Council and engaged consultants (by both the applicant and Council) have occurred throughout the extended assessment of the decision period and various options have been discussed, however Council was not supportive of the proposals.

The existing state of the road and associated drainage infrastructure demonstrates poor quality; however, the road is still functional to service the needs of the existing community. The current road maintenance approach at this stage is reactive. Etna Creek Road is not in the forward works program for upgrading works. Upgrading works on rural roads is covered by the Council '*Road- Upgrade of Unsealed Rural Roads to Sealed Standard Policy'*. While Etna Creek Road is approaching an average 150 vehicle per day movement (demonstrated by vehicle counts undertaken by Council), not all road sections reach the average 150 vehicles per day. Furthermore, the road is not experiencing high maintenance costs and the other criteria do not translate to a priority listing for upgrade works under the policy.

It is also noted that a total of thirty-nine (39) submissions were received by Council, objecting to the proposed development and all submissions did express concern in relation to the current state of the road and the proposed heavy vehicles exacerbating the existing issues with the road's condition and accelerating degradation of the road.

The recommendation includes conditions that require Etna Creek Road, as the haul route for the development to be designed and constructed to a standard satisfactory to accommodate the traffic generated by the development, and without those conditions, the application would be refused.

INFRASTRUCTURE CHARGES

Adopted Infrastructure Charges Resolution (No.2) 2015 for non-residential development applies to the application and it falls outside of the priority infrastructure area. Table 1 – Planning scheme use types to which the adopted infrastructure charges schedule apply, lists an Extractive industry as a Specialised use and in accordance with Table 7 – Adopted charge for non-residential development within the priority infrastructure area, the charges is to be decided by the Livingstone Shire Council at time of assessment as per section 3.2.

Council has not previously imposed an infrastructure charges on other extractive industry applications and proposed none in the case of this application.

CONSULTATION

The developer engaged stakeholder engagement consultants CPR Group to implement a stakeholder engagement program in addition to the prescribed requirements for public notification under the *Sustainable Planning Act 2009*. This was undertaken prior to the formal public notification period and recommendations were considered by the developer in finalising plans and technical reports for the application.

The proposal was the subject of public notification between 23 November 2015 and 16 December 2015, as per the requirements of the *Sustainable Planning Act 2009*, and thirty-nine (39) submissions of objection were received. From these submissions, thirty-eight (38) were properly made and one (1) was not properly made.

It was noted via a submission that one (1) of the public notification signs had fallen down during the public notification period due to weather conditions. The applicant advised that they became aware of the matter on Friday 11 December 2015, and Real Property Signs re-erected the sign on the afternoon of Saturday 12 December 2015. As the applicant allowed eighteen (18) business days for the public notification period, it is considered that the requirements of section 297 (1) of the *Sustainable Planning Act 2009* were still met and the period occurred for a total of seventeen (17) business days.

The following is a summary of the submissions lodged, with Council officer comments:

Issue	**Officer Comment**
More public notification required and public notification not being undertaken correctly.	As detailed above, the applicant has satisfied all public notification requirements in accordance with section 297 of the *Sustainable Planning Act 2009*, which includes: • Publishing a notice at least once in a newspaper circulating generally in the locality of the land. The applicant placed a compliance notice in The Rockhampton Morning Bulletin Newspaper on 20 November 2015. • Placing a notice on the land in the way prescribed under a regulation. The applicant placed multiple notices on the land from 21 November 2015 until 17 December 2015. • Giving a notice to the owners of all land adjoining the land. The applicant notified all adjoining land owners as required. Further, the applicant also undertook an additional stakeholder engagement process.
Traffic count did not include boat ramp users in holiday period	Noted. The traffic counts were made on between 26 August 2015 and 02 September 2015 and there were no public holidays or school holidays during those periods. It is not considered this traffic demographic is significant and regardless suitable conditions have been included in the recommendation requiring design and construction of the haul route.
Vacant lots on Etna Creek Road that will increase traffic movements over time.	Noted, however traffic growth resulting from population growth is considered throughout the above Council assessment. Furthermore, suitable roadworks conditions have been included in condition 4.0 of the recommendation.
Variation in amount of material being transported in and out from the quarry	Noted. The development is required to be undertaken in accordance with Council's conditions and the Environmental Authority. In particular the Environmental Authority has assessed the environmental impacts of the ultimate extraction based on the resources

Issue	Officer Comment
	areas and the thresholds for the ERAs and the development has been supported and conditioned accordingly. Further Council has included road works conditions in condition 4.0 of the recommendation for the maximum extraction rate for the development.
Royalties	Council will not receive royalties.
Rural zoning of the land (development is not in local community's reasonable expectation).	Under the zoning, an Extractive industry can be supported, subject to justification against the Desired Environmental Outcomes, Rural Zone Code and the Special Management Areas Code within the *Livingstone Shire Planning Scheme 2005*. The subject report addresses how the proposed development demonstrates compliance with the relevant criteria and can be supported subject to reasonable and relevant conditions.
Sand quarry oversupply (sixteen (16) quarries servicing the area). Other sand quarries are struggling with business.	As part of Council's assessment, it was not identified that a needs analysis was not required. The proposal can demonstrate compliance with the various requirements of the *Livingstone Shire Planning Scheme 2005*, as detailed within the subject report.
Endangered white throated snapping turtle is endangered species that nests along the Fitzroy River. This has not been addressed within the application	The subject site has confirmed occurrence of the vulnerable Rheodytes leukops (Fitzroy River Turtle) and the critically endangered Elseya albagula (White-Throated Snapping Turtle). The applicant has lodged a referral to the Federal Department of Environment in accordance with the *Environment Protection and Biodiversity Conversation Act 1999*, which is independent to this application process. Such matters of national significance are not dealt with specifically in the local government assessment under the *Sustainable Planning Act 2009*. However, it is noted that throughout the subject report, Council has undertaken a detailed assessment of environmental impacts given the proximity to the waterway and wetland areas.
Concerns pertaining to Etna Creek Road: • Safety (for cyclists (children and recreational), users of the school bus, concerns pertaining to the proposed truck and dog movements – for all users of the road) • Current condition of the road (road width, non-sealed section, wheel rutting, black	Condition 4.0 in the recommendation imposes a condition for the design and construction of the haul route to the relevant standard. The standard will be sufficient to allow for safe vehicle movements including the school bus. Council is aware that the whole lengths of Etna Creek Road consist of various widths and standards, as discussed in detail earlier in the report.

Issue	Officer Comment
soil) • Additional traffic due to the development • Flooding of the road (general flooding at 14 Mile Creek and Etna Creek crossing, flooding causes more pot holes) • School bus route (safety measures)	
Discrepancies within the Road Impact assessment	Council is aware of discrepancies stated in the Road Impact Report submitted by the applicant and notes that Council officers are not entirely relying on the Road Impact Assessment Report in the assessment. Other material such as independent advice from consultants engaged by Council and further updated reports form the applicant have been used as part of the assessment.
Intersection at the Bruce Highway: • Semi blind corner at Rockhampton Correctional Centre • Recently upgraded • Stop sign (not enough acceleration time)	This issue is existing relative to the proposed development and should be raised with the Department of Transport and Main Roads as the road controlling authority over the Bruce Highway. The department has assessed the development and has provided conditions but does not require an upgrade to the intersection.
Monitoring loads (weighbridge) and how will amount of product leaving per day be measured.	Both Council's conditions as recommended below, and the Environmental Authority issued by the Department of Environment and Heritage Protection, require the operator to keep a detailed record of extraction operations, including the quantity of sand and gravel transported from the subject site.
Dust, noise and air pollution concerns	The submitted Environmental Management Plan which will be conditioned as part of an approval, specifically details how these concerns will be mitigated such as 'dampening down cleared areas, extraction working areas, haul roads, stockpiles and the like'. Furthermore, it will be conditioned that development occur in accordance with the *Environmental Protection Act 1994*.
Loss of amenity	As detailed within the subject report, the application has been accompanied by an Ecological Assessment, Environmental Assessment Report and Management Report that are considered to address any on and offsite impacts of the proposed development on the natural environment and the adjacent properties. It is considered there are adequate separation distances between the proposed extraction area and adjoining residential

Issue	Officer Comment
	development, in excess of one (1) kilometre. In order to reduce impacts on the haulage route (Etna Creek Road), suitable roadworks conditions have been included in condition 4.0 of the recommendation.
Limited use for a number of years (use is unable to be regulated).	Any development approval will include reasonable and relevant conditions, which ensures development occurs in the appropriate manner.

SUMMARY OF ASSESSMENT

Etna Creek Road, at the current time, is satisfactory for current users of the road, however the current road cannot withstand the development traffic.

The proposed extractive industry conflicts with Desired Environmental Outcome (i), (j) and (k), is not a preferred use in the rural zone and conflicts with overall outcome (1)(b)(v), specific outcome O2 dot point 3 and specific outcome O5 and specific outcome O11 of the rural zone code.

The proposed extractive industry could not be considered a consistent use without the haul route road works condition 4.0 in the recommendation. Without the road works being designed and constructed to the minimum formation and width and to a standard (including geometric, structural and drainage aspects) that is suitable for the traffic generated by the development operating at the maximum extraction rate, the development would be refused as without the condition the conflict would be significant and serious.

By imposing condition 4.0 Council is mitigating the developments conflict such that it could be approved.

Pursuant to Section 326(1)(b) of the *Sustainable Planning Act 2009*, the assessment manager's decision may conflict with the Planning Scheme if there are sufficient grounds to justify the decision despite the conflict. The grounds applicable in this circumstance are:

(a) The approval includes conditions that require Etna Creek Road, as the haulage route for the development, to be designed and constructed to a standard satisfactory to accommodate the traffic generated by the development, and without those conditions, the application would be refused.

(b) The development will not hinder other current agricultural pursuits on site, and will not irreversibly affect the agricultural nature of the land for future agricultural pursuits.

(c) The approval includes conditions imposed by Council and a State Department to reduce the potential for the use to have significant adverse impacts on the surrounding community in terms of traffic, noise and dust.

(d) The development, provided that there is compliance with the conditions as imposed, will not conflict with:

- the *Livingstone Shire Planning Scheme 2005*; or
- relevant aspects of the applicable State Planning Policies.

Having regard to all of the above, it is recommended Council, from a land use perspective, consider the proposed development favourably as, pursuant to Section 326(1)(b) of *Sustainable Planning Act 2009*, there are considered to be sufficient grounds to justify a decision that favours the development proposed herein pursuant to conditions provided in recommendation D.

RELEVANT PERIOD

The applicant requested Council consider stating a relevant period of more than the four (4) years as provided for in section 341 (1)(a) of the *Sustainable Planning Act 2009* to

allow for the necessary further applications to be prepared, made, assessed and decided and for the relevant works to be undertaken prior to the commencement of use. Section 341 (1)(a) of the *Sustainable Planning Act 2009* provides an opportunity for Council to state a relevant period (currency period) different to the standard four (4) year period. This is supported and a recommendation is included for resolution on the matter.

PREVIOUS DECISIONS

It is noted that Council has previously approved development applications for a Material Change of Use for an Extractive industry both within proximity to the site and elsewhere in the region.

Each decision is made on its merits at the time and with the best planning information available. There are instances above whereby there were sufficient grounds to support the proposals, subject to reasonable and relevant conditions

BUDGET IMPLICATIONS

Management of this application and assessment has been undertaken within existing operational budget allocations.

LEGISLATIVE CONTEXT

The application has been assessed pursuant to the *Sustainable Planning Act 2009* and all subordinate legislation and policies.

LEGAL IMPLICATIONS

A decision by Council contrary to the approval sought by the applicant may be appealed to the Planning and Environment Court. The legal implications of deciding this development application unfavourably is the risk of appeal from the developer and/or a submitter. These potential legal implications also bring unknown budget implications

STAFFING IMPLICATIONS

There are no significant staffing impacts relevant to a decision on the application however significant officer resources have been committed to the assessment since 2015 focusing primarily on traffic and road matters

RISK ASSESSMENT

The risks associated with this assessment have been appropriately addressed in the body of this report. Specifically, the risk of appeal to any decision made by Council and any financial/budget implications such action may have. It should be noted that these risks are difficult to quantify at the assessment stage.

CORPORATE/OPERATIONAL PLAN

Corporate Plan Strategy GO4: Provide transparent and accountable decision making reflecting positive leadership to the community.

LOCAL GOVERNMENT PRINCIPLES

The local government principles are –

(a) Transparent and effective processes, and decision-making in the public interest; and

(b) Sustainable development and management of assets and infrastructure, and delivery of effective services; and

(c) Democratic representation, social inclusion and meaningful community engagement; and

(d) Good governance of, and by, local government; and

(e) Ethical and legal behaviour of councillors and local government employees.

CONCLUSION

The proposed extractive industry conflicts with Desired Environmental Outcome (i), (j) and (k), is not a preferred use in the rural zone and conflicts with overall outcome (1)(b)(v), specific outcome O2 dot point 3 and specific outcome O5 and specific outcome O11 of the rural zone code.

The development is able to occur, subject to conditions, in terms of on-site operations in a manner that reduces the potential for the use to have impacts of noise, dust and environmental and visually amenity.

The proposed extractive industry could not be considered a consistent use in the rural zone without the haul route road works condition 4.0 in the recommendation. Without the road works being designed and constructed to the minimum formation and width and to a standard (including geometric, structural and drainage aspects) that is suitable for the traffic generated by the development operating at the maximum extraction rate, the development would be refused as without the condition the conflict would be significant and serious. By imposing condition 4.0 Council is mitigating the developments conflict such that it could be approved.

Having regard to all of the above, it is recommended Council, from a land use perspective, consider the proposed development favourably as, pursuant to Section 326(1)(b) of *Sustainable Planning Act 2009*, there are considered to be sufficient grounds to justify a decision that favours the development proposed herein pursuant to conditions provided in recommendation D.

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Locality Plan

Meeting Date: 17 July 2018

Attachment No: 1

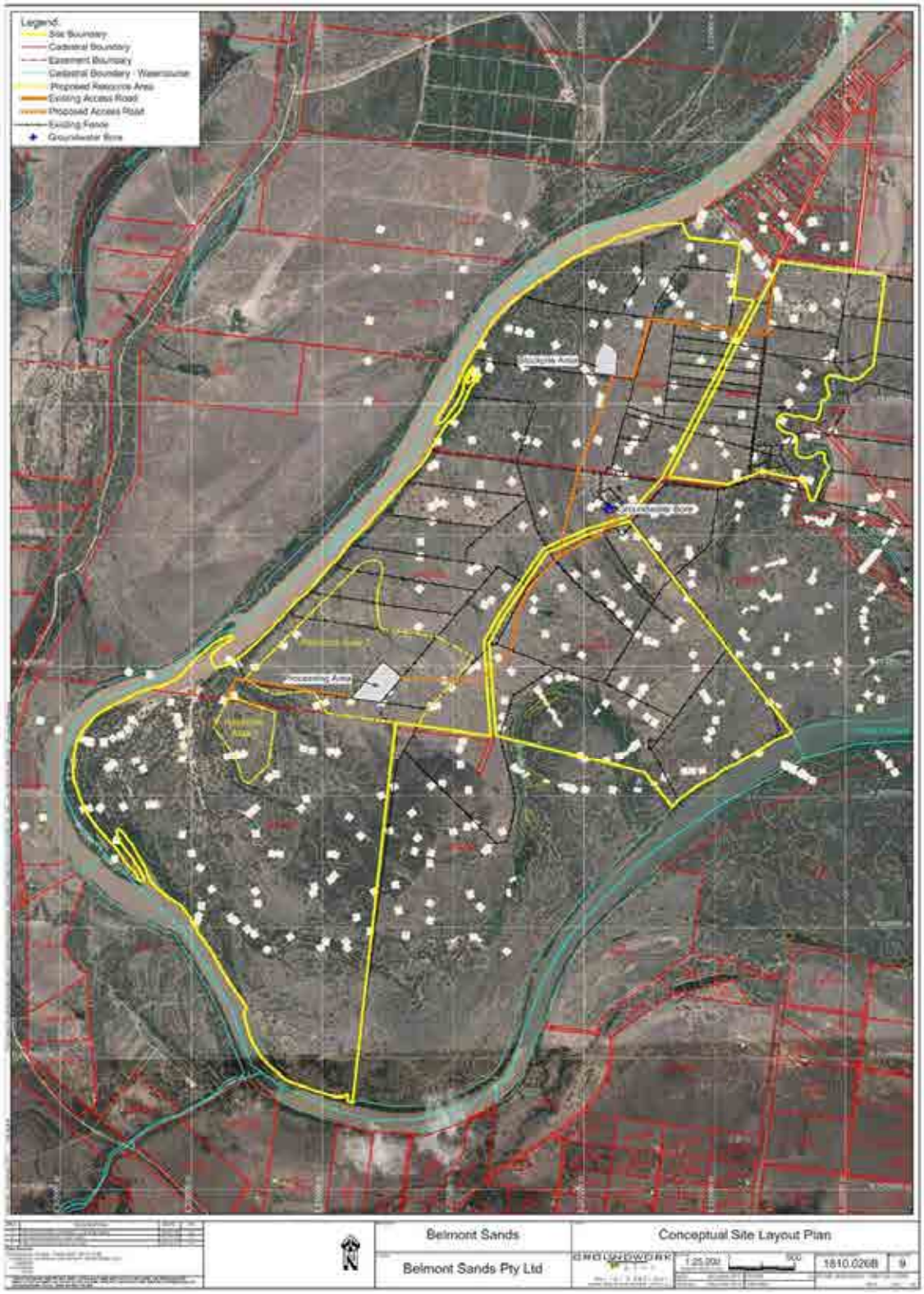
New Gracies Rd
Lindleys Rd
Greiss Rd
Keryn Dr
Steiners Rd
Dakers Rd
Dakers Rd
Paperbark Dr
Yaamba Rd
Bracken Rd
Etna Creek Rd
Vass Rd
Olives Rd
Meldrum Rd
Greenlake Rd
Parrott Dr
Glendale Rd
Eons Dr
Dawson Rd
Emmerson Dr
Angela Rd
Belmont Rd
ArcGIS Web Map
Map Created by: Web AppBuilder for ArcGIS
N
Livingstone

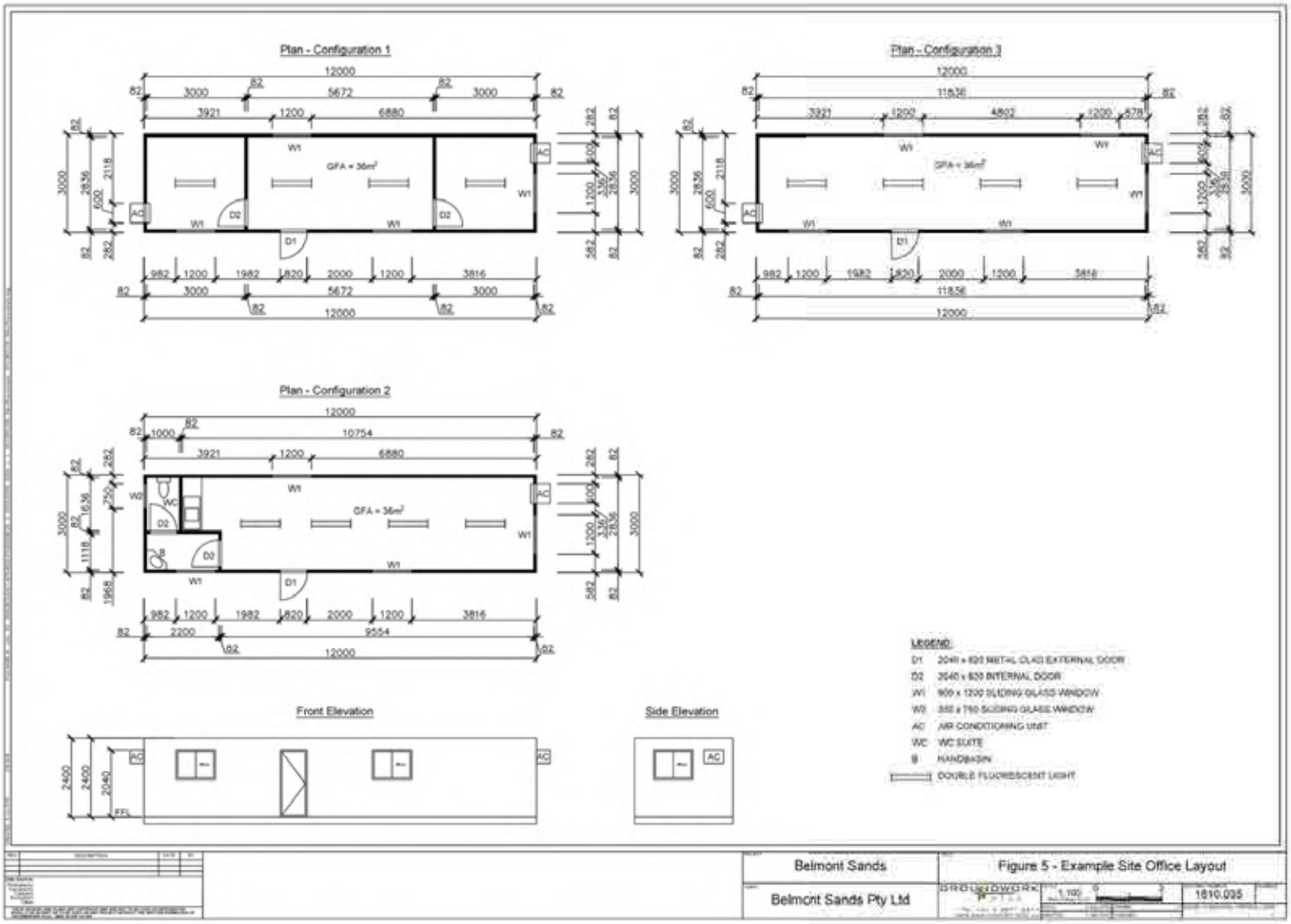
12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

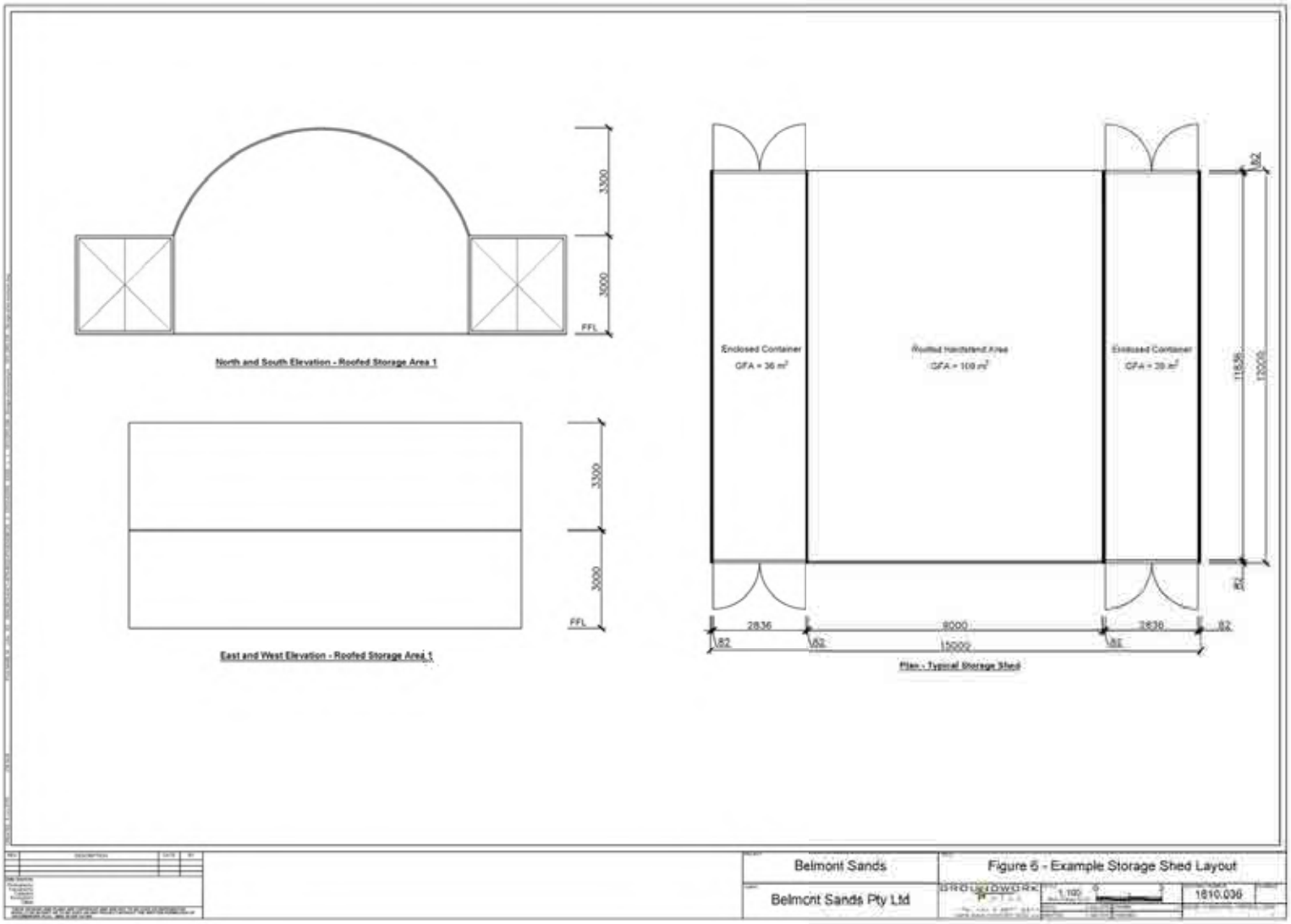
Proposal Plans

Meeting Date: 17 July 2018

Attachment No: 2


Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Existing Fence
Groundwater Bore
Belmont Sands
Belmont Sands Pty Ltd
Conceptual Site Layout Plan
1:25,000
1810.026B
9


Plan - Configuration 1
Plan - Configuration 3
Plan - Configuration 2
Front Elevation
Side Elevation
LEGEND
D1 2040 x 820 METAL CLAD EXTERNAL DOOR
D2 2040 x 820 INTERNAL DOOR
W1 900 x 1200 SLIDING GLASS WINDOW
W2 555 x 750 SLIDING GLASS WINDOW
AC AIR CONDITIONING UNIT
WC WC SUITE
B HANDBASIN
DOUBLE FLUORESCENT LIGHT
Belmont Sands
Belmont Sands Pty Ltd
Figure 5 - Example Site Office Layout
1810.035


3300
3000
FFL
North and South Elevation - Roofed Storage Area 1
3300
3000
FFL
East and West Elevation - Roofed Storage Area 1
Enclosed Container
GFA = 36 m²
Roofed Hardstand Area
GFA = 108 m²
Enclosed Container
GFA = 36 m²
2836
9000
2836
82
15000
Plan - Typical Storage Shed
Belmont Sands
Belmont Sands Pty Ltd
Figure 5 - Example Storage Shed Layout
1:100
1810.036

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Environmental Management Plan

Meeting Date: 17 July 2018

Attachment No: 3

GROUNDWORK plus

BELMONT SANDS
ENVIRONMENTAL MANAGEMENT PLAN

Prepared for:
Belmont Sands Pty Ltd

Date:
12 November 2015

Reference:
1810.610.001r1

Resources Environment Planning Laboratories

www.groundwork.com.au

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Ref. No.	1810_610_001r1

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Table of Contents

1. **Introduction** 1
1.1 Project Overview 1
2. **Site Details** 4
2.1 Potential Environmental Impacts 5
2.2 Relevant Legislation 6
2.3 Purpose of Environmental Management Plan 5
3. **Procedures and Policies** 7
3.1 Environmental Policy 7
3.2 Implementation and Training 7
3.3 Incidents and Complaints Procedure 7
3.4 Monitoring Requirements 8
3.5 Records and Reporting 8
4. **Management Plans** 9
4.1 Water Quality Management Plan 9
4.2 Air Quality (Dust) Management Plan 12
4.3 Noise Management Plan 15
4.4 Hydrocarbons and Chemical Management Plan 17
4.5 Waste Management Plan 19
4.6 Weed Management Plan 22
4.7 Rehabilitation Management Plan 25
4.8 Pre and Post Flood Management Plan 29
4.9 Ecological Management Plan 31

TABLES

Table 1 – Identification of Environmental Impacts 5
Table 2 – Action Plan for the Surveillance and Maintenance of Stormwater Control Devices 11
Table 3 – General Weed Control Options 24
Table 4 – Maintenance Schedule for Revegetation Works 26

DIAGRAMS

Diagram 1 Sand Extraction Process
Diagram 2 Incidents and Complaints Procedure Summary

Table of Contents

FIGURES

Figure 1	Site Location Plan	*(Drawing No. 1810.DRG.005r2)*
Figure 2	Conceptual Site Layout Plan	*(Drawing No. 1810.DRG.026Ar9)*
Figure 3	Conceptual Erosion and Sediment Control Plan	*(Drawing No. 1810.DRG.035Br3)*
Figure 4	Location of Sensitive Receptors	*(Drawing No. 1810.DRG.039r1)*

ATTACHMENTS

Attachment 1	Incident and Complaint Procedure
Attachment 2	Schedule 7 of the *Environmental Protection Regulation 2008*
Attachment 3	Schedule 2E of the *Environmental Protection Regulation 2008*
Attachment 4	State Emergency Services Business Flood Plan Template

1. Introduction

1.1 Project Overview

Belmont Sands Pty Ltd propose to develop an extractive resource ('Belmont Sands') in the Livingstone Shire Council (Council) area for the supply of sand and gravel to the building and construction industry (extractive industry). The site accessed by Etna Creek Road, Etna Creek QLD 4702 refer **Figure 1 – Site Location Plan** ('site'). The site comprises of the following lots:

- Lot 8 on RP601603
- Lot 5 on RP601603
- Lot 10 on SP142291
- Lot 6 on RP601603 (for road/access purposes only)
- Lot 3 on RP601603 (for road/access purposes only).

Groundwork Plus has been commissioned by Belmont Sands to prepare an Environmental Management Plan (EMP) to accompany a development application to the Livingstone Shire Council (Council) for *extractive industry*.

The development application will comprise the following components:

- Material Change of Use – Development Permit for *extractive industry* and associated activities
- Material Change of Use – Concurrence Environmentally Relevant Activities (ERAs)
- Environmental Authority for Environmentally Relevant Activities (ERAs):
  - ERA 16(2)(b) Extracting, other than by dredging, in a year, the following quantity of material – more than 100,000 tonnes but not more than 1,000,000 tonnes.
  - ERA 16(3)(b) Screening, in a year, the following quantity of material – more than 100,000 tonnes but not more than 1,000,000 tonnes.

Prior to commencement of extraction, access and haul roads will be developed to facilitate the movement of personnel, plant and equipment, and light vehicles around the site. Construction of site infrastructure including the stockpile/processing plant area, office/amenities (if required), weighbridge (if required), storage shed and processing plant will also occur at this juncture. Once the infrastructure is established, topsoil stripping and stockpiling will be completed in a logical sequence, to enable extraction to commence.

Sand will be extracted by excavator and transported to the processing plant by truck refer to **Diagram 1 – Sand Extraction Process**.

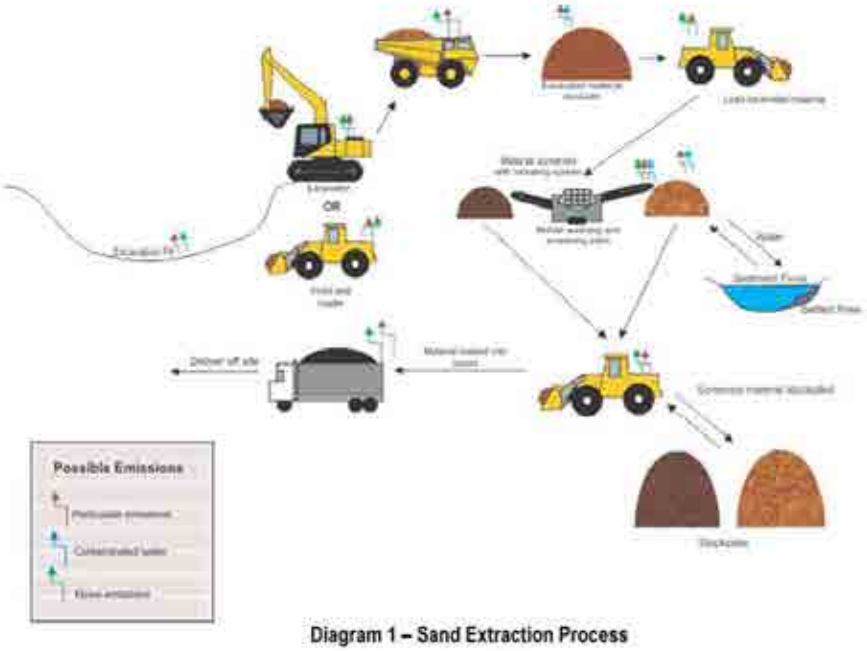


Diagram 1 – Sand Extraction Process

Processing will involve screening and washing to remove fine silt and clay particles and dewatering of the final product prior to stockpiling. No blasting or crushing is to occur as part of the process.

An existing groundwater bore on the site will be utilised by the proposed operation when needed. It is anticipated that longer-term, water for the washing of material (if required) will be sourced from a pond which will be formed within the extraction pit. Water will be returned to the pond, where suspended particles will settle through sedimentation, and the water reused. It is anticipated that the groundwater bore will be utilised primarily in the initial stages of extraction while the pond is still being formed and then on an as need basis.

Planning and design of the layout and sequence of the workings have considered deposit characteristics, overburden stripping ratios, initial development costs, processing and material transfer efficiencies, flooding, environmental values, surrounding land holders, visual amenity, early commencement of progressive rehabilitation, access, security and post extraction land use to ensure the layout and sequence of the development is optimum and effective to minimise land disturbances and other potential environmental impacts, maximise sand resource extraction.

Internal access roads will be necessary to facilitate the movement of personnel, plant and equipment, and light vehicles around the site. The location of these roads may change from time to time depending on the stage of development and access requirements.

Stockpiling of products will be necessary to meet customer requirements, schedules and for quality control testing. Stockpiling on site will be restricted to the minimum necessary by matching production to market requirements to the extent possible. Stockpiling will be arranged to provide ready access to different products.

Rehabilitation works will be undertaken progressively and in tandem with the extraction program. Profiling of the final landform shall be carried out to facilitate drainage.

Major plant and equipment to be used as part of the proposed development will include (but is not limited to):

- Excavator
- Haul truck
- Processing plant
  - Hopper and feeding conveyor
  - Static screen
  - Density tank
  - Sand pump
  - Tower
  - Hydrocyclone
- Spray bar
- Wash down pad
- Weighbridge (if required).

Ancillary facilities include (but are not limited to):

- Office/amenities
- Storage shed.

The general layout of the processing plant, stockpiles, ancillary facilities and proposed extent of extraction is shown on **Figure 2 – Conceptual Site Layout Plan**.

The principle objective of rehabilitation is to return the land to a stable, non-polluting and self-sustaining state capable of supporting grazing as a post extraction land use.

2. Site Details

Location: The site is accessed via the Etna Creek Road, Etna Creek QLD 4702, approximately 20 kilometres north-west of Rockhampton (refer **Figure 1 – Site Location Plan**).

Real Property Description: The site consists of the following lots:

- Lot 8 on RP601603
- Lot 5 on RP601603
- Lot 10 on SP142291
- Lot 6 on RP601603 (for road/access purposes only)
- Lot 3 on RP601603 (for road/access purposes only).

Access: The site will be accessed via a current access point from Etna Creek Road, which connects to the Bruce Highway.

Site Area: 1,524 hectares.

Tenure: Freehold.

Registered Proprietors:

Lot	Registered Proprietor
Lot 8 on RP601603	AgForce Queensland Industrial Union of Employers
Lot 5 on RP601603	
Lot 10 on SP142291	
Lot 6 on RP601603	
Lot 3 on RP601603	

Local Authority: Livingstone Shire Council.

Assessment Manager: Livingstone Shire Council.

Planning Scheme: *Livingstone Shire Planning Scheme 2005.*

Zoning: Rural Zone.

Existing Use: Rural pursuits. Cattle grazing. Research.

2.1 Potential Environmental Impacts

The identification of activities and impacts is fundamental to designing and implementing procedures and measures proposed in the EMP. Activities associated with carrying out extractive industry have been tabulated against potential environmental impacts to provide a focus for preparing the EMP, refer to **Table 1 – Identification of Potential Environmental Impacts**.

Table 1 – Identification of Environmental Impacts

ACTIVITY	POTENTIAL IMPACTS											
	Noise	Air Quality	Water Quality	Traffic	Visual Amenity	Social and Economic Factors	Land Contamination	Soils	Groundwater	Stormwater and soil erosion	Fauna and Flora	Waste
Vegetation Clearing	•	•	•			•		•		•		
Topsoil Stripping & Stockpiling	•	•	•					•		•		
Raw Material Extraction	•		•			•						
Raw Material Stockpiling and Loading	•		•		•					•		
Raw Material Hauling	•		•	•						•		
Raw Material Unloading	•		•							•		
Washing and Screening	•		•							•		•
Product Stockpiling	•	•	•							•		
Product Handling	•	•	•							•		
Maintenance Activities	•		•				•			•		•
Handling and storage of oils, greases, fuels and chemicals			•				•	•		•		•
Rehabilitation Activities	•	•	•		•	•		•		•		•
Stormwater Management			•							•		
Waste Management			•				•		•			
Equipment												
Front End Loader	•	•	•					•		•		
Screening Plant	•	•										
Excavator	•	•	•					•		•		
Haul Truck	•	•	•							•		
Product Delivery Trucks	•	•	•	•						•		
Light Vehicles	•	•	•	•						•		

• Potential Risk if inappropriately managed

A risk assessment of the potential environmental impacts for on-site activities has been provided in the Environmental Assessment report (Groundwork Plus 2015) submitted as part of the supporting documentation to the Development Application.

2.2 Relevant Legislation

In Queensland, the *Environmental Protection Act 1994* (EP Act) is the principal legislation for protecting the environment. The EP Act was assented on 1 December 1994 and was proclaimed on 1 March 1995. The object of the EP Act is to

> *"protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development)".*

The EP Act imposes a General Environmental Duty on corporations, government departments and individuals, in order to meet the primary objective (s319 of the EP Act). The duty relates to the notion that everyone must take all reasonable and practicable measures to prevent or minimise environmental harm.

In addition, the EP Act states that it is an offence to cause environmental nuisance (s440 of EP Act), material environmental harm (s438 of EP Act), serious environmental harm (s437 of EP Act), and it is an offence to contravene a condition of an Environmental Authority (s430 of EP Act).

Schedule 2 of the *Environmental Protection Regulation 2008* (EP Reg) lists prescribed Environmentally Relevant Activities (ERAs). The proposed development is considered to comprise of the following ERA's:

- ERA 16(2)(b) Extracting, other than by dredging, in a year, the following quantity of material – more than 100,000 tonnes but not more than 1,000,000 tonnes.
- ERA 16(3)(b) Screening, in a year, the following quantity of material – more than 100,000 tonnes but not more than 1,000,000 tonnes.

2.3 Purpose of Environmental Management Plan

This EMP is a management document which links the potential environmental impacts with commitments and measures to safeguard the surrounding environment. It is the principal management tool for guiding environmental management at the site by providing the framework for environmental management at the operational level to prevent or minimise environmental impacts.

The structure of the EMP comprises a series of procedures for ease of implementation. The elements of the EMP are based on a standard format (that may be adapted for a particular issue or activity) as follows:

- purpose
- performance targets
- relevant conditions
- strategies/mitigation measures
- monitoring.

The objective of the EMP is to meet the requirements of the Development Approval issued by the Council and associated Environmental Authority (EA) issued by the Department of Environment and Heritage Protection (EHP).

3. Procedures and Policies

3.1 Environmental Policy

Site management is committed to being environmentally responsible, and to conducting activities in compliance with environmental legislation, and will strive to achieve leading practice environmental management. In the process of implementing this policy, management shall:

- implement work programs to protect the surrounding environment.
- meet the requirements of all laws, acts, regulations and standards relevant to its operations and activities.
- make the most efficient use of natural resources taking due regard of environmental issues and ensuring land maintains long term productivity.
- implement a program to train all Employees in general environmental issues and individual workplace environmental responsibilities.
- continually improve environmental practices to reflect changing legislation, new technology and scientific advances, lessons learned from environmental incidents and increasing knowledge and experience of site specific issues.
- allocate necessary resources to ensure the implementation of the environmental policy.

3.2 Implementation and Training

Implementation of the EMP will require:

- commitment by the Owners, Managers and Employees of the site.
- access to technical expertise for tasks such as environmental monitoring, modelling or assessment, as needed.

Management shall ensure that sufficient funding is provided to implement the EMP. All Employees and sub-contractors will be inducted on the environmental management procedures and practices to be carried out at the quarry and informed of the environmental management objectives and the specifics of the EMP including protection of buffer areas, impact minimisation measures, operational practices, maintenance measures, reporting measures, and individual responsibilities. They shall also be made aware of penalties if development conditions are breached and reporting requirements for incidents involving environmental harm and safety in accordance with the relevant environmental legislation.

A record of all Employee training/inductions will be maintained on-site. Each Employee shall be responsible for implementing environmental policies within the scope of their duty statement or job description.

The EMP should be checked regularly (at least every three years) or as a result of significant change(s) to operations to ensure up-to-date versions are available and ensuring accuracy of the information.

3.3 Incidents and Complaints Procedure

The objective of the Incident and Complaint Procedure is to ensure that incidents and complaints are reported, investigated and appropriate action is taken. A summary of the Incident and Complaint Procedure is provided below in **Diagram 2 – Incidents and Complaints Procedure Summary**. For further details regarding each element of the procedure refer to **Attachment 1 – Incident and Complaint Procedure**.

Diagram 2 – Incidents and Complaints Procedure Summary

3.4 Monitoring Requirements

The controls nominated in this EMP will require regular surveillance and review to ensure that performance aligns with design criteria and also reflects the dynamic nature and changing needs of the operation. The monitoring requirements are outlined in each management plan, refer to **Section 4. – Management Plans**.

All instruments used to measure or monitor parameters required under the relevant conditions of approval are to be calibrated, maintained and operated appropriately. All monitoring is to be undertaken by a person or body possessing appropriate experience and qualifications to perform the required measurements.

3.5 Records and Reporting

All environmentally relevant documentation, including policies, procedures, forms, records, and reports required to be kept as per this EMP shall be available at the approved/licensed premises for a period of at least five years and be available for inspection by an authorised person.

If monitoring is required following a complaint or incident, the report shall:

- record the date and time of sampling.
- be endorsed by a person or body possessing appropriate experience and qualifications to perform the required measurements on all records of analysis results.
- record the results of all analyses, measurements and observations and interpretations (if appropriate).
- be made available on request to any authorised person.

4. Management Plans

4.1 Water Quality Management Plan

Purpose	This Water Quality Management Plan has been prepared to control potential environmental impacts occurring as a result of land disturbance necessary for the extractive industry operation. Sand extraction activities have the potential to impact on surface runoff water and groundwater quality if not managed appropriately. These activities include: • vegetation clearing (principally grass) • topsoil stripping • overburden removals • excavation pit development • construction and maintenance of internal roads and hardstands • stockpiling of topsoil, raw feed and product • spillage during handling of materials • use and storage of oils, greases, fuels and other chemicals • exposing potential acid forming materials. Under normal conditions discharge isn't envisioned as the water retained within the extraction pit will be reused for operational purposes including washing the sand and dust suppression. Refer to **Section 4.8 Pre and Post Flood Management Plan** for proposed water management after flood events.
Performance Targets	• To ensure contaminants are not directly, or indirectly, released from the site to any waters, or the bed and banks of any waters. • To ensure no environmental nuisance complaints are received. • To ensure the quality of surface water discharged from the site meets the release and discharge limits outlined in the EA.
Relevant Conditions	Refer to EA once issued. Proposed water quality limits: • DO - 85 to 110% saturation. • Turbidity – maximum 50NTU. • Total Suspended Solids - maximum 85mg/L. • pH - between 6.5 to 8.5.
Strategies/mitigation measures	Strategies and mitigation measures for the management of surface runoff, surface water and erosion and sediment transport from the site will be implemented in accordance the relevant conditions of approval and may include the following measures: ***Stormwater Management and Erosion and Sediment Control*** • Divert clean catchment run off using a series of suitable banks and/or diversion drains in accordance with the Erosion and Sediment Control Plan (refer **Figure 3 – Conceptual Erosion and Sediment Control Plan**). • Stabilise permanent bunds with appropriate native grass species. • Minimise land disturbance to the maximum practicable extent. • Limit exposure time of unprotected batters and slopes.

4.1 Water Quality Management Plan

	• Install stormwater bunding as soon as practical and in a logical progression. • Rip rapped diversion or catch drain outlets will installed. • Construct stockpile areas with a cross fall of approximately 1 in 30 to direct runoff from the stockpiles to the extraction pit. • Should water occur within the extraction pits following large storm events or flooding events, water quality will be monitored, treated if required then released using a pump at the locations shown in the Erosion and Sediment Control Plan (refer **Figure 3 – Erosion and Sediment Control Plan**). Alternatively, water may be irrigated to pasture where feasible. • Design, construct and maintain bunded areas and roofed storage with holding capacities to conform to the appropriate regulatory requirement or the provisions of *AS1940-2004 - The Storage and Handling of Flammable and Combustible Liquids*. • Induct and train staff on the prevention and control of erosion. • Implement an action plan for the surveillance and maintenance of stormwater control devices to assess the effectiveness (refer **Table 2 – Action Plan for the Surveillance and Maintenance of Stormwater Control Devices**). A summary schedule of the various inspections, performance criteria and responses that shall be performed on site is shown in **Table 2 – Action Plan for the Surveillance and Maintenance of Stormwater Control Devices**.
Monitoring	• Prior to any water release from the extraction pits, the quality of extraction pond water will be tested for turbidity, total suspended solids, pH, dissolved oxygen and visual oil & grease to ensure compliance with state regional Water Quality Objectivities (WQO) Criteria (*Queensland Water Quality Guidelines*, 2009). • The Site Manager may engage the services of a suitably qualified and experienced person to conduct water quality sampling if required and review monitoring results to provide advice in relation to the water quality management. • All surface water sampling will be undertaken in accordance with EHP's *Monitoring and Sampling Manual*, September 2009. • Water pH, turbidity and dissolved oxygen levels will be measured in the field in-situ, whilst all laboratory analysis will be undertaken by a NATA certifiec laboratory. • The Site Manager or delegate will undertake monthly inspections and as required after rainfall events of the extraction pits and the settling pond in the northern stockpile area and conduct any necessary maintenance.

Table 2 – Action Plan for the Surveillance and Maintenance of Stormwater Control Devices

Inspection	Minimum Frequency	Performance Criteria	Response
Inspect drainage lines including catch drains, contour drains and diversions	Quarterly	• erosion in areas adjacent to water conveyancing structures • overtopping of water conveyancing structures (identified by the scouring of the drain batters perpendicular to the direction of flow)	• eroded areas shall be treated appropriately (e.g. rock lined) as soon as practicable • drains to be cleaned of sediments and retreated as necessary to original design specifications • revegetation with grasses in the catchment of the drain may be required to reduce sediment loadings of runoff
Inspect potential sediment storage capacity of grit traps, sediment traps and excavation pit	Quarterly or following major rainfall events	• storage capacity maintained	• sediment to be removed from the structure and reused on-site where possible • recycle sediment basin waters to ensure adequate free storage is maintained for the collection and holding of runoff
Waste containers	Quarterly	• waste to be stored in appropriate containers	• Ensure waste materials are stored and disposed of properly
Spill response stations	Quarterly and following use	• equipment to be properly maintained and stocked	• maintain equipment • replace / restock equipment as necessary
Maintenance / refuelling area	Quarterly	• fuel, oil spills • contractor maintenance • fuel storage integrity maintained	• clean up spills and the investigate spill source • maintain contractor maintenance records • investigate and repair potential leaks

4.2 Air Quality (Dust) Management Plan

Purpose	This Air Quality (Dust) Management Plan has been prepared to control potential air quality impacts occurring as a result of land disturbance necessary for the extractive industry operation. The *Environmental Protection Act 1994* and the associated *Environmental Protection (Air) Policy 2008* provide the legislation and regulatory controls for management of emissions to the atmosphere. The potential for dust emissions from the proposed sand extraction is limited as no crushing will be conducted on the site and buffer areas will be maintained between the site and potential sensitive receptors (refer **Figure 4 – Location of Sensitive Receptors)** that include residents along Etna Creek Road to the north and to the east. Therefore, there is minimal potential for the proposed operations to cause dust amenity impacts. Nevertheless a wide range of mitigation measures has been proposed as outlined below. Activities on site that may generate fugitive emissions include: – trucks transporting raw material to the plant. – exhaust emissions from motorised plant and equipment. – wind action on conveyors, stockpiles and disturbed areas. – topsoil/overburden stripping (earthmoving machinery ground interaction, materials digging, loading and dumping, haul truck tyre/unsealed road interaction, unsealed roads, material spillage from haul trucks). – product stockpiling and dispatch (stockpiles and stockpile pads, product loading, truck type/road interaction, material spillage from trucks). – rehabilitation works.
Performance Targets	• Dust and particulate matter not exceeding the following levels when measured at any sensitive receptor: – dust deposition of 120 mg/m²/day, when monitored in accordance with Australian Standard AS 3580.10.1 Methods for sampling and analysis of ambient air – Determination of particulates – Deposited matter – Gravimetric method; and – an aerodynamic diameter of less than 10 µm (PM10) suspended in the atmosphere of 50 µg/m³ over a 24 hour averaging time when monitored in accordance with Australian Standard AS 3580.9.6 *Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 high volume sampler with size-selective inlet – Gravimetric method.*
Relevant Conditions	Refer to EA once issued.
Strategies/mitigation measures	Strategies/mitigation measures for the management of dust emissions from the site will be implemented in accordance with the relevant conditions of approval and may include the following:

4.2 Air Quality (Dust) Management Plan

Disturbed areas

- Dampen down cleared areas, extraction working areas, haul roads, stockpiles and other hardstand areas by water spraying when visual surveillance indicates excessive dust generation and propagation from point or mobile sources.
- Limit clearing, topsoil and overburden removal at any one time to that necessary whilst providing for effective production of the resource.
- Monitor meteorological conditions to time particular activities with favourable weather conditions.
- Restrict vehicle and mobile machinery movements to designated routes and standing areas.
- Restrict vehicle movements to designated tracks and areas to the extent practicable.
- Maintain buffers between operational areas and the site boundaries where possible.
- Install water sprays or dry dust collection systems at all major dust sources.
- Engage a water truck/cart to dampen access roads.

Processing Plant

- Dampen down work areas.
- Dampen materials prior to transport.
- Use water sprays and/or dust collection systems at transfer points.
- Use shielding and/or windbreaks where possible.
- Maintain vehicles and equipment in accordance with the original equipment manufacturers' specifications.

Stockpiles

- Use water sprays as required during winds likely to generate dust releases.
- Stabilise and revegetate topsoil and overburden stockpiles where possible.
- Use dust suppressants and shielding where possible.
- Limit the height and slope of stockpiles.

Trafficable Areas

- Enforce a maximum speed of 40 km/hr on unsealed haul and internal roads.
- Keep trafficable areas as clean as possible.
- Dampen down access roads.
- Maintain road surfaces in good condition
- Implement a shaker access grid and wheel wash at the site exit (if required)
- Undertake a regular road inspection by the operator for deposited sediment from the Site.

Material Transport and Transport Vehicles

- Ensure signage is installed to advise drivers to contain and cover all loads of material prior to leaving the site.
- Ensure loads are appropriately contained and covered prior to leaving the site.
- Dampen down the load prior to transport where necessary and practicable.
- Clear spillages from side rails, tailgates and draw bars of trucks (following loading and tipping).
- Level loads prior to truck exit from the site where possible.
- Securely fix tailgates of all material transport vehicles prior to loading.

4.2 Air Quality (Dust) Management Plan

	Screening Equipment • Install windshields, enclosures and/or barriers where possible. • Maintain material in moistened state. ***Rehabilitation*** • Progressively rehabilitate the site as areas become available. • Minimise wind blown dust during any rehabilitation activities. • Ensure vehicles use established roads and tracks where possible and limit access to any rehabilitated areas. ***Other*** • Employees and contractors are to be made aware of dust management practices. • Ensure sufficient on-site water supply is available for dust suppression. • Apply good housekeeping practices.
Monitoring	The controls nominated will require regular monitoring and review to ensure that performance accords with design criteria and also reflect the dynamic nature and changing needs of the operation. Daily visual surveillance will be undertaken by all employees to ensure dust generation on-site is controlled appropriately. Dust and particulate monitoring will be undertaken as required in accordance with the relevant conditions of the EA. Monitoring will be carried out at a place relevant to the potentially affected, nuisance-sensitive place. Monitoring is to be undertaken by a suitably qualified person in accordance with Australian Standard *AS3580.10.1 of 2003 – Determination of particulate matter – Deposited mater – Gravimetric method* (or most recent edition). When requested to undertake monitoring, monitoring results are to be provided to the administering authority following completion of the monitoring event. Monitoring shall be carried out at a place(s) relevant to the potentially affected dust sensitive place.

4.3 Noise Management Plan

Purpose	This Noise Management Plan has been prepared to control potential nuisance impacts occurring as a result of noise associated with the extractive industry operations. Uncontrolled or unmitigated site noise has the potential to be a nuisance at neighbouring residences. Site equipment or activities that have potential to generate significant noise have been identified and include: • excavators (clearing vegetation, stripping topsoil, raw product handling, rehabilitation) • screening plant (processing of raw materials) • front end loaders (product haulage, loading, feeding screening plant) • off highway haul trucks (haulage of raw material to the screening plant and water carting) • face loaders (raw product handling) • road trucks (product delivery) • light vehicles (employee vehicles, maintenance vehicles, service vehicles) • maintenance activities • ancillary plant and equipment (e.g. pumps, welders).
Performance Targets	• Noise from the site must not cause an environmental nuisance at any nuisance sensitive place or commercial place. • Site operations shall comply with the noise criteria specified in the EA, which states that the emission of noise from the activity must not result in levels greater than those specified.
Relevant Conditions	Refer to EA once issued.
Strategies/mitigation measures	Strategies/mitigation measures for the management of noise emissions from the site will be implemented in accordance with the relevant conditions of approval and may include the following: ***General*** • Ensure sufficient buffers are maintained to sensitive receptors by operating in accordance with **Figure 2 – Conceptual Site Layout** which locates the processing and stockpile area away from rural residential receptors to the north and east. • The proposed sand extraction and processing facility will incorporate best available technology where required to mitigate potential noise amenity impacts. This will include the following: – Use of modern mobile plant (e.g. front-end loaders, excavators, off-road trucks) with effective exhaust silencers. – Use of broadband reversing alarms for mobile plant (e.g. front-end loaders, excavators, off-road trucks, excavators) to mitigate potential nuisance from tonal characteristic of traditional beeper alarms. • Operate and maintain well-maintained equipment. • Avoid unnecessary revving of engines. • Shut down equipment when not in use. • Ensure that equipment at the site is used for the intended purpose. • Ensure that any extraneous noises are rectified. • Maintain haul roads and hardstand surfaces in good condition (e.g. free of potholes, rills and product spillages) and with suitable grades.

4.3 Noise Management Plan

	• Avoid the use of compression braking on product delivery trucks in residential areas.
Monitoring	The Site Manager will: • Ensure regular surveillance of the site to qualitatively assess noise generation from plant and machinery. • Ensure all site plant and machinery and vehicles are serviced in accordance with, or more frequently than, manufacturers' specifications. • Initiate a noise survey following when requested by the administering authority, or as otherwise deemed necessary, to investigate a noise complaint. Methods for measurements and reporting of noise monitoring must comply with the current edition of the administering authority's *Noise Measurement Manual*. The measurement and reporting of noise levels will be undertaken by a person or body possessing both the qualifications and the experience appropriate to perform the required measurements. Monitoring must include: • $L_{Aeq,\ adj,\ T}$ • Background noise (Background) as $L_{A\ 90,\ adj,\ T}$ or $L_{Aeq,\ T}$ • the level and frequency of occurrence of any impulsive or tonal noise effects due to extraneous factors such as traffic noise • atmospheric conditions including wind speed and direction • effects due to extraneous factors such as traffic noise • location, date and time of recording.

4.4 Hydrocarbons and Chemical Management Plan

Purpose	The Hydrocarbons and Chemicals Management Plan has been prepared to control the potential for spills or leaks from chemicals and hydrocarbons associated with the extraction activities. Site operations have the potential to contaminate land and water in and surrounding the site by the release of various chemicals used and/or stored on-site. These chemicals could include: • distillate (e.g. fuel for stationary and mobile engines) • oils and greases (e.g. lubricants and hydraulic oils for stationary and mobile equipment) • miscellaneous chemicals (e.g. weedicide, paint, solvents).
Performance Targets	The following performance targets are relevant: • No land contamination that would require registration on the Environmental Management Register (EMR) or Contaminated Land Register (CLR). (NB. there are notifiable activity reporting thresholds that may trigger listing on the EMR without any land contamination occurring). • No serious spills of oils, greases, fuels or other hazardous chemicals (for this purpose, hydrocarbon spill incidents have been classified as follows: minor spill ≤5 L, major spill 5 L to 20 L, and serious spill ≤20 L). • No preventable release of hydrocarbons and chemicals to the environment.
Relevant Conditions	Refer to EA once issued.
Strategies/mitigation measures	Strategies/mitigation measures for the management of hydrocarbons and chemicals at the site will be implemented in accordance with the relevant conditions of approval and may include the following: ***General*** • Spills are to be cleaned up immediately. • Undertake refuelling and equipment maintenance within designated areas that are hard stand or paved where practicable. • Maintain all material safety data sheets and information relating to the storage, use and handling of chemicals at the site office. • Prepare a spill containment and clean-up protocol. • Ensure employees are familiar with proper fuelling and spill clean-up procedures. • Induct all new employees on the use of handling of chemicals used on-site. • Maintain the site in a neat and tidy condition. • Discourage "topping off" of fuel tanks. • Use drip pans during refuelling and equipment maintenance. • Material Safety Data Sheets (MSDS) of chemicals used on site shall be kept in a register at the site Office. ***Spill Kits*** • Maintain appropriate spill kits at locations known to all employees (e.g. refuelling locations, chemical storage facilities, mobile equipment). • Ensure employees are familiar with proper spill clean-up procedures.

4.4 Hydrocarbons and Chemical Management Plan

Bunding and Storage

- All chemical storage facilities on-site must meet specifications of Australian Standard *AS 1940 - The storage and handling of flammable and combustible liquids*, as a minimum.
- All chemical drum storages must be bunded to ensure that the capacity of the bund is at least 25% of the maximum design storage volume.
- Bunding will be constructed of material which is impervious to the material stored and transferred therein.
- Bunds will be kept in good condition (e.g. no cracks, gaps or leaks).
- Roofed storage facilities will be provided where practicable.
- Stormwater captured within bunding is to be removed as soon as practicable and disposed of as contaminated water. Prior to removal the water is to be free from contaminants.
- Empty hydrocarbon and chemical containers are to be stored will closures in place on a concrete hardstand or within a bunded area.
- A collection sump must be provided in the floor of the bunding to facilitate the removal of liquids.
- All pipe work in the bunded area must be directed over the bund wall and not through it.
- Where vehicle access to the bunded area is required, access must be by way of a rollover bund.
- Records will be kept on existing inventory, storage location, personnel training and disposal of waste for all hazardous materials used on site.
- Bunds and/or drains are to be in place to exclude surface waters from washing/degreasing areas.

Disposal

- Hydrocarbon contaminated materials are to be appropriately disposed of at a licensed facility.
- If the material is Regulated Waste, it will be transported and disposed of by a licensed contractor.
- Oily waste materials, including liquid hydrocarbons, should be segregated from general wastes for disposal off-site by a licensed contractor.
- Records are to be kept on disposal of waste for all regulated waste materials.

Monitoring

Areas where handling of hydrocarbons and chemicals occur (e.g. refuelling or minor on-site servicing) shall be regularly inspected by the Site Manager. All employees will be responsible for the safe day-to-day handling, use and temporary storage of chemicals being used on-site.

4.5 Waste Management Plan

Purpose	This Waste Management Plan has been prepared to ensure wastes produced on-site are appropriately managed. Unmanaged wastes can detract from the amenity of the site and locality and can increase operational costs. The principal wastes that may be generated from the site operations may include, but are not necessary limited to: • regulated wastes (e.g. batteries, oil filters, waste oil/hydrocarbons and containers, oil/water emulsions and tyres) • metal and used or faulty parts and equipment • food scraps, packaging and consumables (e.g. paper, cardboard) • green waste. The *Waste Reduction and Recycling Act 2011* (WRR Act) nominates a waste management hierarchy in a preferred order of adoption. The hierarchy is as follows: *(a) AVOID unnecessary resource consumption;* *(b) REDUCE waste generation and disposal;* *(c) RE-USE waste resources without further manufacturing;* *(d) RECYCLE waste resources to make the same or different products;* *(e) RECOVER waste resources, including the recovery of energy;* *(f) TREAT waste before disposal, including reducing the hazardous nature of waste; and* *(g) DISPOSE of waste only if there is no viable alternative.*
Performance Targets	The following performance targets are relevant: • Implement the WRR Act waste management hierarchy. • Maintain a record of any disposal of trackable wastes in accordance with the *Environmental Protection Regulation 2008*. • No unlawful disposal of wastes on or off-site.
Relevant Conditions	Refer to EA once issued.
Strategies/mitigation measures	Strategies/mitigation measures for the management of waste materials at the site will be implemented in accordance with the relevant conditions of approval and may include the following: ***Waste Avoidance*** Waste avoidance relates to preventing the generation of waste or reducing the amount of waste generated. Reasonable and practicable measures for achieving waste avoidance may include, but are not necessarily limited to: • Input substitution (using recyclable materials instead of disposable materials, for example using oil delivered in recyclable steel drums instead of non-recyclable plastic containers). • Increased efficiency in the use of raw materials, energy, water or land (purchasing consumables in bulk (large containers) rather than in small quantities). • Improved maintenance and operation of equipment (keep equipment in good working order to reduce wear and overhaul). • Undertaking an assessment of waste minimisation opportunities from time to time.

4.5 Waste Management Plan

Waste Re- use

Waste re-use refers to re-using waste, without first substantially changing its form. Reasonable and practicable measures for reusing waste may include, but are not necessarily limited to:

- Recovering and separating solvents, metals, oil, or components or contaminants and reusing separated solvents for degreasing plant and equipment.
- Applying waste processing fines to land in a way that gives agricultural and ecological benefits (using fine sediments in rehabilitation activities).
- Using overburden for constructing bunds and landforming.
- Reusing silt/sediment on-site to the maximum practicable extent.

Waste Recycling

Waste recycling refers to treating waste that is no longer useable in its present form and using it to produce new products. Reasonable and practicable measures may include, but are not necessarily limited to:

- Recovering oils, greases and lubricants for collection by a licensed oil recycling contractor, recovering, separating and recycling packaging (including paper, cardboard, steel and recyclable plastics).
- Recycling used plant and equipment to the maximum practicable extent.
- Finding alternatives to disposal of non-recyclable materials (using conveyor belts for noise attenuation, mudflaps, ute tray liners).
- Providing suitable receptacles and storage areas for collection of materials for recycling.

Energy Recovery from Waste

This refers to recovering and using energy generated from waste. Due to the scale of the operation, energy recovery is not considered viable.

Waste Disposal

This refers to disposing of waste which cannot otherwise be reused, recycled or used for energy recovery. Reasonable and practicable measures may include, but are not necessarily limited to:

- Regulated wastes must be transported and disposed of in accordance with the *Environmental Protection Regulation 2008*.
- Disposal to a licensed waste disposal facility (i.e. landfill or transfer station).

Waste Storage

Waste storage containers or areas to be provided and located at safe and convenient locations at the site. Each container will be identified with the type of wastes which may be disposed of in each container. Each container or area will be designed to prevent the escape of materials.

Regulated Waste and Trackable Waste

Regulated waste is commercial or industrial waste, whether or not it has been immobilised or treated and is of a type or contains a constituent of a type listed in Schedule 7 of the

4.5 Waste Management Plan

	Environmental Protection Regulation 2008 and is attached (refer to **Attachment 2 – Schedule 7 of the *Environmental Protection Regulation 2008***). Schedule 2E of the *Environmental Protection Regulation 2008* sets out substances which are trackable waste and is reproduced as **Attachment 3 – Schedule 2E of the *Environmental Protection Regulation 2008.*** All regulated wastes will be transported by a licensed commercial transporter. Regulated waste transport is an ERA if the load is non-commercial and exceeds 250 kilograms, of any quantity if the load is commercial. If regulated waste transport occurs, it must be undertaken by a licenced commercial transporter.
Monitoring	The Site Manager will undertake a monthly visual inspection to ensure the waste management hierarchy is being effectively implemented. All Employees and contractors shall be responsible for ensuring wastes are stored and removed from the site on a regular basis (e.g. daily or weekly). The Site Manager shall ensure that waste treatment measures are implemented at the site. The Site Manager shall ensure waste receptacles are provided and the waste type identified and that temporary waste storage areas are signed, recycling bins are emptied when full and materials which may cause land contamination are not disposed of on the site. The Site Manager shall keep a record of regulated waste generated at the site, treatment and disposal methods, approved contractors for transporting and disposing of waste and the location of the facility for accepting the waste.

4.6 Weed Management Plan

Purpose	This Weed Management Plan has been developed to ensure adequate control measures are implemented to control the spread and infestations of weeds and declared plant species within the site. A 'weed' is a plant which, because of its characteristics and location, may result in economic, ecological, physical or aesthetic problems. Weeds can alter ecosystem functionality, reduce primary productivity and profitability, and limit long term sustainability of natural and agricultural resources if not appropriately controlled. Weed impacts that may occur due to the extractive industry operations include: • areas of exposed earth available for weed colonisation including topsoil stockpiles. • spread of existing weed infestations due to disturbance and vehicle traffic. • unsuccessful or weed-infested revegetated areas. The primary legislation governing the management of weeds in Queensland is the *Land Protection (Pest and Stock Route Management) Act 2002* (LP Act). The LP Act declares plants considered to be serious or potentially serious and imposes a legal responsibility for control of these plants by all landowners or land under management. Three classes of declared plants exist and are targeted for control because they have, or could have serious economic, environmental or social impacts. • **Class 1** has the potential to become a serious pest and is subject to eradication from the State. • **Class 2** has already spread over Queensland and gaining control is considered to be very important. • **Class 3** is commonly found in Queensland and prevention of the sale of Class 3 declared plants is expected to reduce their spread, especially if land is adjacent to an environmentally significant area. Landowners are not expected to try to control them.
Performance Targets	Prevent the spread of weeds on the site.
Relevant Conditions	Refer to EA once issued.
Strategies/mitigation measures	Specific control measures to be implemented may include, but not necessarily be limited to the following strategies.

4.6 Weed Management Plan

General

- Weed infestations are to be controlled as soon as possible to prevent further spread of weeds.
- Maintain groundcover for as long as possible by minimising land disturbance at any one time, where practicable.
- Annual weed spraying campaigns should be implemented at the site, with additional spraying campaigns (e.g. spot spray, bi-annual sprays, etc) undertaken if necessary.
- Weeds indentified on-site will be prioritised for weed management according to the class of weeds identify, and the cause of the weed establishment will be determined to prevent or minimise further introduction and spread.
- Weed plant materials and seed should be disposed of at a Council refuse station, or buried at an appropriate depth on-site, whenever possible.
- Employees should be trained appropriately to recognise existing and potential weeds present on-site and within the surrounding area to ensure they are not inadvertently brought onto the site via items contaminated by seed (e.g. vehicles, machinery, hand tools, soil, mulch or livestock).
- If areas containing weeds are encountered, clean all equipment, vehicles and machinery prior to leaving the area.

Access Roads/Hardstand areas

- All access routes and hard stand areas will be maintained in a weed-free or weed-reduced state to lessen the spread of weed seed by vehicle movements.
- Established roads and tracks should be used wherever possible and weed-infested areas / sites are to be avoided.

Topsoil Management

- Visual surveys will be undertaken prior to all topsoil stripping operations and, if necessary, control mechanisms will be undertaken to reduce the risk of the contamination of topsoil stockpiles with seed and vegetative weed material.
- Weed control mechanisms may include separate stockpiling, herbicide spraying of stripped soils, or disposal as fill of soil materials infested with weeds.
- Weed control mechanism strategies will be implemented to control weed infestation if required, both before and after use of top-dressing material in the rehabilitation program.
- All topsoil stockpiles will be regularly monitored and managed for weed infestation.

Rehabilitation

- Implement progressive rehabilitation as soon as practical as areas become available.
- Avoid importing topsoil onto the site where possible.
- Prior to the establishment of vegetation:
  - a spraying campaign may be required to prevent migration or establishment of weed species into the area under rehabilitation.
  - alternative methods for controlling both grasses and weeds may be used, including manual weeding, burning, slashing, weed matting and mulching, where practicable.

4.6 Weed Management Plan

Weed Control Methods

As a guide to assist in planning weed control, a summary of weed control options that may be implemented are presented in **Table 3 – General Weed Control Options**.

- Department of Agriculture, Fisheries and Forestry (DAFF) provides an A to Z listing of weeds including plants declared under the LP Act. This listing can be found at: http://www.dpi.qld.gov.au. Detailed information on controlling individual species is also provided in the A-Z listing along with fact sheets and information sheets.

Monitoring

All employees on-site shall carry out general daily visual surveillance for weeds within the quarry and ensure that vehicles leaving site are free of soil and vegetation.

The Site Manager shall:

- Conduct weekly inspections of all access routes on-site to ensure they are maintained weed free or in a reduced state to lessen the spread of weed seed by vehicle movements.
- Conduct inspection of any area/s and treat any weed infestations prior to topsoil removal.
- Carry out at least four thorough inspections per year of the quarry to identify:
  - effectiveness of weed control measures implemented and whether an amendment is required
  - new areas where weed control is required
  - infestations of new weed species
  - areas where rehabilitation should be carried out.

Note: The frequency of site inspections will vary depending on the identified weed species on-site and what management requirements are necessary for those species.

Table 3 – General Weed Control Options

Infestation Level	Biological	Chemical	Mechanical	Physical
Low (Canopy cover between 1% and 10%)	Not suitable.	Spot-spraying by hand with a registered herbicide.	Not suitable.	Hand grubbing (remove roots and burn plant).
Medium (Canopy cover between 11% and 50%)	Release of biological control agents.	Spot-spraying by hand with a registered herbicide.	Chaining, rolling, raking or back-ploughing, then burning.	Follow up control of seedlings – could include physical removal.
High (Over 50% canopy cover)	Inspect infestation to see if, and what, bio-control agents are already present. If necessary, release biological control agents and monitor their progress.	Aerial spraying with a registered herbicide.	Attach with chaining, rolling or raking. Use fire to kill any regrowth and break seed dormancy.	Follow up control of seedlings – could include physical removal.

4.7 Rehabilitation Management Plan

Purpose	This Rehabilitation Management Plan has been prepared to guide planning, landforming, revegetation, maintenance and environmental management associated with land disturbed by sand extraction activities at the site. Extractive industry is a temporary land use. Designing and implementation of rehabilitation works is therefore an important element of an extractive industry. Integration of rehabilitation and extractive operations assists in cost control as well as minimising potential environmental impacts. Potential impacts resulting from extractive industry include: • soil erosion • pollution of storm water run off • sedimentation of waterways • iricreased nutrient loads in waterways • introduction of weed species • potential clearing of vegetation • potential loss of habitat and biodiversity. The main purpose of rehabilitation is to return the land to a stable, non-polluting and self-sustaining state capable of supporting grazing as a post extraction land use.
Performance Targets	Performance targets nominated for rehabilitation of the site are to: • Maintain the general amenity (visual, air quality, water quality, etc) of the surrounding area. • Prevent the degradation of non-operational areas. • Limit land disturbance to that which is necessary at any one time. • Identify any land contamination and implement appropriate remediation or management where necessary. • Ensure progressive rehabilitation is carried out during the progression of quarry activities where practicable and commence progressive rehabilitation as areas become available. • Select suitable plant species for revegetation (e.g. Regional Ecosystem species and/or local endemic species such as pasture grass). • Reinstate stable drainage patterns. • Prevent the introduction or spread of declared weeds and pest species. • Ensure the post-extraction landform is safe, stable, non-polluting and suitable for the desired long-term land use.
Relevant Conditions	Refer to EA once issued.
Strategies/mitigation measures	Strategies/mitigation measures for the management of rehabilitation activities at the site will be implemented in accordance with the relevant conditions of approval and may include the following: ***Final Land Use*** • The subsequent land use is anticipated to be highest beneficial use consistent with the surrounding land use at the time of cessation, most likely grazing.

4.7 Rehabilitation Management Plan

Landform

- The practicalities, economics and the constraints imposed by environmental and amenity values shall determine the final landform. It is likely that the site will be used for cattle grazing as a post extraction land use.
- The following measures shall ensure that the landform created by extraction activities is stable and is connected into the surrounding landscape:
  - Using earthmoving equipment to progressively shape and trim the workings to the desired design profiles and flattening the gradients of selective batters to a stable angle of repose on reaching the terminal limits of extraction.
  - Rounding or marrying the contours into the natural ground surface.
  - Topsoiling and grassing of contours.
  - Designing landform and drainage to control erosion for the particular hydrological regime.

Topsoil Management

Topsoil supports and promotes plant growth, soil micro-organisms, organic matter and nutrients. Topsoil is defined as the organic rich, friable layer beneath the natural ground surface. The physical properties of topsoil are important for promoting and supporting plant growth.

The following measures should be implemented for topsoil stripping:

- Topsoil should not be stripped when it is too wet or too dry.
- Topsoil when stripped should be used directly for rehabilitation to the maximum practicable extent, or stockpiled and preserved for future use.
- Stockpiling of topsoil should not exceed a height of 2 to 3 m and should be shaped (i.e. batters no greater than 2:1) and revegetated to protect the soil from erosion and weed infestation.
- Stockpiles should be maintained in a free draining condition and long-term soil saturation should be avoided.
- Runoff waters external to the areas to be stripped should be diverted away from the working area.
- Stripping of topsoil should be limited to the minimum area necessary.

The following measures should be implemented for topsoil spreading:

- Whenever possible, stripped topsoil should be directly placed on an area undergoing rehabilitation.
- Areas to be topsoiled should be re-shaped prior to placing topsoil.
- Equipment used to spread topsoil should be scheduled to avoid compaction.
- Before respreading the topsoil, loosen the subsoil to break up any compacted or surface sealing and to enable keying of the two soils.
- On slopes less than 3:1, loosen lightly compacted subsoil with a tined implement ensuring all ripping operations occur along the contour.
- Topsoil is to be removed from stockpiles in a manner that avoids vehicles travelling over the stockpiles.
- Topsoil is to be respread in the reverse sequence to its removal so that the original upper soil layer is returned to the surface to re-establish the entrapped seed content of the soil.

4.7 Rehabilitation Management Plan

- Ensure all exposed subsoils are covered.
- Topsoil is to be respread over selected batters, contours, bunds and disturbed areas to a minimum thickness of 100 mm.
- After spreading topsoil, ensure the surface is left in a roughened state to assist moisture infiltration and inhibit soil erosion.
- Prior to any planting, cultivate any compacted or crusted topsoil surfaces (to a depth no greater than the depth of the topsoil).
- Soil spreading is to be immediately followed by seeding grass if applicable.
- Straw or organic mulch may be spread over the soil to minimise potential soil erosion until the area is revegetated.
- If erosion occurs on treated surfaces, the area is to be re-topsoiled and sown with cover grass.

Revegetation

There are a range of methods for establishing vegetation. As this site is likely to be returned to cattle grazing, the preferred method of establishing vegetation is natural regeneration of pasture followed by seed broadcasting if required.

All methods shall be accompanied by appropriate weed control to prevent rehabilitated areas from being overrun with weed species.

Weed and Pest Control

Any materials (e.g. earth, soil, mulch and straw) brought onto the site for rehabilitation shall be inspected to ensure the materials are free from weeds and pests.

Prior to the establishment of vegetation, a spraying campaign may be required to control weeds to prevent migration of weed species into areas under rehabilitation.

Alternative methods for controlling both grass and weeds include manual weeding, slashing, weed matting and mulching. Techniques best suited to the specific species of weeds being targeted for control shall be determined by consulting with the Department of Agriculture, Fisheries and Forestry weed control sheets.

Predation (e.g. grazing animals, birds, kangaroos, hares, and insects) are risks for revegetation. Depending on the situation, specific measures may be required to protect the works from predation such as fencing, barriers, etc.

Buffers

- Work areas to be clearly defined.
- Vehicles limited to defined tracks.

Monitoring

Rehabilitation works require time to establish during which maintenance and monitoring shall be required. Regular inspections shall be made to plan timely maintenance works in accordance with **Table 4 – Maintenance Schedule for Revegetation Works**. Maintenance works shall be required for fertilising and watering.

Table 4 – Maintenance Schedule for Revegetation Works

Item	Activity	Frequency
Weed Control		
Site Preparation (where necessary)	Application of herbicide and / or slashing	One (1) treatment at least two (2) weeks prior to seeding / planting
Ongoing Weed Management	Application of herbicide	Suggested biannually or as required
Supplementary Weeding	Application of herbicide	As required
Pasture Management		
Grass Height	Slashing	Biannually until established
Grass Vigour	Fertilise	Annually (if necessary)

4.8 Pre and Post Flood Management Plan

Purpose	This Pre and Post Flood Management Plan has been prepared to control potential risks to safety, property and the environment as a result of flooding of the Fitzroy River which will result in inundation of some part of the Site as it is mapped as a flood area in State government mapping. It has also been prepared to outline contingency measures required prior to Site inundation and detail the post flood activities required to resume operation.
Performance Targets	• To ensure site activities prior to and post inundation are managed to meet DA and EA requirements. • To ensure potential risks relating to safety, property and the environment are identified and appropriately managed. • To protect downstream water quality in the event of a release from the Site before, during or after a flood event.
Relevant Conditions	Refer to EA and DA once issued.
Strategies/mitigation measures	Strategies/mitigation measures for the management of release water from the site will be implemented in accordance with the relevant conditions and include the following: ***Prior to Site Inundation*** • A rainfall gauge will be installed on site to monitor local rainfall and the Site Manager will regularly monitor storm warnings from the Bureau of Meteorology. • The upstream Fitzroy River stream gauge will be monitored on a regular basis to assess whether the site will be inundated. Real time data is available at: http://www.bom.gov.au/cgi-bin/wrap_fwo.pl?IDQ60289.html#Fitzroy • Mitigation actions and monitoring will be undertaken in line with the Water Quality Management Plan and relevant conditions of the EA. • A pre-wet weather inspection of all erosion and sediment controls will be performed in accordance with **Table 2 – Action Plan for the Surveillance and Maintenance of Stormwater Control Devices**. • The northern stockpile area has been located to be immune from a Q2 (1 in 50 year) flood event. • The Site Office and storage shed will be located within the northern stockpile area. • Stockpiles will be moved to the northern stockpile area where feasible. • All mobile machinery and vehicles will be removed from the Site or stored at the northern stockpile area prior to flood events occurring. • Fuels and chemicals will be stored and bunded within the northern stockpile area at all times in accordance with AS1940. • Evacuation of the Site will be undertaken prior to inundation. • The Site Manager will ensure the State Emergency Services Business Flood Plan template (refer to **Attachment 4 – State Emergency Services Business Flood Plan Template**) is complete and kept up to date, and a copy will be available at all times to the Site Manager.

4.8 Pre and Post Flood Management Plan

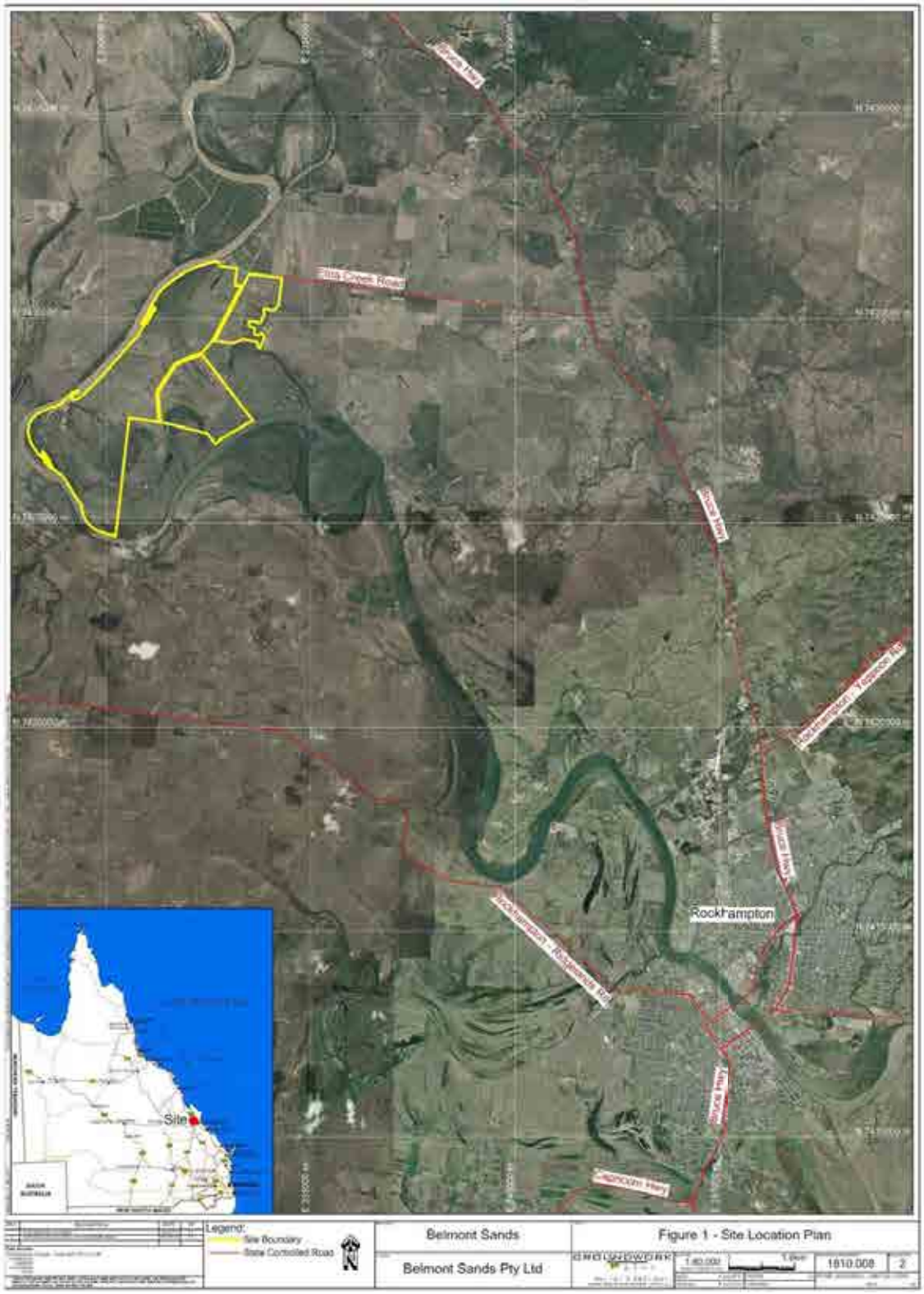
	Post Site Inundation • Post inundation, the Site Manager will inspect the site access to determine if safe to enter. • Post inundation the stormwater control infrastructure on Site shall be inspected for signs of erosion and subsidence following the flood event as shown in **Table 2 – Action Plan for the Surveillance and Maintenance of Stormwater Control Devices.** • The Site Manager will monitor the water quality of the pit water and the freeboard available. • If stormwater is required to be released from the extraction pits post inundation to enable extraction to recommence, the water will be pumped from the pit and irrigated to surrounding pasture. Irrigation will be visually monitored by the Site Manager to ensure water isn't ponding or running off the irrigated pastured area into mapped waterways. Should this occur, irrigation will cease immediately. • If settled stormwater is required to be released from the extraction pits post inundation, water quality monitoring will be undertaken to determine if it meets the water quality limits set in the EA. Should it meet these criteria, water will be released from the extraction ponds at the approved release point. If necessary, water may be treated using appropriate flocculants to reduce total suspended solids or turbidity if elevated. Monitoring will be undertaken post treatment to confirm the water quality is within the specified EA limits prior to release to a watercourse. ***Corrective Actions*** • Exceedance of the surface water quality release limits shall be reported immediately to the Site Manager. • The Site Manager shall report the exceedance to the relevant administering authority (EHP Pollution Hotline telephone: 1300 130 372).
Monitoring	• Water quality within the pit following inundation shall be monitored in accordance with the conditions of the EA. • Proactive monitoring of the Bureau of Meteorology reports, the site rainfall gauge, and the Fitzroy River stream gauge will be undertaken by the Site Manager to ensure that the Site is evacuated prior to inundation.

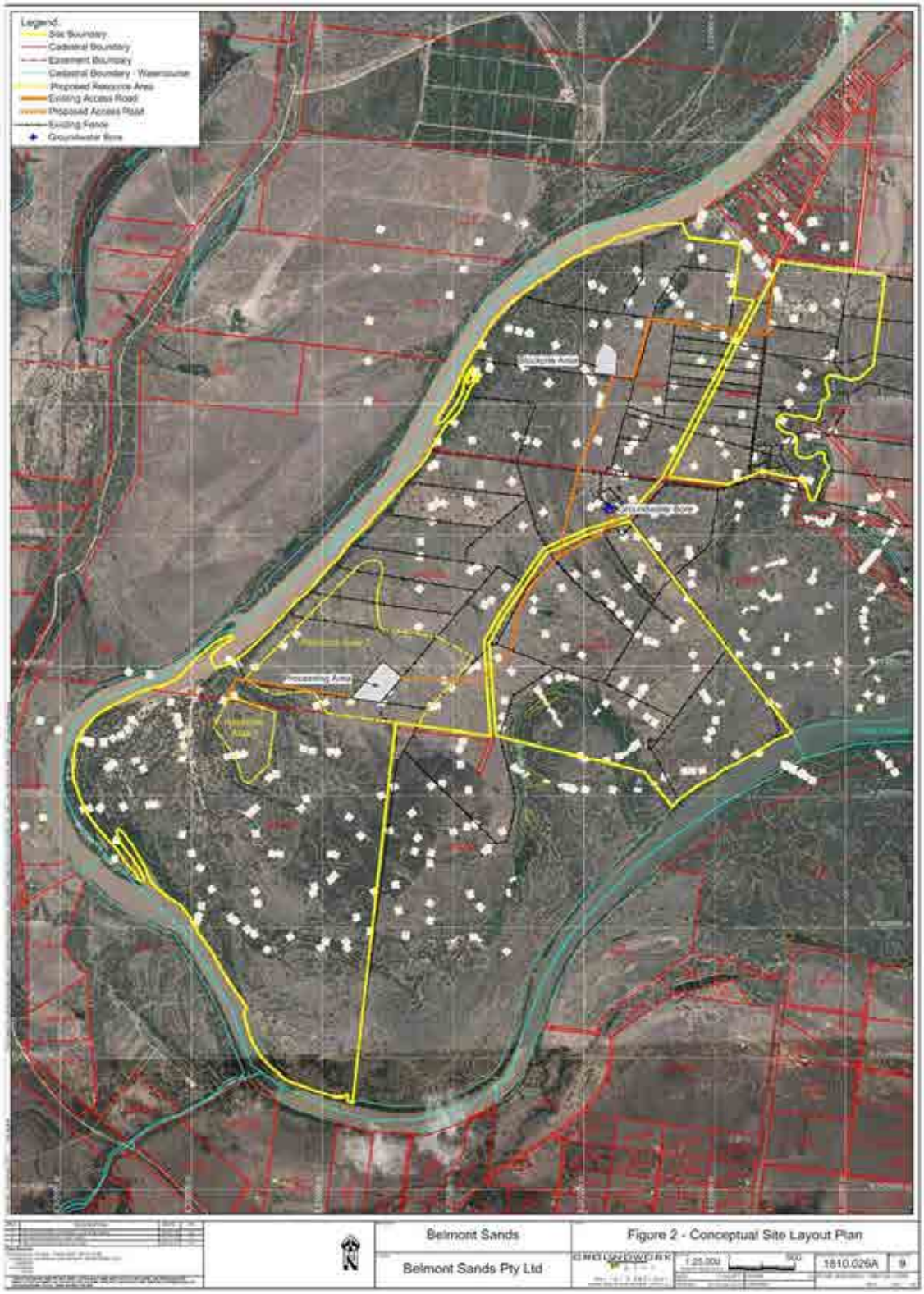
4.9 Ecological Management Plan

Purpose	The Ecological Management Plan has been prepared to control the potential for impacts to local ecological values associated with the extraction activities. This management plan has incorporated the recommendations from the Ecological Assessment completed for the proposed extraction by Gondwana Ecology Group (refer to Attachment 1 – Ecological Assessment within the Environmental Assessment Report).
Performance Targets	The following performance targets are relevant: • Avoid features of high ecology value on the Site. • Minimise potential impacts on local ecological values.
Relevant Conditions	Refer to DA and EA once issued.
Strategies/mitigation measures	Strategies/mitigation measures to minimise potential impacts on the local ecology may include the following: ***General*** • Minimise the extent of clearing within any of the nominated stages, to that which is necessary as a practical working area. • Avoid removal of large paddock trees, figs and stags on the edges of the nominated resource areas. • The final internal haul road location is to be determined in consultation with a qualified ecologist, to ensure that any resultant ecology impacts are minimised. • Implementation of sediment control and erosion control measures to ensure potential impacts to "wetlands" are avoided. • Provide a fauna spotter on the site during clearing operations, particularly for large trees (e.g. trees with girth greater than 300mm) and other trees with nests or obvious hollows. The spotter is to give particular consideration to nests and breeding periods. • Relocate/reuse hollow logs and woody debris for habitat. • Identify areas for progressive rehabilitation. • Identify (i.e. fencing/flagging) appropriate setbacks to remnant vegetation, wetlands and any other features of ecological value that are identified for retention/protection.
Monitoring	All employees will be responsible for the identifying local ecological values on-site. Qualified spotter/catchers will be employed for monitoring in the event clearing of trees with a girth greater than 300mm and other trees with nests and obvious hollows.

figures

21/12/2015
1910.610.001


Rockhampton
Site
Legend:
Site Boundary
State Controlled Road
Belmont Sands
Belmont Sands Pty Ltd
Figure 1 - Site Location Plan
1810.008
2


Legend
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Existing Fence
Groundwater Bore
Belmont Sands
Belmont Sands Pty Ltd
Figure 2 - Conceptual Site Layout Plan
1810.026A
9

Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Fence
Groundwater Bore
Berm / Diversion Drain
Rollover Bund
Sediment Basin
Release Point
Stockpile Area
Groundwater Bore
Resource Area 7
Processing Area
Release Point
Resource Area 1
Belmont Sands
Belmont Sands Pty Ltd
Figure 3 - Conceptual Erosion and Sediment Control Plan
1:2,500
240
1810.038B
3

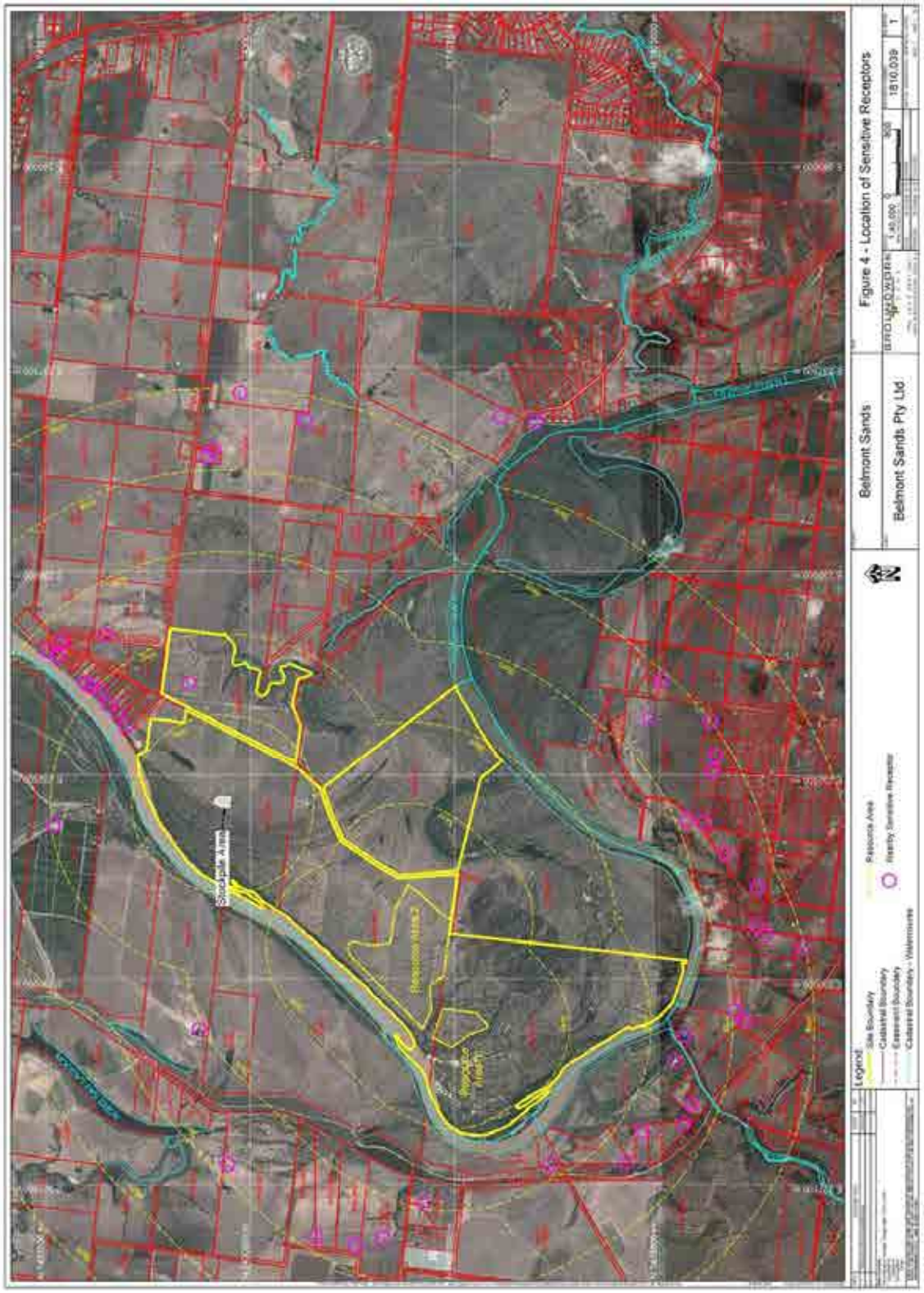


Figure 4 - Location of Sensitive Receptors
Belmont Sands
Belmont Sands Pty Ltd
1810.039
Legend
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watermark
Resource Area
Nearby Sensitive Receptor
Resource Area 2
Resource Area 1
Swansea Lake
Lake Tabourie

attachments

21/12/2015
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Attachment 1

Incident and Complaint Procedure

2/11/2015
1810.610.001

Incidents and Complaints Procedure

The objective of the Incident and Complaint Procedure is to ensure that incidents and complaints are reported, investigated and appropriate action is taken. A summary of the Incident and Complaint Procedure is provided below in **Diagram 2 – Incidents and Complaints Procedure Summary**. For further details regarding each element of the procedure refer to Attachment 3 – Complaint Procedure.

Diagram 2 – Incidents and Complaints Procedure Summary

Receiving Complaints/Recording Incidents

The Site Manager will be responsible for ensuring that all employees at the site are familiar with the procedure for incidents and complaint recording. The Site Manager will liaise personally with the complainant to discuss the nature of the complaint, identify possible causes and explain actions to prevent further complaints.

All complaints received or any employee involved in an incident having environmental implications or who becomes aware of any situation that develops into an incident, shall be reported to the Site Manager or delegate as soon as practicable. Employees are to show respect and understanding to complainants.

The following details shall be recorded at the receipt of an incident or complaint:

- date, time, location and nature of the incident or complaint
- type of communication (telephone, letter, email, personal, etc)
- name, contact address and contact telephone number of the person reporting the incident or complaint (i.e. note: if the complainant does not wish to be identified then '*not identified*' is to be recorded)
- details of incident or complaint
- response and investigation undertaken as a result of the incident or complaint
- name of person responsible for receiving and/or investigating the complaint
- response and investigation undertaken as a result of the complaint
- action taken as a result of the complaint investigation and signature of responsible person.

Step 1. Notification

When an environmental incident/complaint occurs, the Site Manager will notify the administering authority via telephone on 1300 130 372 (Pollution Hotline) or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of the approval. A standard form for such notification is attached see below - **INITIAL NOTIFICATION FORM**.

Step 2. Investigation

All incidents and complaints should be investigated. The investigations should include:

- determining what activities (and equipment) were being carried out or operated at the time of the complaint/incident
- determining whether, at the time of the complaint, normal day to day activities were conducted
- identifying whether equipment or activities on site were the source of complaint (or whether other activities in the locality were the cause of the complaint)

2/11/2015
1810.610.001

- determining what potential actions may be carried out to resolve complaint and/or minimise the likelihood of further
  complaint or release of contaminants to the environment.

Appropriate action is to be undertaken as soon as practical, but no longer than two days, to either determine the source of the complaint, and/or minimise further impact in the case of an incident. Corrective action is to be implemented and an assessment conducted to determine what, if any, preventative action can be implemented to prevent a similar incident from occurring again. All incidents and complaints reported shall be filed in a complaint/incident register available on the site.

The incident/complaint form shall be checked by the Site Manager two (2) weeks after receipt of complaint to ensure appropriate corrective action has been taken and that the issue has been resolved. If monitoring is undertaken to investigate a complaint the Site Manager, or the consultant commissioned to undertake the study/survey, an objective summary of the results of the study/survey shall be provided to the complainant.

Step 3. Reporting

Within 14 days of the incident/emergency, Hanson must, in addition to the information provided in the initial notification form, provide further information to the administering authority as shown in the attached form (see **FURTHER NOTIFICATION FORM**).

Within fourteen (14) days of the incident/emergency the written advice of the results of any environmental monitoring (not previously supplied) in relation to the incident/emergency shall be supplied to the relevant regulatory authority.

3/10/2015
1892.670.001

EMERGENCY AND INCIDENT

Department of Environment and Heritage Protection **Initial Notification Form**

This form is to be completed when notifying the Department of Environmental and Heritage Protection (EHP) of any emergency or incident, which has or may cause environmental harm. The EHP is to be contacted by telephone or facsimile (of this form) within 24 hours after becoming aware of the emergency or incident.

Date: .....

Environmental Authority (EA) Number: .....

Operator's name: .....

Your name: .....

Site location: .....

Name and telephone number of contact person: .....

.....

Location of emergency or incident within Site: .....

.....

Time of the emergency / incident / event: .....

Time that operators became aware of the emergency / incident / event: .....

The suspected cause of the emergency / incident / event: .....

.....

The environmental harm caused, threatened, or suspected to be caused by the emergency / incident / event:

.....

.....

.....

Actions taken to prevent further environmental harm and mitigate any environmental harm caused by the emergency / incident / event:

.....

.....

.....

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.....

.....

Name: ..... **Signature:** .....

2/11/2015
1810.610.001

EMERGENCY AND INCIDENT

Department of Environment and Heritage Protection **Further Notification Form**

Not more than 14 days following the initial notification of an emergency or incident, the holder of the Environmental Authority must provide the following written advice along with the initial notification form.

This record must be kept for a period of five (5) years.

Environmental Authority (EA) Number .....

Designated contact person: .....

Date of Event: ...../...../..... **Time of Event:** ..... am/pm

Proposed action to prevent a recurrence of the emergency / incident / event:

.....

.....

.....

Outcomes of actions taken at the time to prevent or minimise environmental harm and / or environmental nuisance:

.....

.....

.....

Results of any environmental monitoring performed:

.....

.....

.....

Further comments:

.....

.....

.....

.....

.....

.....

.....

Name: ..... **Signature:** .....

2/11/2015
1810.610.001

Attachment 2

Schedule 7 of the *Environmental Protection Regulation 2008*

2/11/2015
1810.610.001

Schedule 7 Regulated waste and waste that is not regulated waste

section 65

Part 1 Regulated waste

1 acidic solutions and acids in solid form

2 animal effluent and residues, including abattoir effluent and poultry and fish processing wastes

3 antimony and antimony compounds

4 arsenic and arsenic compounds

5 asbestos

6 barium compounds, other than barium sulfate

7 basic (alkaline) solutions and bases (alkalis) in solid form

8 beryllium and beryllium compounds

9 boron compounds

10 cadmium and cadmium compounds

11 chemical waste arising from a research and development or teaching activity, including new or unidentified material and material whose effects on human health or the environment are not known

12 chlorates

13 chromium compounds (hexavalent and trivalent)

14 clinical and related waste

15 containers contaminated with a regulated waste

16 copper compounds

17 cyanides (inorganic)

18 cyanides (organic)

19 encapsulated, chemically-fixed, solidified or polymerised wastes

20 ethers

21 filter cake, other than filter cake waste generated from the treatment of raw water for the supply of drinking water

22 fly ash

23 food processing waste

24 grease trap waste

25 halogenated organic solvents

26 highly odorous organic chemicals, including mercaptans and acrylates

27 hydrocarbons and water mixtures or emulsions, including oil and water mixtures or emulsions

28 inorganic fluorine compounds, other than calcium fluoride

29 inorganic sulfides

30 isocyanate compounds

31 lead and lead compounds including lead-acid batteries

32 material containing polychlorinated biphenyls (PCBs), polychlorinated napthalenes (PCNs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)

33 mercury and mercury compounds

34 metal carbonyls

35 mineral oils

36 nickel compounds

37 non-toxic salts including, for example, saline effluent

38 organic phosphorous compounds

39 organic solvents, other than halogenated solvents, including, for example, ethanol

40 organohalogen compounds, other than another substance stated in this schedule

41 oxidising agents

42 perchlorates

43 pesticides, including organochlorine

44 pharmaceuticals, drugs and medicines

45 phenols and phenol compounds, including chlorophenols

46 phosphorus compounds, other than mineral phosphates

47 polychlorinated dibenzo-furan (any congener)

48 polychlorinated dibenzo-p-dioxin (any congener)

49 reactive chemicals

50 reducing agents

51 residues from industrial waste treatment or disposal operations

52 selenium and selenium compounds

53 sewage sludge and residues, including nightsoil and septic tank sludge

54 surface active agents (surfactants) containing principally organic constituents, whether or not also containing metals and other inorganic materials

55 tallow

56 tannery wastes, including leather dust, ash, sludges and flours

57 tarry residues arising from refining, distillation or any pyrolytic treatment

58 tellurium and tellurium compounds

59 thallium and thallium compounds

60 triethylamine catalysts for setting foundry sands

61 tyres

62 vanadium compounds

63 vegetable oils

64 waste containing peroxides other than hydrogen peroxide

65 waste from a heat treatment or tempering operation that uses cyanides

66 waste from surface treatment of metals or plastics

67 waste from the manufacture, formulation or use of the following—

- biocides or phytopharmaceuticals
- inks, dyes, pigments, paints, lacquers or varnish
- organic solvents
- photographic chemicals or processing materials
- resins, latex, plasticisers, glues or other adhesives
- wood-preserving chemicals

68 waste from the manufacture or preparation of pharmaceutical products

69 waste of an explosive nature, other than an explosive within the meaning of the *Explosives Act 1999*

70 wool scouring wastes

71 zinc compounds

Part 2 Waste that is not regulated waste under section 65(3)

1 intact or partly disassembled televisions

2 intact or partly disassembled electronic equipment designed to be used with a television, including video players, DVD players, games units and set-top boxes

3 intact or partly disassembled computers, including desktop computers, notebook computers, laptop computers and tablets

4 intact or partly disassembled equipment designed to be used with computers, including keyboards, mouses, hard drives, scanners, printers, multi-function devices, speakers and web cameras

5 intact or partly disassembled internal computer components, including network or graphics cards, motherboards and DVD drives

6 mobile phones and mobile phone accessories, including chargers

7 batteries typically used in small electronic devices or handheld devices such as mobile phones, digital cameras, keyboards, toys and torches

8 whitegoods

9 residue produced by the process of recycling treated timber products, for example power poles and bridge timbers, containing amounts of treatment chemicals

10 groundwater or treated groundwater necessarily or unavoidably brought to the surface of the earth as part of an industrial process, if the groundwater—

(a) has a pH of at least 6 but not more than 10.5; and

(b) has an electrical conductivity of less than 15,000 micro-siemens a centimetre

11 waste architectural and decorative paints collected, stored and transported in accordance with a product stewardship, unless the paint—

- is a bagged render
- is texture coating
- contains isocyanates
- is paint stripper
- is an industrial paint
- is anti-fouling paint

12 containers of waste architectural and decorative paints mentioned in item 11 that are collected, stored and transported in accordance with a product stewardship, unless the paint is in a spray pack

Attachment 3

Schedule 2E of the *Environmental Protection Regulation 2008*

2/11/2015
1810.610.001

Schedule 2E Trackable waste and waste codes

section 81C and schedule 12, part 2, definition *waste code*

Explanatory notes to sch 2E

1 A substance is trackable waste if it is regulated waste of a type mentioned in this schedule.

2 If a substance falls under more than 1 item in this list, and the code for one of the items is marked with an asterisk, the code for the substance is the code marked with an asterisk.

Type of waste	Waste code
acidic solutions and acids in solid form	B100
animal effluent and residues, including abattoir effluent and poultry and fish processing wastes	K100
antimony and antimony compounds	D170
arsenic and arsenic compounds	D130
asbestos	N220
barium compounds, other than barium sulphate	D290
basic (alkaline) solutions and bases (alkalis) in solid form	C100
beryllium and beryllium compounds	D160
boron compounds	D310
cadmium and cadmium compounds	D150
chemical waste arising from a research and development or teaching activity, including new or unidentified material and material whose effects on human health or the environment are not known	T100
chlorates	D350

Type of waste	Waste code
chromium compounds (hexavalent and trivalent)	D140
clinical and related waste	R100*
copper compounds	D190
cyanides (inorganic)	A130
cyanides (organic)	M210
encapsulated, chemically fixed, solidified or polymerised wastes	N160*
ethers	G100
filter cake, other than filter cake waste generated from the treatment of raw water for the supply of drinking water	N190
fire debris and fire washwaters	N140*
fly ash	N150
grease trap waste	K110
halogenated organic solvents	G150
highly odorous organic chemicals, including mercaptans and acrylates	M260
inorganic fluorine compounds, other than calcium fluoride	D110
inorganic sulfides	D330
isocyanate compounds	M220
liquid food processing waste	K200
lead and lead compounds	D220
material containing polychlorinated biphenyls (PCBs), polychlorinated napthalenes (PCNs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)	M100
mercury and mercury compounds	D120
metal carbonyls	D100
mineral oils	J100

Type of waste	Waste code
nickel compounds	D210
non-toxic salts	D300
oil and water mixtures or emulsions, or hydrocarbons and water mixtures or emulsions	J120
organic phosphorous compounds	H110
organic solvents, other than halogenated solvents	G110
organohalogen compounds, other than another substance stated in this schedule	M160
perchlorates	D340
pharmaceuticals, drugs and medicines	R120*
phenols and phenol compounds, including chlorophenols	M150
phosphorus compounds, other than mineral phosphates	D360
polychlorinated dibenzo-furan (any congener)	M170
polychlorinated dibenzo-p-dioxin (any congener)	M180
residues from industrial waste treatment or disposal operations	N205
selenium and selenium compounds	D240
sewage sludge and residues, including nightsoil and septic tank sludge	K130
surface active agents (surfactants) containing principally organic constituents, whether or not also containing metals and other inorganic materials	M250
tannery wastes, including leather dust, ash, sludges and flours	K140
tarry residues arising from refining, distillation or any pyrolytic treatment	J160
tellurium and tellurium compounds	D250
thallium and thallium compounds	D180

Type of waste	Waste code
triethylamine catalysts for setting foundry sands	M230
tyres	T140
vanadium compounds	D270
waste containing peroxides other than hydrogen peroxide	E100
waste from a heat treatment or tempering operation that uses cyanides	A110
waste from surface treatment of metals or plastics	A100
waste from the manufacture, formulation or use of—	
• biocides or phytopharmaceuticals	H100
• inks, dyes, pigments, paints, lacquers or varnish	F100
• organic solvents	G160
• photographic chemicals or processing materials	T120
• resins, latex, plasticisers, glues or other adhesives	F110
• wood-preserving chemicals	H170
waste from the manufacture or preparation of pharmaceutical products	R140
waste of an explosive nature, other than an explosive within the meaning of the *Explosives Act 1999*	E120
wool-scouring wastes	K190
zinc compounds	D230

Attachment 4

State Emergency Services Business Flood Plan Template

2/11/2015
1810.610.001

SES RESCUE

Flood Planning for your Business

This is a guide only, designed to assist you in the key areas of flood planning and to create minimise the effect of flood on your business.

If you are already experiencing some flood damage on a regular basis (every couple of years or so) you may benefit from looking at some of the documentation on Flood-Proofing or talking to the SES or local council in your region.

Each business is different and things such as number of employees, type of business, location, size of location, type of plant and equipment must be taken into consideration. With this in mind if you look at your existing business, policies and procedures, staffing and existing emergency plans then consider if you have planned appropriately in the event of a flood.

Things that you may want to consider are:

- *Security procedures - Who is responsible for locking windows, doors and setting the alarm. Would this person be available to do this task in the event of an emergency evacuation. Perhaps another person (or people, in the event that staff work various shifts) should be allocated this responsibility in the event of an emergency.*
- *Insurance policies - Are you insured for flood damage, business interruption and lost revenue?*
- *Contingency Plans – Are you able to negotiate a reciprocal (or other) deal so that you can continue to run your business temporarily should your premises be effected by flood or other disaster.*
- *Hazardous materials plan - You must ensure that chemicals, oils and other substances in your possession are kept safe and do not contaminate flood water. Who is responsible for securing these materials safely, either moving them to a higher place or water-proofing them? Remember garbage may also be included in hazardous materials.*
- *Occupational Health & Safety for Employees – Do you have emergency evacuation procedures included in staff information/orientation packs. Does each job description include emergency warden duties including flood procedures.*
- *Warning Systems - Do you have a warning system to alert staff?. Do staff understand the alert signals? Does everyone understand the Emergency Plan? Is this warning system checked regularly?*

Legislative Requirements

- Occupational health and safety regulations
- Environmental regulations
- Local Government regulations

Important contacts

- Make a list of important telephone numbers, including contacts for gas, electricity, water and telephone providers.

Staff

- Make a list of employees' contact details in the event of an evacuation. This might include mobile telephone numbers, or numbers for their home or the home of a friend or relative.
- Think about staff who may need special assistance in the event of a flood (e.g. elderly, deaf, blind etc.)

Key locations

- Know the location of cut-off points for gas, electricity and water. Ideally, these should be marked on a map that is stored with your flood plan.
- Know the location of chemicals, oils or other materials that could be dangerous or contaminate flood water. These should be stored safe from floods and other damage.

Protective actions

- Note key stock, equipment and possessions that may need special protection from flood waters.
- Consider things you may need during or after a flood (i.e. sandbags, plastic sheeting, loudspeaker etc.)
- See if it's possible to move key operations, such as shipping and receiving or customer services, to another building.

Suppliers and external links

- Identify products and services you won't need in the event of a flood, or which suppliers may not be able to provide. Make back-up plans or arrangements for short-notice cancellation of deliveries.
- Consider contracting in advance with companies whose help you may need after a flood. This avoids the frustration of finding help in an emergency, and puts you in a better position to negotiate costs.
- Identify people who can help you before, during and after a flood.

BUSINESS FLOOD PLAN

Date: _____

Company name _____

Registered address _____

_____

_____Postcode_____

General contact list

	Company name	Contact name	Telephone	Mobile
State Emergency Service	General Contact No.: Emergency 24 hour contact:			
Electricity provider				
Gas provider				
Water company				
Telephone provider				
Local public transport				
Local council emergency services				
Insurance company				
Insurance agent				

Alternate office premises, contact details

Office / branch	Telephone	Fax	Address

Staff

Staff contact list - please continue on a separate sheet if necessary

Name	Job title	Home telephone & address	Mobile	Emergency contact	Emergency telephone & address

Note staff who may require assistance in the event of a flood.

Special needs staff member	Office location	Volunteer aide/s

Key locations

Service cut-off	Description of location
Electricity	
Gas	
Water	

Answer the following if applicable

Hazardous material	Description of location	How to protect from a flood (i.e. move, cover, tie down)
Chemicals (including cleaning products)		
Oil based products (gasoline, oil, cooking oil etc.)		
Other contaminants (i.e. asbestos insulation, lead-based paint)		

Protective actions

Identify stock, equipment and possessions that may need special protective measures, and describe the actions you will take to prevent their damage in the event of a flood. We have suggested items and ways to protect them, but make sure you follow through on your plans. For example, if you say you will move an item to a safer location, then do it!

Please continue on a separate sheet if necessary.

Items to consider

Computers	In-store stock	Chairs / stools	Computer files
Machinery	Warehouse stock	Tables / heavy furniture	Staff files
Vehicles	Fittings	Soft furnishings	Paper files
Electrical	Movable goods	Food	Databases

Ways to protect items

- Make a copy and store in safe location
- Raise above ground level
- Buy flood protection products
- Buy new flood-resistant item
- Move to safer location

Valuable item	Protective action	New location (if applicable)	Done

Valuable item	Protective action	New location (if applicable)	Done

Note basic building materials required. If materials are not needed, leave the relevant section blank.

Materials	Used for	Items to protect / where to use	Storage Location	Done
Sand & sand bags (unfilled), shovel	Creating flood barriers (used with plastic sheeting)			
Tools - hammer, nails, saw	Boarding up doors, windows and openings, creating shelves			
Wood - plywood, blocks of wood	Boarding up doors, windows and openings, creating shelves			
Sturdy plastic sheeting	Sandbag barriers, pulling up around furniture and appliances			
Plastic bags	Putting around legs of tables and chairs			
Pallets	Raising stored stock above flood level			
Emergency power generator	Maintaining function of air conditioning units (can help dry out a building), running fridges & freezers			

Note options for moving key operations to another site in the event of a flood. If you are a small business and relocation is not an option, leave this section blank.

Function	Temporary relocation	Telephone	Fax
Shipping & receiving			
Production			
Customer services			
Payroll			
Information support systems			

Suppliers and external links

Identify back-up plans for disruption of deliveries, or arrangements for short-notice cancellation with suppliers. Suggested back-up arrangements are listed below. Make sure that you follow through on your plans. For example, if you say you will use an alternate delivery address, make sure you provide that delivery address to your supplier in advance.

Please continue on a separate sheet if necessary.

Possible contingency plans

- (1) Contact supplier immediately on evacuation
- (2) Use alternate supplier
- (3) Use alternate delivery address
- (4) Individual terms detailed in separate document (attach document to this plan)

Supplier	Contingency plan	1) Supplier contact & telephone	2) Alternate supplier contact & telephone	3) New delivery address	4) Own agreement (attached)

List companies whose help you may need after a flood. Make sure that you follow through on your plans, and get contracts in place, or know who to call for assistance. If help is not needed, you can leave this section blank. If you contract in advance, attach the contract to this flood plan.

Flood service company	Company name	Contact	Telephone / mobile	Contract agreed
Hazardous materials response team				
Security services				
Water pumping services				
Suppliers of emergency power / equipment				
Equipment repair				
Earthmoving or engineering				

Identify people who can help you before, during and after a flood, and what they can do. We have suggested ways they might be able to help, but you'll need to discuss this with them.

Please continue on a separate sheet if necessary.

Ways people can help
- Assistance with installing flood products
- Assistance with evacuation transport
- Able to use their property for shelter
- Able to use their property as assembly point
- Provision of emergency storage
- Provision of emergency supplies or medical support

Relationship	Name	Contact details	How they can help	Help agreed
Neighbour				
Neighbour				
Volunteer				
Volunteer				
Other				

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Environmental Assessment Report

Meeting Date: 17 July 2018

Attachment No: 4

GROUNDWORK plus

BELMONT SANDS
ENVIRONMENTAL ASSESSMENT REPORT

Prepared for:
Belmont Sands Pty Ltd

Date:
17/07/2015

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Table of Contents

1. Introduction 1
1.1 General 1
1.2 Site Details 1
1.3 Project Overview 2
1.4 Description of Existing Environment 3
1.5 Potential Environmental Impacts and Risks 7
2 Environmental Assessments 11
2.1 Summary of Assessment Undertaken and Recommendations 11
3 Environmental Management Plan 12
4 Environmental Objective Assessment 13
5 Conclusion 17

TABLES

Table 1 – Identification of Potential Impacts on Surrounding Environmental Values 7
Table 2 – Definitions of Likelihood 7
Table 3 – Definitions of Consequence 8
Table 4 – Risk Assessment Matrix 8
Table 5 – Indicative Management Option for Each Risk Assessment Rating 8
Table 6 – Identification of Environmental Impacts and Risks 9
Table 7 – Operational Assessment 13
Table 8 – Land Use Assessment 15

FIGURES

Figure 1	Site Location Plan	*(Drawing No. 1810.DRG.008r2)*
Figure 2	Conceptual Site Layout Plan	*(Drawing No. 1810.DRG.026Ar6)*
Figure 3	Regulated Vegetation Management Map	*(Drawing No. 1810.DRG.033A)*
Figure 4	Location of Sensitive Receptors	*(Drawing No. 1810.DRG.039)*

ATTACHMENTS

Attachment 1	Ecological Assessment

1. Introduction

1.1 General

Belmont Sands Pty Ltd propose to develop an extractive resource ('Belmont Sands') in the Livingstone Shire Council (Council) area for the supply of sand and gravel to the building and construction industry (extractive industry). The site is accessed by Etna Creek Road, Etna Creek QLD 4702 refer **Figure 1 – Site Location Plan** (the site). The site comprises the following lots:

- Lot 8 on RP601603
- Lot 5 on RP601603
- Lot 10 on SP142291
- Lot 6 on RP601603 (for road/access purposes only)
- Lot 3 on RP601603 (for road/access purposes only).

Groundwork Plus has been commissioned by Belmont Sands to prepare an Environmental Assessment Report (EAR) to accompany a development application to the Council for *extractive industry*.

The development application will comprise the following components:

- Material Change of Use – Development Permit for *extractive industry* and associated activities
- Material Change of Use – Concurrence Environmentally Relevant Activities (ERAs)
- Environmental Authority for Environmentally Relevant Activities (ERAs):
  - ERA 16(2)(b) Extracting, other than by dredging, in a year, the following quantity of material – more than 100,000 tonnes but not more than 1,000,000 tonnes.
  - ERA 16(3)(b) Screening, in a year, the following quantity of material – more than 100,000 tonnes but not more than 1,000,000 tonnes.

The EAR provides a description of the proposed activity and the existing environment, and identifies the potential environmental impacts associated with the proposed development. The purpose of the EAR is to provide a clear and concise description of the proposed activity, inform the appropriate design and implementation of measures proposed to safeguard the environment and surrounding amenity, and demonstrate compliance with the *Environmental Protection Act 1994* and associated regulations and guidelines. The findings of the EAR provide the basis for the preparation of the site Environmental Management Plan (EMP).

1.2 Site Details

Location:	The site is accessed by Etna Creek Road, Etna Creek QLD 4702, approximately 20 kilometres north-west of Rockhampton (refer **Figure 1 – Site Location Plan**).
Real Property Description:	The site consists of the following lots: • Lot 8 on RP601603 • Lot 5 on RP601603 • Lot 10 on SP142291 • Lot 6 on RP601603 (for road/access purposes only) • Lot 3 on RP601603 (for road/access purposes only).

Access:	The site will be accessed via a current access point from Etna Creek Road, which connects to the Bruce Highway.
Site Area:	1,524 hectares.
Tenure:	Freehold.
Registered Proprietors:	AgForce Queensland Industrial Union of Employers.
Local Authority:	Livingstone Shire Council.
Zoning:	Rural Zone.
Existing Use:	Rural pursuits. Cattle grazing. Research.

1.3 Project Overview

Prior to commencement of extraction, access and haul roads will be developed to facilitate the movement of personnel, plant and equipment, and light vehicles around the site. Construction of site infrastructure including the stockpile/processing plant area, office/amenities (if required), weighbridge (if required), storage shed and processing plant will also occur at this juncture. Once the infrastructure is established, topsoil stripping and stockpiling will be completed in a logical sequence, to enable extraction to commence.

Material will be extracted via conventional methods, which includes an excavator and then transported to the processing plant by truck. Processing will involve screening and washing (if required) to remove fine silt and clay particles and dewatering of the final product, prior to stockpiling. No blasting or crushing is to occur as part of the process.

An existing groundwater bore on the site will be primarily utilised by the proposed operation when needed. It is anticipated that longer-term water for the washing of material (if required) will be sourced from a pond which will be formed within the extraction pit. Water will be returned to the pond, where suspended particles will settle through sedimentation, and the water reused. It is anticipated that the groundwater bore will be utilised in the initial stages of extraction while the pond is still being formed and then on an as needed basis.

Stockpiling of products will be necessary to meet customer requirements and schedules and for quality control testing. Stockpiling on site will be restricted to the minimum necessary by matching production to market requirements to the extent possible. Stockpiling will be arranged to provide ready access to different products.

Rehabilitation works will be undertaken progressively and in tandem with the extraction program. Profiling of the final landform shall be carried out to facilitate drainage.

Major plant and equipment to be used as part of the proposed development will include (but is not limited to):

- Excavator
- Haul truck
- Processing plant
  - Hopper and feeding conveyor
  - Static screen
  - Density tank
  - Sand pump
  - Tower
  - Hydrocyclone
- Spray bar

- Wash down pad
- Weighbridge (if required).

Ancillary facilities include (but are not limited to):

- Office/amenities
- Storage shed.

The general layout of the processing plant, stockpiles, ancillary facilities and proposed extent of extraction is shown on **Figure 2 – Conceptual Site Layout Plan**.

The principle objective of rehabilitation is to return the land to a stable, non-polluting and self-sustaining state capable of supporting grazing as a post extraction land use.

1.4 Description of Existing Environment

Regional Climate:

The site is within the Fitzroy River Catchment on the Tropic of Capricorn and within the south east trade wind belt, too far south to experience regular north west monsoonal influence and too far north to benefit from higher latitude cold fronts. The region has a subtropical climate with a distinct dry winter season and wet summer with most rain falls between December and March. The driest month is September. The annual mean rainfall is about 798 mm.

Mean monthly maximum temperatures are highest in January (32°C) and lowest in July (about 23.1°C).

A summary of the Regional Climatic Statistics is as follows:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall (mm)													
Mean	132.2	140.7	98.7	46.9	49.6	34.7	28.1	24.8	21.3	39.3	64.7	117.3	798.3
Temperature (°C)													
Mean min.	22.1	22.1	20.8	17.9	14.2	11	9.6	10.7	13.7	17	19.5	21.2	16.6
Mean max.	32	31.2	30.5	28.8	26	23.5	23.1	24.8	27.4	29.7	31.2	32.1	28.4

Source: Bureau of Meteorology's Rockhampton (Station No. 39083) for temperate and Belmont Station (Station No.33209) for rainfall data.

Topography and Drainage:

The site is situated within the flood plains of the Fitzroy River and the majority of the site drains south towards the river.

Topography of the site ranges between 10m AHD at the northern end of the site to 2m AHD in the far eastern sector of the site.

Fitzroy River meanders for approximately 60 km in a south easterly direction before discharging into the Coral Sea.

Geology and Groundwater Hydrology:

The fluvial, lithic quartzose sands investigated at Belmont Station display well-established grain sorting and moderate chemical maturity. These features are the product of a consistent riverine depositional flow regime which has built up high sandy and vegetated levees which run sub-parallel to the Fitzroy River on Belmont's point bar bank. The large catchment area of the Fitzroy is represented by the variety of lithic grains observed in the sand which include volcanic, metamorphic and sedimentary grains. These are accompanied by trace free hornblende and mica grains which are relics of a granitic source rock. These diversely constituted sands are accompanied by fine, clay rich

fluvial deposits which are interbedded with the sand as lenses or have settled as vast sheets in adjacent flood plains.

The Groundwater Environmental Values for the local area prescribed by Fitzroy River Sub-Basin Environmental Values and Water Quality Objectives (WQOs) include stock watering, aquatic ecosystems, irrigation, farm supply/use, primary recreation, drinking water and cultural and spiritual values. Based on local groundwater information sourced from the Qld Globe interactive mapping system (supported by Google Earth), there are four registered groundwater bores on the site.

The majority of the site is mapped as Zone 22 for Groundwater within the Fitzroy River Sub-Basin Environmental values and Water Quality Objectives with the north west corner mapped as Zone 14.

The Water Quality Objectives for Zone 14 and Zone 22 for shallow (less than 30m) groundwater are provided below:

Zone	Depth	Percentile	EC (µScm)	Handness (mgLas CaCO3)	pH	Ca (mgL^{-3})	Mg (mgL^{-3})	Na (mgL^{-3})	Cl (mgL^{-3})	Fe (mgL^{-3})	Zn (mgL^{-3})	Cu (mgL^{-3})
22	<30m	20th	1403	367	7.2	60	41	145	218	0.000	0.010	0.000
22	<30m	50th	2220	591	7.7	105	76	240	475	0.000	0.020	0.010
22	<30m	80th	3722	1001	8.0	175	145	420	979	0.050	0.080	0.037
14	<30m	20th	1006	294	7.5	51	36	88	129	0.000	0.010	0.010
14	<30m	50th	1619	458	7.9	80	61	164	260	0.005	0.030	0.020
14	<30m	80th	2150	743	8.1	125	108	308	604	0.030	0.091	0.050

A representation of the closest existing registered bores to the site is provided below.

Bore Reg. No.	Bore Status	Property/ Description	Lat. (°) Long. (°)	Distance from quarry development area (km)	Bore Depth (m)	Standing Water Levels m AHD/date
RN151501	Existing	Lot 5 RP601603	-23.22460002 150.38303	1.8km NE	28	NR
RN88290	Existing	Lot 5 RP601603	-23.2236917 150.3840153	1.9km NE	29	NR
RN151494	Existing	Lot 10 SP142291	-23.2288 150.3839269	1.9km NNE	22	-10.4
RN88289	Existing	Lot 10 SP142291	-23.21378849 150.3827335	2km NNE	30	-11.63
RN111644	Existing	Lot 10 SP142291	-23.2052333 150.3881469	3.9km NNE	18	-13.0

Notes: NR = no records found

Contaminated Land: The site not listed on the Environmental Management Register or Contaminated Lanc Register.

Acid Sulphate Soil: The site is located at or near an area where acid sulphate soils have previously bean identified or within a prospective land zone containing acid sulphate soils as identified in the Livingstone Shire Council Planning Scheme 2015 Acid Sulfate Soils Overlay. The area of the site proposed in this application is not within the mapped acid sulfate soil area.

Erosion Risk: Erosion risk for the region based on monthly average rainfall depth:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
H	H	H	M	M	L	L	L	VL	M	M	H

Notes: E = Extreme, H = High, M = Medium, L = Low, VL = Very Low
Sourced from Table 4.4.2, p. 4.12 of IECA Best Practice Erosion and Sediment Control, Book 1.

Vegetation: The site is largely cleared and has been used for cattle grazing but does have pockets of 'Of Concern Regional Ecosystem' and 'Least Concern Regional Ecosystem', refer **Figure 3 – Regulated Vegetation Management Map** and **Attachment 1 – Ecological Assessment**.

These are as follows:

- **Remnant Vegetation Containing Of Concern Regional Ecosystems:**
  - 11.3.2 – Eucalyptus populnea woodland on alluvial plains.
  - 11.3.3 – Eucalyptus coolabah woodland on alluvial plains.
- **Remnant Vegetation Containing Of Least Concern Regional Ecosystems:**
  - 11.3.25 – Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines.

Waterways: There are a number of mapped waterways and wetland areas on the site (refer **Figure 3 – Regulated Vegetation Management Map**).

The site is adjacent to the freshwater Fitzroy main channel above the barrage. The *Queensland Water Quality Guideline (EHP 2009)*, outlines the Environmental Values for the Fitzroy main channel (freshwater) as aquatic ecosystems, irrigation, farm supply/use, stock water, aquaculture, human consumer, primary recreation, secondary recreation, visual recreation, drinking water, industrial use and cultural and spiritual values. The regional water quality objectives for the Fitzroy River are as follows:

Summary of Water Quality Objectives for Fitzroy River Sub-Basin fresh waters*

Ammonia N (µg/L)	Oxid N (µg/L)	Org N (µg/L)	Total Nitrogen (N) (µg/L)	Total P (µg/L)	DO (%sat)		Turbidity (NTU)	Suspended Solids (mg/L)	pH		Conductivity (µs/cm)
					lower	upper			lower	upper	
20	60	420	500	50	85	110	<50	<85	6.5	8.5	<445^

* Note: Physico-chemical indicator and guideline value for moderately disturbed systems.

^ during base flow.

Flooding: The site is mapped as containing Floodplains in accordance with the Qld Globe Flood Event Mapping.

Existing Land Use: Predominately cattle grazing.

Adjacent Land Use: North – rural farming and rural residential and Fitzroy River (north-west).
East – Rural farming and residential along Etna Creek Road.
South – Fitzroy River and wetland area adjoining the river.
West – Fitzroy River and rural residential.

Environmental Sensitive Receptors: The nearest external sensitive receptor to the development is a rural residence, approximately 1.6 km to the south west of the site boundary, which is rural residential south of Fitzroy River, refer to **Figure 4 – Location of Sensitive Receptors.**

Cultural Heritage: There are no known or registered matters of Aboriginal Cultural Heritage significance within the site.

Air Quality: The ambient air quality for the area is relatively pristine being a rural area. It is assumed that dust levels within the vicinity are relatively pristine (low) for the majority of the time.

Noise: The key influence on the existing background noise levels at the site is road traffic on Etna Creek Road. Background noise levels at residential areas to the north and along Etna Creek Road are currently affected by the existing traffic use of residents and trucks used for farming including moving cattle from the AgForce site.

The recommended outdoor background noise level for rural residential as outlined in the Department of Environment and Heritage Protection (EHP), Planning for Noise Control (2004) are as follows:

Receiver Land Use	Receiver Area Dominant Land Use (description of neighbourhood) Note 1	Background Noise Level, minLA90,1hour (dBA) Note 2		
		Day	Evening	Night
Residential	Rural residential, church, hospital	45	35	3[illegible]

Note 1. The dominant land use is defined by a radius of 200m from the receiver location under consideration.

Note 2. LA90,1 hour, dBA The A-weighted sound pressure level of the residual noise (dB) exceeded for 90 percent of a given time interval, T, measured using time weighting 'F' and quoted to the nearest whole number of decibels.

Visual Amenity: Natural topography, buffer distances and surrounding vegetation provide effective visual safeguards from potential viewpoints.

1.5 Potential Environmental Impacts and Risks

The identification of activities and their potential environmental impacts is fundamental to designing and implementing procedures and measures proposed in the Environmental Management Plan (EMP). This section outlines the possible impacts on existing environmental values which may occur due to the extractive industry operations on-site. Activities associated with on-site operations have been tabulated against environmental issues to provide a focus for preparing the EMP, refer to **Table 1 – Identification of Potential Impacts on Surrounding Environmental Values**.

Table 1 – Identification of Potential Impacts on Surrounding Environmental Values

Item No.	Activity	Potential Environmental Impact
1	Topsoil Stripping and Stockpiling	Stormwater Quality and Soil Erosion, Air Quality (Dust), Noise Emissions, Weeds, Visual Amenity
2	Extraction of raw materials	Stormwater quality and Soil Erosion, Air Quality (Dust), Noise Emissions, Visual Amenity
3	Handling and Stockpiling of Raw Material	Stormwater Quality, Air Quality (Dust), Noise Emissions
4	Screening and washing of Raw Material	Stormwater Quality, Air Quality (Dust), Noise Emissions
5	Handling, Storage and Haulage of processed material	Stormwater Quality, Air Quality (Dust), Noise Emissions
6	Maintenance Activates	Stormwater Quality, Waste Generation and Land Contamination
7	Handling of Hydrocarbons and Chemicals on-site	Stormwater Quality, Waste Generation and Land Contamination
8	Site Rehabilitation	Stormwater Quality and Soil Erosion, Air Quality (Dust), Noise Emissions, Weeds, Visual Amenity
9	Stormwater Management	Stormwater Quality
10	Waste Management (i.e. paper, food packaging and scraps, waste oil/lubricates, oily rages, spilled raw material and packaging)	Stormwater Quality, Land Contamination, Fauna, Visual Amenity

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.
- the consequences of the occurrence on the surrounding environment.

The likelihood and consequences are scored between 1 and 5 for each potential impact or event. **Table 2 – Definitions of Likelihood** and **Table 3 – Definitions of Consequence** outline the identifiers and scores used in the risk assessment.

Table 2 – 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 time in the future	3
Likely	Will probably occur	4
Almost Certain	Is expected to occur in most circumstances	5

Table 3 – Definitions of Consequence

Rating	Descriptor	Score
Negligible	Impacts not requiring any treatment or management action	1
Minor	Nuisance or insignificant environmental harm requiring minor management action	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 4 – Risk Assessment Matrix**. The final risk level assigned is a product of the likelihood and consequence scores. The higher the risk score, the higher the priority is for management.

Table 4 – Risk Assessment Matrix

Likelihood		Consequence				
		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

Table 5 – Indicative Management Option for Each Risk Assessment Rating describes the possible actions required for each risk assessment rating.

Table 5 – Indicative Management Option for Each Risk Assessment Rating

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 and emergency 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 risk to provide a focus for preparing the EMP, refer to **Table 6 – Identification of Environmental Impacts and Risks**.

Table 6 – Identification of Environmental Impacts and Risks

Activity	Impacts								
	Stormwater, Soil Erosion/Flood inundation	Groundwater	Land Contamination	Air Quality (Dust)	Noise and Vibration	Waste	Fauna and Flora	Visual Amenity	Spread of Declared Plants
Vegetation Clearing	Medium 4x2=8	Low 2x1=2	Low 2x1=2	Medium 3x2=6	Medium 3x2=6	Low 4x1=4	Medium 3x3=9	Medium 3x2=6	Low 2x1=2
Topsoil Stripping & Stockpiling	Medium 4x2=8	Low 2x1=2	Low 1x1=1	Medium 3x2=6	Medium 3x2=6	Low 2x1=2	Low 2x1=2	Medium 3x2=6	Low 2x1=2
Raw Material Extraction including Dredging	Medium 4x2=8	Low 2x1=1	Low 2x1=2	Low 2x1=2	Medium 3x3=9	Low 2x1=2	Low 2x1=2	Medium 3x2=6	Low 2x1=2
Raw Material Stockpiling	Low 4x1=4	Low 1x1=1	Low 1x1=1	Low 3x1=3	Low 3x1=3	Low 1x1=1	Low 1x1=1	Low 2x1=2	Low 2x2=4
Raw Material Handling	Low 3x1=3	Low 1x1=1	Low 2x1=2	Low 3x1=3	Low 3x1=3	Low 1x1=1	Low 3x1=3	Low 2x1=2	Low 2x2=4
Screening	Low 3x1=3	Low 1x1=1	Low 2x1=2	Medium 3x3=9	Medium 3x3=9	Low 3x1=3	Low 2x1=2	Low 2x1=2	Low 1x1=1
Product Stockpiling & Handling	Low 3x1=3	Low 1x1=1	Low 1x1=1	Low 3x1=3	Medium 3x3=9	Low 2x1=2	Low 1x1=1	Low 2x1=2	Low 2x2=4
Product Haulage	Low 2x1=2	Low 1x1=1	Low 1x1=1	Medium 3x2=6	Medium 3x3=9	Low 1x1=1	Low 2x1=2	Low 2x1=2	Low 2x2=4
Maintenance Activities	Low 3x1=3	Low 2x1=2	Low 3x1=3	Low 1x1=1	Low 3x1=3	Low 4x1=4	Low 2x1=2	Low 1x1=1	Low 2x2=4
Handling of Hydrocarbons & Chemicals	Medium 3x2=6	Low 2x1=2	Medium 3x2=6	Low 1x1=1	Low 1x1=1	Low 3x1=3	Low 2x1=2	Low 1x1=1	Low 1x2=2
Rehabilitation Activities	Medium 4x2=8	Low 1x1=1	Low 1x1=1	Low 2x1=2	Low 3x1=3	Low 2x1=2	Low 2x1=2	Low 1x1=1	Low 3x1=3
Stormwater Management	Medium 4x2=8	Low 1x1=1	Low 1x1=1	Low 2x1=2	Low 2x1=2	Low 2x1=2	Low 2x1=2	Low 1x1=1	Low 2x2=4
Waste Management	Low 3x1=3	Low 1x2=2	Low 2x1=2	Low 3x1=3	Low 2x1=2	Low 2x1=2	Low 3x1=3	Low 2x1=2	Low 2x2=4
Front End Loader	Low 1x1=1	Low 1x1=1	Low 2x2=4	Low 3x1=3	Medium 3x2=6	Low 2x1=2	Low 2x1=2	Low 1x1=1	Low 2x2=4
Screening Plant	Low 2x1=2	Low 1x1=1	Low 2x2=4	Low 2x1=2	Medium 3x3=9	Low 2x1=2	Low 2x1=2	Low 1x1=1	Low 2x2=4
Excavator	Low 2x1=2	Low 1x1=1	Low 2x2=4	Low 3x1=3	Medium 3x3=9	Low 2x1=2	Low 2x1=2	Low 1x1=1	Low 2x2=4

Activity	Impacts								
	Stormwater, Soil Erosion/Flood inundation	Groundwater	Land Contamination	Air Quality (Dust)	Noise and Vibration	Waste	Fauna and Flora	Visual Amenity	Spread of Declared Plants
Haul Trucks and Product Delivery Truck	Low 2x1=2	Low 1x1=1	Low 1x2=1	Medium 3x3=9	Medium 3x3=9	Low 2x1=2	Low 2x1=2	Low 1x1=1	Low 2x2=4
Light Vehicles	Low 1x1=1	Low 1x1=1	Low 1x2=1	Low 3x1=3	Low 3x1=3	Low 2x1=2	Low 2x1=2	Low 1x1=1	Low 2x2=4

2 Environmental Assessments

2.1 Summary of Assessment Undertaken and Recommendations

A detailed Ecology Assessment (refer **Attachment 1 – Ecological Assessment**) has been undertaken by Gondwana Ecology Group which analysed the ecological features within the site and assessed the potential impact of proposed operations with consideration of the requirements identified in the State and Council prelodgement meetings. The report states that vegetation on the site is predominately grazing landscape of planted pasture and weed species with the valance generally conforming to that which has been mapped "regulated vegetation" by the State.

The proposed project has been designed to avoid all features considered "high ecological value" at a State and Commonwealth level and has avoided the Council's "significant local vegetation". The Ecological Assessment recommends a number of mitigation measures which include:

- Designing the haul road through remnant woodland to Resource Area 1 to avoid large eucalypts.
- Avoiding any tree with eagle nest during initial stages and only remove if necessary.
- Avoiding the removal of large paddock trees, figs and stags (particularly with design of haul road and on edge of Resource Areas).
- Retaining the Stockpile Area on higher ground (rather than on lower slopes).
- Avoiding the small swales/wetlands (particularly with haul road design).
- Minimising the erosion to "wetlands" through avoidance and implementation of sediment control, where necessary.
- Checking the fauna (with fauna catcher/ecologist) during clearing operations (particularly large trees).
- Relocate/reusing the hollow logs and woody debris for habitat.
- Retaining the Stockpile Area setback (approximately 30m) from remnant vegetation and above a flooding level.

Following implementation of the proposed project the report concludes it is unlikely there would be any significant impact on features of high ecological value. The report concludes that the project could be approved with reasonable and relevant conditions with respect to ecology.

3 Environmental Management Plan

The proposed extraction of sand and gravel is considered to be relatively small scale, however, where potential risks have been identified an applicable management plan has been prepared as part of the EMP to manage these potential impacts. The EMP is the principal management tool for guiding environmental management at the site by providing the framework for environmental management at the operational level to prevent or minimise environmental impacts. It sets out the purpose, relevant Environmental Authority (EA) and Development Approval (DA) conditions, performance targets, mitigation measures and strategies, and monitoring that will be undertaken for each environmental element that poses a risk.

The EMP will guide future activities on site and will need to incorporate the requirements of the DA once issued by the Council and the EA once issued by the EHP hence it will be updated to include all conditions once these approvals are finalised.

4 Environmental Objective Assessment

This Environmental Objective Assessment has been prepared to assist the administering authority in their environmental management decisions relating to the environmental relevant activity of this site-specific Environmental Authority Application. The Environmental Objective Assessment has been made against the environmental objective and performance outcomes prescribed in schedule 5, part 3, tables 1 and 2 of the *Environmental Protection Regulations 2008*.

The Environmental Objective Assessment has been split into an Operational Assessment, refer to **Table 7 – Operational Assessment** and a Land Use Assessment, refer to **Table 8 – Land Use Assessment**.

Table 7 – Operational Assessment

Environmental Objective	Performance Outcomes	Assessment ×/✓/na	Comments
Air			
The activity will be operated in a way that protects the environmental values of air.	1. There is no discharge to air of contaminants that may cause an adverse effect on the environment from the operation of the activity.	×	The potential for dust emissions from the proposed sand extraction is limited due to the nature of the material being extracted having a large particle size (sand). Additionally, no crushing will be conducted on the site. While there is minimal potential for the proposed operations to cause dust amenity impacts, a range of mitigation measures will be implemented as detailed in the EMP.
	2. All of the following— (a) fugitive emissions of contaminants from storage, handling and processing of materials and transporting materials within the site are prevented or minimised;	✓	Strategies/mitigation measures implemented on-site are provided in Section 3.4 of the draft EMP.
	(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;	✓	The initial corrective actions are provided in Section 3.4 of the EMP.
	(c) releases of contaminants to the atmosphere for dispersion will be managed to prevent or minimise adverse effects on environmental values.	na	
Water			
The activity will be operated in a way that protects environmental values of waters.	1. There is no actual or potential discharge to waters of contaminants that may cause an adverse effect on an environmental value from the operation of the activity.	×	Site activities have the potential to impact on overland flow water quality that could cause an adverse effect on environmental values of the receiving environment.
	2. All of the following— (a) the storage and handling of contaminants will include effective means of secondary containment to prevent or minimise releases to the environment from spillage or leaks;	✓	Applicable strategies/mitigation measures implemented on-site are provided in Section 3.1 and Section 3.1 of the EMP for stormwater contamination management, and handling/storing of hydrocarbons and chemicals on-site respectively.
	(b) contingency measure will prevent or minimise adverse effects on the environment due to unplanned releases or discharges of contaminants to water;	✓	Applicable strategies/mitigation measures implemented on-site are provided in Section 3.1 of the EMP.
	(c) the activity will be managed so that stormwater contaminated by the activity that may cause an adverse effect on an environmental value will not leave the site without prior treatment;	✓	Site management protocol relating to Stormwater management (including management strategies/mitigation measures, monitoring and corrective actions) is provided in Section 3.1 of the EMP.
	(d) the disturbance of any acid sulphate soil, or potential acid sulphate soil, will be managed to prevent or minimise adverse effects on environmental values;	✓	As the area of the proposed extraction is outside of the mapping for Acid Sulphate Soils it is unlikely that disturbance of ASS or PASS will occur. Should it be identified site management will investigate the source further and undertake management strategies/mitigation measures, monitoring and corrective actions if necessary.

Environmental Objective	Performance Outcomes	Assessment x/✓/na	Comments
	(e) acid producing rock will be managed to ensure that the production and release of acidic waste is prevented or minimised, including impacts during operation and after the environmental authority has been surrendered;	na	The site is not located at or near an area where acid producing rock has previously been identified or within a prospective land zone containing acid producing rock.
	(f) any discharge to water or a watercourse or wetland will be managed so that there will be no adverse effects due to the altering of existing flow regimes for water or a watercourse or wetland;	✓	The waters within the extraction pits will be managed to meet to meet license conditions and ensure no adverse effects occur downstream. The proposed operations should not alter the existing flow regimes within the Fitzroy River as clean overland flow will be directed around or through the site away from the operational area, refer to Section 3.1 of the EMP.
	(g) for a petroleum activity, the activity will be managed in a way that is consistent with the coal seam gas water management policy, including the prioritisation hierarchy for managing and using coal seam gas water and the prioritisation hierarchy for managing saline waste;	na	Site operations are not a petroleum activity.
	(h) the activity will be managed so that adverse effects on environmental values are prevented or minimised.	✓	Site management protocol relating to Stormwater, Erosion and Sediment Control (including management strategies/mitigation measures, monitoring and initial corrective actions) is provided in Section 3.1 of the EMP
Wetlands			
The activity will be operated in a way that protects the environmental values of wetlands.	1. There will be no potential or actual adverse effect on a wetland as part of carrying out the activity.	x	Any potential for adverse impact on wetlands due to stormwater drainage will be mitigated and managed in accordance with Section 3.1 of the EMP.
	2. The activity will be managed in a way that prevents or minimises adverse effects on wetlands.	✓	Site management protocol relating to water quality management (including management strategies/mitigation measures, monitoring and corrective actions) is provided in Section 3.1 of the EMP. This will ensure the activity will be managed in a way that prevents or minimises adverse effects on the adjacent wetland.
Groundwater			
The activity will be operated in a way that protects the environmental values of groundwater and any associated surface ecological system.	1. Both of the following apply— (a) there will be no direct or indirect release of contaminants to groundwater from the operation of the activity; (b) there will be no actual or potential adverse effect on groundwater from the operation of the activity.	x	Groundwater may be encountered at depth during extraction. No actual or potential adverse effect on groundwater from the operation of the activity is anticipated. If managed in accordance with the EMP, it is expected that the proposed extraction activities will have no adverse impact on local groundwater quality.
	2. The activity will be managed to prevent or minimise adverse effects on groundwater or any associated surface ecological systems. *Note—* *Some activities involving direct releases to groundwater are prohibited under section 56 of this regulation.*	✓	The activity will be managed to prevent adverse effects on groundwater or any associated surface ecological systems. Site management protocol relating to water quality management (including management strategies/mitigation measures and monitoring is provided in Section 3.1 of the EMP.
Noise			
The activity will be operated in a way that protects the environmental values of the acoustic environment.	1. Sound from the activity is not audible at a sensitive receptor.	x	The proposed development will incorporate appropriate noise control infrastructure and management measures as necessary to achieve the regulatory amenity guidelines for surrounding sensitive receptors.
	2. The release of sound to the environment from the activity is managed so that adverse effects on environmental values including health and wellbeing and sensitive ecosystems are prevented or minimised.	✓	Site management protocol relating to noise including management strategies/mitigation measures and monitoring is provided in Section 3.5 of the EMP.

Environmental Objective	Performance Outcomes	Assessment ×/✓/na	Comments
Waste			
Any waste generated, transported, or received as part of carrying out the activity is managed in a way that protects all environmental values.	1. Both of the following apply— (a) waste generated, transported or received is managed in accordance with the waste and resource management hierarchy in the Waste Reduction and Recycling Act 2011; (b) if waste is disposed of, it is disposed of in a way that prevents or minimises adverse effects on environmental values.	✓	Site management protocol relating to waste (including management strategies/mitigation measures, monitoring and corrective actions) is provided in Section 3.6 of the EMP.
Land			
The activity is operated in a way that protects the environmental values of land including soils, subsoils, landforms and associated flora and fauna.	1. There is no actual or potential disturbance or adverse effect to the environmental values of land as part of carrying out the activity.	×	Site operations will predominately occur within pasture areas but may involve minor clearing of vegetation and the disturbance of land, soils, subsoils and landform. However, areas of high ecological value as identified by the ecological assessment will be retained (refer **Attachment 1 – Ecological Assessment**).
	2. All of the following— (a) activities that disturb land, soils, subsoils, landforms and associated flora and fauna will be managed in a way that prevents or minimises adverse effects on the environmental values of land;	✓	Site management protocol relating to site rehabilitation (including management strategies/mitigation measures, monitoring and corrective actions) is provided in Section 3.9 of the EMP.
	(b) areas disturbed will be rehabilitated or restored to achieve sites that are— (i) safe to humans and wildlife; and (ii) non-polluting; and (iii) stable; and (iv) able to sustain an appropriate land use after rehabilitation or restoration;	✓	The operator's 'Rehabilitation Policy' is to return the land to a safe, stable, non-polluting and self-sustaining state suitable for the desired long-term land use at the cessation of the quarrying operations.
	(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;	✓	The activity will be managed to prevent or minimise adverse effects on land including unplanned releases or discharges, including spills and leaks through the EMP, specifically through section 3.6 of the plan which specifies performance targets and strategies/mitigation measures and monitoring relating to hydrocarbons and chemical management.
	(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.	na	No application of contaminated water or waste likely to have adverse effects on the composition or structure of the soils and subsoils are proposed by the site operations.

Table 8 – Land Use Assessment

Environmental Objective	Performance Outcomes	Assessment ×/✓/na	Comments
Site Suitability			
The choice of the site, at which the activity is to be carried out, minimises serious environmental harm on areas of high conservation value and special significance and sensitive land uses at adjacent places.	1. Both of the following apply— (a) areas of high conservation value and special significance likely to be affected by the proposal are identified and evaluated and any adverse effects on the areas are minimised, including any edge effects on the areas; (b) the activity does not have an adverse effect beyond the site.	✓	The proposed development is not anticipated to impact directly or indirectly upon any identified high conservation value areas on or adjacent to the site. A significant buffer shall be maintained to Fitzroy River to ensure the activities have no adverse effects to beyond the site.
	2. Both of the following apply— (a) areas of high conservation value and special significance likely to be affected by the proposal are identified and evaluated and any adverse effects on the areas are minimised, including any edge effects on the areas;	na	
	(b) critical design requirements will prevent emissions having an irreversible or widespread impact on adjacent areas.	na	
Location on Site			

Environmental Objective	Performance Outcomes	Assessment ×/✓/na	Comments
The location for the activity on a site protects all environmental values relevant to adjacent sensitive uses.	1. The location for the activity means there will be no adverse effect on any environmental values.	×	The closest sensitive receptor is situated approximately 1.4 km north east of the northern stockpiling area and 1.6 km to the south of Resource Area 1. Any potential adverse impact on these sensitive uses will be minimal, due to the substantial buffer land of the Site and the additional buffers created by Fitzroy River and Etna Creek Road.
	2. Both of the following apply— (a) the activity, and components of the activity, are carried out on the site in a way that prevents or minimises adverse effects on the use of surrounding land and allows for effective management of the environmental impacts of the activity;	✓	The proposed extraction of sand from the site has been designed to ensure that the activity, and components of the activity is carried out in a way that prevent or minimises adverse effects on the use of surrounding land and the EMP identifies mitigation measures/strategies to ensure the effective management of potential environmental impacts of the activity.
	(b) areas used for storing environmentally hazardous materials in bulk are located taking into consideration the likelihood of flooding.	✓	Areas used for storing environmentally hazardous materials are located taking into consideration the likelihood of flooding.
Critical Design Requirements			
The design of the facility permits the operation of the site, at which the activity is to be carried out, in accordance with the best practice environmental management.	1. The activity does not involve the storage, production, treatment or release of hazardous contaminants, or involve a regulated structure.	✓	The activity does not involve the storage, production, treatment or release of hazardous contaminants, or involve a regulated structure.
	2. All of the following apply— (a) all storage provided for hazardous contaminants includes secondary containment to prevent or minimise releases to the environment from spillage or leaks;	na	
	(b) regulated structures comply with the 'Manual for Assessing Hazard Categories and Hydraulic Performance of Dams' published by the department;	na	
	(c) provide containers for the storage of hazardous contaminants that are secured to prevent the removal of the containers from the site by a flood event;	na	
	(d) the design of the facility prevents or minimises the production of hazardous contaminants and waste;	na	
	(e) if the production of hazardous contaminants and waste is not prevented or minimised under paragraph (d)—the design of the facility contains and treats hazardous contaminants rather than releasing them.	na	

Notes:
✓ = Achieves performance outcome
× = Does not achieve performance outcomes
na = Not applicable

5 Conclusion

This report has provided a detailed assessment of the potential impacts for the proposed extraction of sand and gravel to be carried out by Belmont Sands on the site adjacent to Fitzroy River to ensure that the potential environmental impacts are identified and will be managed in accordance with best practice. An EMP has been prepared which is intended for use by site managers and will be updated to include DA and EA conditions upon approval.

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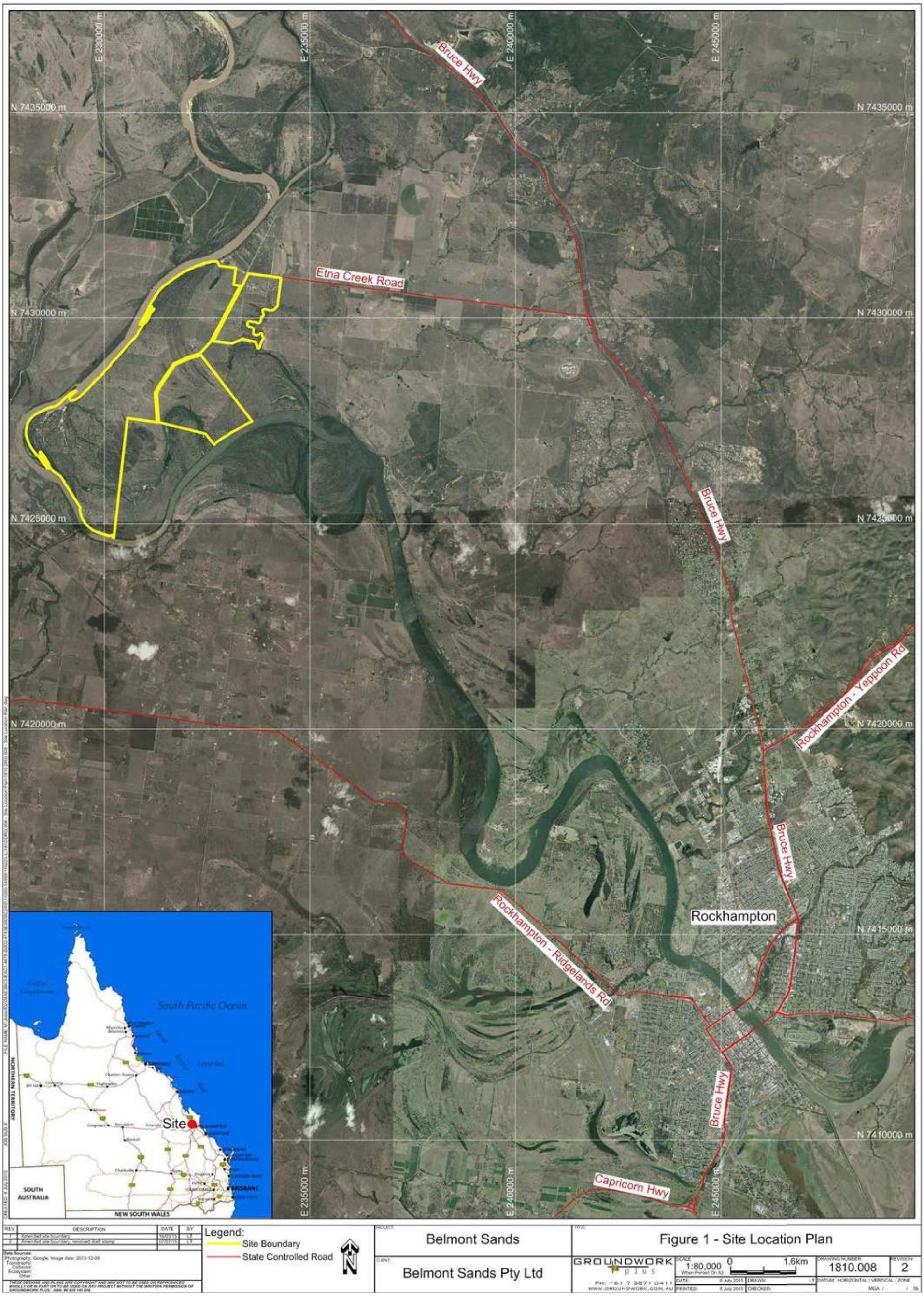
figures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E 235000 m
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E 245000 m
N 7435000 m
N 7430000 m
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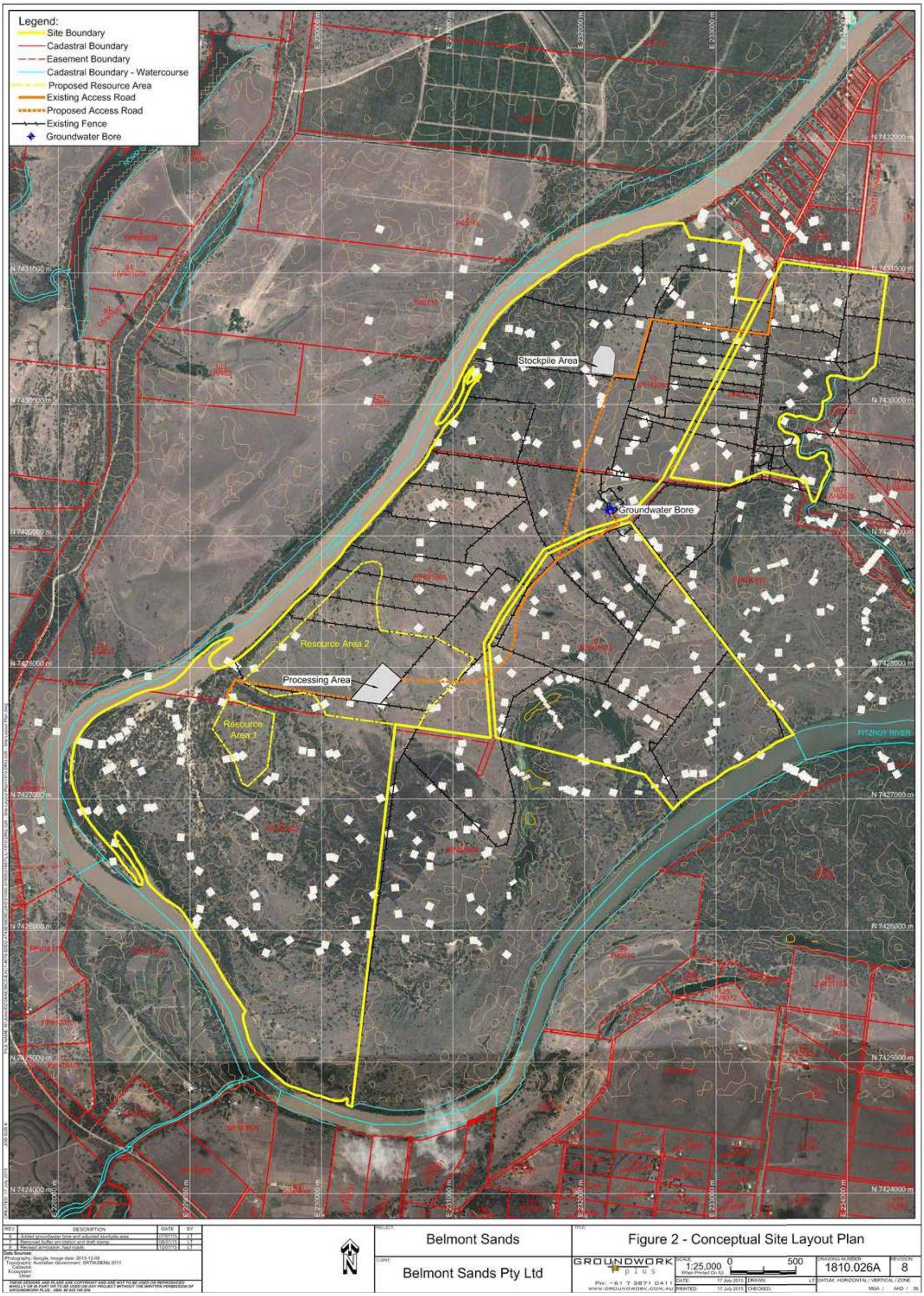
N 7420000 m
N 7415000 m
N 7410000 m
Bruce Hwy
Etna Creek Road
Bruce Hwy
Rockhampton - Yeppoon Rd
Bruce Hwy
Rockhampton - Ridgelands Rd
Rockhampton
Bruce Hwy
Capricorn Hwy
South Pacific Ocean
NORTHERN TERRITORY
Site
SOUTH AUSTRALIA
BRISBANE
NEW SOUTH WALES
Legend:
Site Boundary
State Controlled Road
Belmont Sands
Belmont Sands Pty Ltd
Figure 1 - Site Location Plan
GROUNDWORK plus
1:80,000
0
1.6km
1810.008
2



REV	DESCRIPTION	DATE	BY
C	Added groundwater bore and adjusted stockpile area	07/07/15	LT
B	Removed buffer annotation and draft stamp	03/07/15	LT
A	Revised annotation, haul roads	19/07/15	LT

Data Sources:
Photography: Google. Image date: 2013-12-08
Topography: Australian Government: SRTM-DEMs 2011
Cadastre:
Ecosystem:
Other:

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PROJECT: Belmont Sands

CLIENT: Belmont Sands Pty Ltd

TITLE: Figure 2 - Conceptual Site Layout Plan

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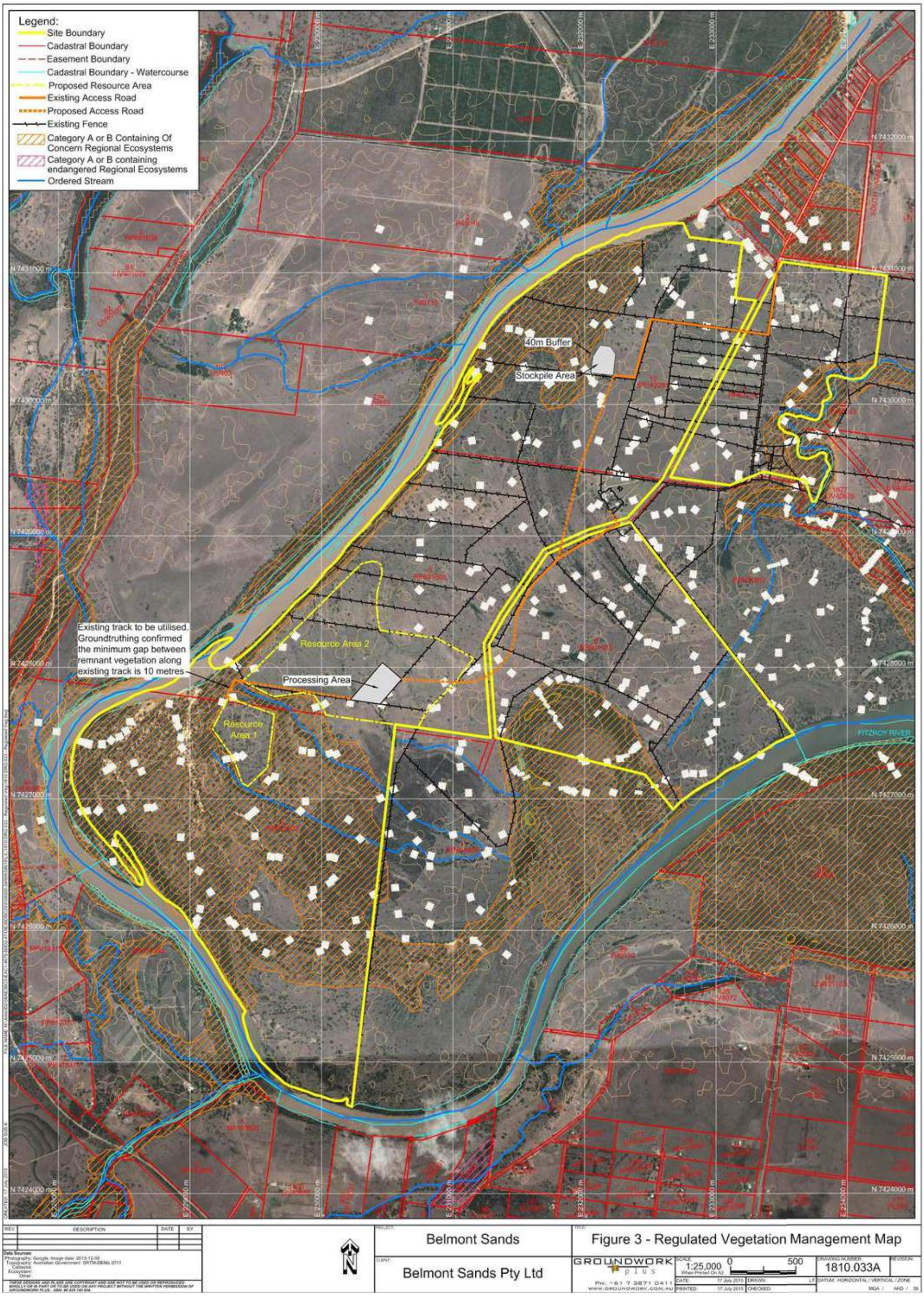
SCALE: 1:25,000 When Printed On A3 (0 – 500)
DRAWING NUMBER: 1810.026A
REVISION: 8
DATE: 17 July 2015
DRAWN: LT
PRINTED: 17 July 2015
CHECKED:
DATUM: HORIZONTAL / VERTICAL / ZONE: MGA / AHD / 55


Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Existing Fence
Category A or B Containing Of Concern Regional Ecosystems
Category A or B containing endangered Regional Ecosystems
Ordered Stream
40m Buffer
Stockpile Area
Existing track to be utilised. Groundtruthing confirmed the minimum gap between remnant vegetation along existing track is 10 metres
Resource Area 2
Processing Area
Resource Area 1
FITZROY RIVER
N 7432000 m
N 7431000 m
N 7430000 m
N 7429000 m
N 7428000 m
N 7427000 m
N 7426000 m
N 7425000 m
N 7424000 m
E 229000 m
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E 231000 m
E 232000 m
E 233000 m
E 234000 m
Belmont Sands
Figure 3 - Regulated Vegetation Management Map
Belmont Sands Pty Ltd
GROUNDWORK plus
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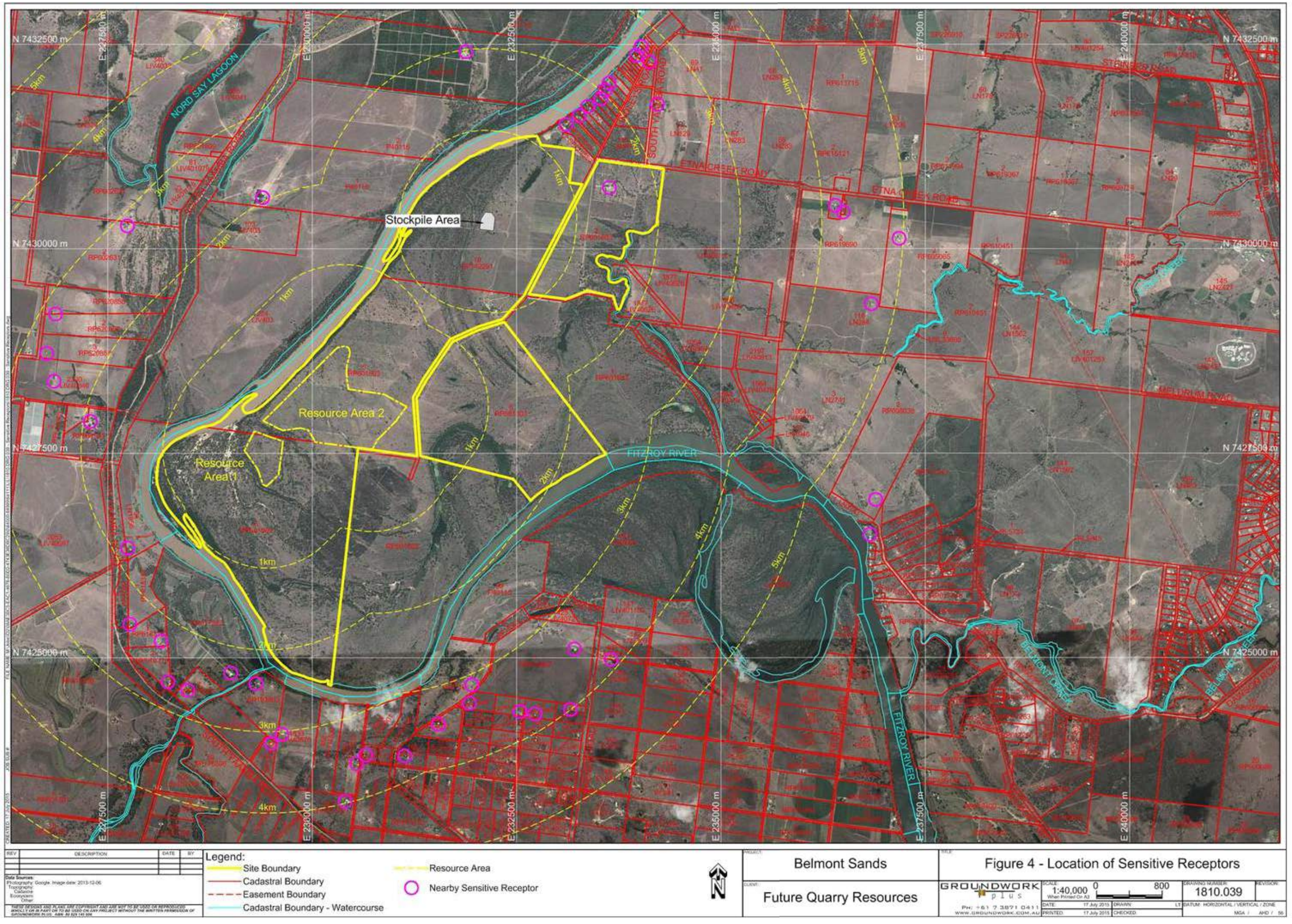
Stockpile Area
Resource Area 1
Resource Area 2
NORD SAY LAGOON
FITZROY RIVER
ETNA CREEK ROAD
SOUTH ALTON ROAD
STRINGER ROAD
BELMONT CREEK
N 7432500 m
N 7430000 m
N 7427500 m
N 7425000 m
E 227500 m
E 230000 m
E 232500 m
E 235000 m
E 237500 m
E 240000 m
1km
2km
3km
4km
5km
Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Resource Area
Nearby Sensitive Receptor
Belmont Sands
Future Quarry Resources
Figure 4 - Location of Sensitive Receptors
GROUNDWORK plus
1:40,000
1810.039

17/07/2015
1810.640.001

attachments

Attachment 1

Ecological Assessment

17/07/2015
1810.640.001

Gondwana Ecology Group
Pty Ltd

Ecological Assessment

Belmont Sands Quarry

Etna Creek

Prepared for: **Belmont Sands Pty Ltd**
July 2015

Gondwana Ecology Group PO Box 535 Kenmore 4069

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QUALITY ASSURANCE

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Gondwana Ecology Group operates in accordance with the following approvals, permits and ethical principles:

- Scientific Use Registration (*Animal Care & Protection Act 2001*) – 508
- Animal Ethics Committee (DAFF Animal Ethics) – CA 2013/11/732
- Scientific Purposes Permit (*Nature Conservation Regulation 2006*) – WISP 13794613
- *Certified Environmental Practitioner (Environment Institute of Australia & New Zealand)

Gondwana Ecology Group

TABLE OF CONTENTS

EXECUTIVE SUMMARY **1**

1. Introduction **2**

1.1 Background 2

1.2 Subject Site 2

1.3 Proposed Development 2

1.4 Purpose of the Report 2

1.5 Site Inspections 2

2. Statutory Mapping and Policies **5**

2.1 Introduction 5

2.2 Commonwealth 5

2.3 State 5

2.4 Livingstone Shire Council 7

3. Ecology Values **8**

3.1 Introduction 8

3.2 Survey Methodology 8

3.2 Broad Vegetation Communities 8

3.3 Remnant Vegetation 8

3.4 Vegetation Communities in Project Areas 9

3.5 Threatened Vegetation Communities 10

3.3 Significant Flora 11

3.5 Fauna & Habitat 12

3.6 Threatened Fauna 13

4. Impact Assessment and Management Recommendations **14**

4.1 Ecological Features of Project Areas 14

4.2 Potential Impacts on Ecological Values 15

4.3 Management & Mitigation Measures 17

5. Statutory Considerations **18**

5.1 Council 18

5.2 State 18

5.3 Commonwealth 18

6. Bibliography/References **19**

PHOTO PLATES 20

APPENDICES .....
Appendix A: Database Search Results (Commonwealth & State) 22
Appendix B: MSES Mapping (State) 23
Appendix C: Regulated Vegetation (State) 24
Appendix D: Flora Species List 25
Appendix E: Fauna Species List 26

FIGURES .....
Figure 1 Subject Site & Location 3
Figure 2 Conceptual Layout Plan 4
Figure 3 Ecological Mapping & Proposed Project 16

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EXECUTIVE SUMMARY

The subject site is located on a number of allotments (research station) in the Etna Creek locality, north of Rockhampton (within the Livingstone Shire) and is currently an agricultural operation. The Fitzroy River lies to the west with the surrounding landscape characterised by agricultural activities. An extractive operation of sand and gravel is proposed from two resource areas. Other infrastructure for the operation includes a northern stockpile, a processing area and a haul road. All project infrastructure and operations is located in existing grazing land. This report provides an analysis of ecological features within the subject site and assessment of potential impacts with consideration of the requirements identified by Council and the State during pre-lodgement meetings. The site vegetation is predominantly grazing landscape of planted pasture and weed species with the balance generally conforming to that which has been mapped "regulated vegetation" by the State. Riparian vegetation along the Fitzroy River comprises large forest red gums and Coolibah woodland. Isolated large paddock trees, stags and large figs are a characteristic feature across the landscape and provide some habitat for fauna and biodiversity foci. Wetlands and swales with water/wetland vegetation offer habitat for aquatic species, including wetland birds and occur primarily to the east of the subject site. No Commonwealth threatened ecological communities occur within the subject site or immediate surrounds. Council's "significant local vegetation" mapping needs to be refined to accurately reflect that which occurs in the landscape. The proposed project has been designed to avoid all features considered "high ecological significance" at a State or Commonwealth level. A number of management measures have been recommended to minimise potential impacts or general ecological values within (and adjacent to) the subject site. Following appropriate implementation of the proposed project, including detailed design and operation management, it is unlikely there would be any significant or residual impact on features of high ecological value. With respect to ecology, the proposed project could be approved with reasonable and relevant conditions.

1. INTRODUCTION

1.1 Background

Gondwana Ecology Group Pty Ltd has been engaged to provide an analysis of ecological values of the subject site. The level of assessment and subsequent reporting is based on an understanding of the proposed development, associated minimal disturbance to native vegetation and in response to relevant statutory requirements. Pre-lodgement meetings (25 March 2015) with Council and the State have assisted in forming the objectives for the ecological reporting.

1.2 Subject Site

The subject site is located on a number of allotments comprising more than 1500ha off Etna Creek Road as Lots 3, 5, 6 and 8 of RP601603 and Lot 10 on SP142291 (Etna Creek, north of Rockhampton) (**Figure 1**).

The subject site lies within the Livingstone Shire and is mapped in the *Rural* zone. The land was part of the CSIRO research station with current practices (operated by Agforce) for rural purposes.

The Fitzroy River lies to the west (and generally to the south) with the surrounding landscape characterised by agricultural activities. The subject site is on an alluvial plain (landzone 3) with a number of wetlands (including Boomerang Lagoon and Etna Creek to the east) and woodland patches throughout the local landscape. The Bruce Highway is less than 10km to the east with Mt Etna National Park a further few kilometres in a north-easterly direction.

1.3 Proposed Development

An extractive operation of sand and gravel is proposed from two resource areas (in the south) (**Figure 2**). A northern stockpile is proposed above the flood-line and a processing area is located in the south, associated with resource area 2. A haul road is proposed through the landscape to Etna Creek Road. All resource areas, roads, processing and stockpile areas are located in existing grazing land and comprise an area approximately 130ha.

1.4 Purpose of the Report

The objective of this report is to provide a technical assessment of ecological values for the subject site in accordance with statutory requirements within the context of the site values and proposed development and as identified during the pre-lodgement meetings. Specifically, the following:

- Locally significant vegetation mapping (Council)
- Northern wetland and adjacent stockpile (it is acknowledged that, subsequent to the meeting, the stockpile has been relocated away from this wetland)
- Ground-truthing of any watercourse crossings (with photographs), State-mapped vegetation (with tree heights near infrastructure), waterways and wetlands.

1.5 Site Inspections

Gondwana Ecology Group has completed site inspections in June 2015. Local ecological knowledge (e.g. the author, station manager and community/conservation organisations) has also assisted in informing the values within the site and locality.

Belmont Sands Quarry – Ecology Assessment	Source: Google Earth 2015
FIGURE 1 SITE LOCATION	Gondwana Ecology Group

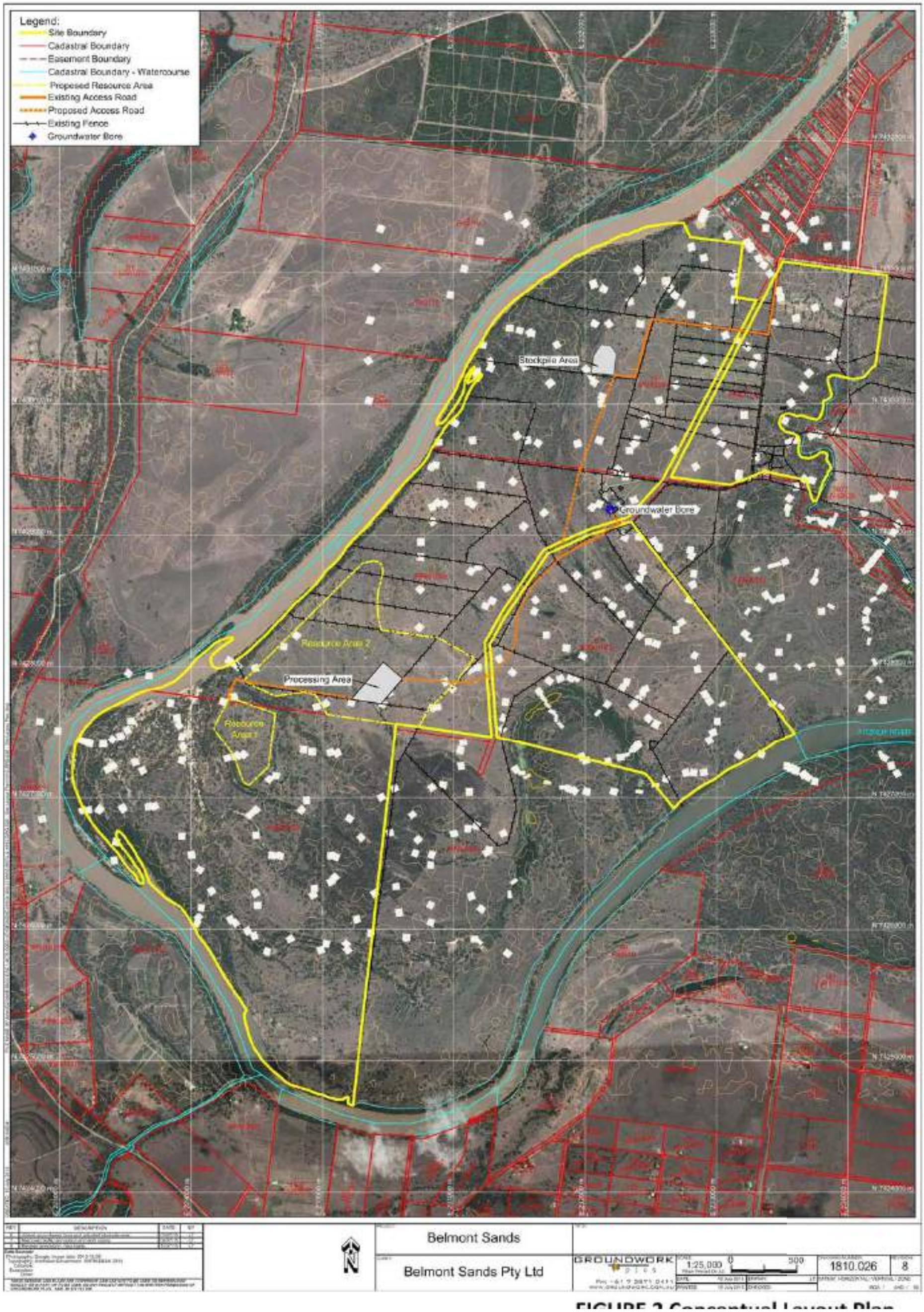


FIGURE 2 Conceptual Layout Plan

2. Statutory Mapping and Policies

2.1 Introduction

Available databases, mapping and aerial photography was reviewed to determine the potential for certain species and/or vegetation communities to occur within or adjacent to the site.

Threatened (or conservation significant) species are those which are listed under the schedules of the Commonwealth *Environment Protection and Biodiversity Conservation* (EPBC) Act 1999 and/or State *Nature Conservation Act* (NCA) 1992 as *critically endangered, endangered, vulnerable* or *near threatened*. The Commonwealth collectively identifies matters of significance as Matters of National Environmental Significance (MNES) while the State identifies ecological values as "State Significant Biodiversity Values" (SSBV) or Matters of State Environmental Significance (MSES). MSESs include flora and fauna, essential habitat and regulated vegetation.

2.2 Commonwealth

The database tool provided by the Commonwealth (Australian Government, 2015) is recognised as broad and general, often capturing species and communities that do not necessarily occur in the location. Confirmation with local databases and ground truthing is necessary to made accurate determinations of likelihood of occurrence. The database considers a number of MNES to occur within 5km of the site (**Appendix A**). This includes:

- three threatened ecological communities - TECs (Brigalow, Coolibah-Blackbox Woodlands, Weeping Myall)
- 29 threatened species (flora and fauna)
- 24 migratory species
- one nationally important wetland (Fitzroy River Floodplain)

Marine species are also listed, but not discussed in this document (i.e. lack of habitat and unlikely potential to occur).

2.3 State

The Department of State Development Infrastructure and Planning (DSDIP) provides a range of mapping to assist development planning. The State maps (DSDIP, 2015) MSES "regulated vegetation", MSES "high ecological significance wetlands and MSES "regulated vegetation intersecting a watercourse" (**Attachment B**).

The *Vegetation Management Act 1999* (VMA) regulates clearing of remnant vegetation on freehold and leasehold land within Queensland. This is achieved by preserving remnant regional ecosystems (RE's), preserving vegetation in areas of high nature conservation value, and protecting areas vulnerable to land degradation. A number of "ecological" layers are provided through the DNRM (2015) mapping database (**Appendix C**). Remnant vegetation is mapped along the Fitzroy River in the west and in the south (forest red gum woodland fringing drainage lines and coolibah woodland in south). There is no *essential habitat* mapped within the subject site. Essential habitat for the squatter pigeon (based on a point record) is mapped approximately 2km to the east (refer **Appendix C**).

One State-mapped (State of Queensland, 2015) wetland of *high ecological significance* is mapped in the north of the subject site (refer **extract** below) with other wetlands mapped to the east. Buffer (or trigger areas) extend from these wetlands into the subject site.

Extract - State Wetland Mapping

HES wetland (blue shading)
Trigger area (hatching)

northern part of subject site

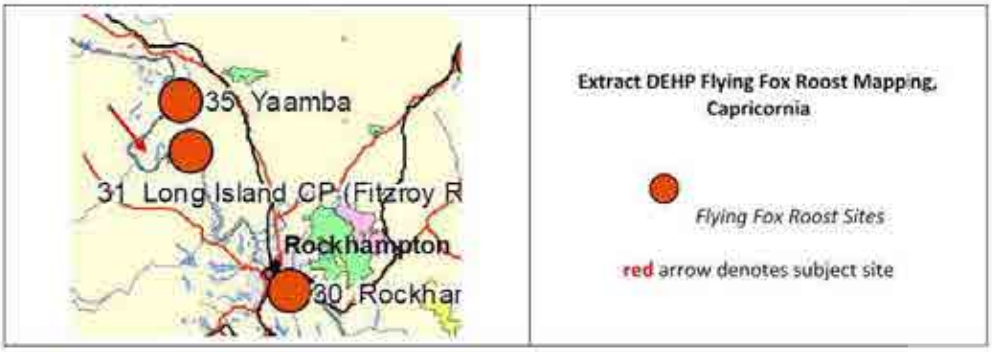
As per the Fish habitat DA Mapping (provided by DSDIP/SARA, June 2015 – refer extract), three waterways are mapped in south of site, one near Processing Area (low value), one associated with access to Resource Area 1 (moderate value) and the third south of Resource Area 1.

Extract – Fish Habitat Mapping

southern part of subject site

The *Nature Conservation Act 1992* (NCA) provides the framework for the protection of native flora and fauna, and provides a list of threatened flora and fauna at a state level (including endangered, vulnerable, near threatened and of least concern). The subject site **does not** fall within the *protected plants flora survey trigger area* (DEHP, 2015) which identifies knowledge of local protected plant records. The State wildlife database (DISITIA, 2015) indicates that there are confirmed records for listed (under the NCA) species, i.e. three fauna and nine flora (refer **Section 3**) which have been recorded within 10km of the subject site.

The Department of Environment and Heritage Protection has mapped the locations of flying-fox colonies within Southeast Queensland. There are a number of colonies mapped within the Capricornia region, including one at Long Island and another at Yaamba, east and north of the subject site, respectively (DEHP, 2011) (refer **Extract** below).



2.4 Livingstone Shire Council

The Livingstone Shire Council Strategic Map identifies the subject site as lying within the *Rural* zone. Two Council mapping overlays are relevant to ecology, i.e. O3A/1 - Waterways & Wetlands and PSM 10A – Locally Significant Vegetation (refer **Extract** below). No waterways or wetlands are mapped on the subject site, other than a wetland in north. Locally significant vegetation is mapped in the south (associated with Resource Area 1) and to the south east.

Extract Livingstone Shire Council Overlay Mapping

PSM 10A – Locally Significant Vegetation

green denotes locally significant vegetation

O3A/1 - Waterways & Wetlands

pink denotes wetlands
blue denotes waterways

The Capricorn Conservation Council (CCC) website (http://www.cccqld.org.au/) provides information on "current issues" and fauna and flora for the region. It is noted that 49 frog species (included a number of threatened species) occur within Central Queensland. Koala, turtle, State vegetation and water bodies were identified by CCC as the key ecological matters for attention (M.McCabe pers.com.).

The Fitzroy Basin Association website (http://www.fba.org.au/) provides information for graziers, farmers, volunteers and community groups. Information on special plants and animals, pest species and the waterways is provided.

3. ECOLOGY VALUES

3.1 Introduction

Inspections have been undertaken in June 2015 to provide confirmation of the site values and to assist with the design of the extraction operations in order to minimise impacts on ecological values. Survey objectives were therefore as follows:

- Assess the site vegetation and consider State mapping;
- Searches for significant species listed (and habitats) under Council, EPBC and NC Act Schedules; and
- Inspection of ecological values in the immediate surrounds.

3.2 Survey Methodology

A field assessment of the vegetation of the subject property was conducted over two days from the 6th to 7th June 2015. The assessment specifically targeted the areas to be impacted by the proposed development as well as examining any adjacent remnant areas. Within each area of interest, information about the vegetation was recorded using a quaternary site assessment as per the method of Neldner *et al.* (2012). GPS location, major canopy, shrub and groundcover species, structural information including approximate stratum heights and past or ongoing disturbances were recorded at each quaternary site. Photos were also taken at each site facing the four cardinal points (north, south, east and west). The field survey also involved targeted searches for threatened flora species. One or more quaternary sites were assessed for each area. Targeted surveys were undertaken for threatened fauna and/or their habitats in suitable locations. The survey included identification and assessment of fauna habitats and a list of fauna recorded during the inspection.

3.2 Broad Vegetation Communities

Vegetation in the subject site generally comprised non-remnant, grazed pasture with varying densities of native trees and native woody regrowth (refer **Photo Plates**). A total of 96 plant species were recorded during the field assessment, 43 of which were introduced. Common remnant trees across the area included *Casuarina cunninghamiana* (river sheoak), *Corymbia tessellaris* (Moreton Bay ash), *Eucalyptus coolabah* (coolabah), *E. tereticornis* (forest red gum) and *Ficus obliqua* (small-leaved fig). The woody regrowth also featured these tree species as well as some native shrub species. The ground cover was dominated by introduced species, typically pasture grasses and legumes.

There is fairly extensive evidence across the landscape of damage and tree uprooting, primarily as a result of the recent cyclone (i.e. Cyclone Marcia - February 2015) (P.Orchard, Station Manager, pers.com.).

3.3 Remnant Vegetation

Regional Ecosystem (RE) mapping showed three remnant vegetation communities occurred in the area (refer **Attachment C**):

- RE 11.3.2 – *Eucalyptus populnea* woodland on alluvial plains;
- RE 11.3.3 - *Eucalyptus coolabah* woodland on alluvial plains; and
- RE 11.3.25 - *Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines.

The status of both RE 11.3.2 and RE 11.3.3 under the *Vegetation Management Act 1999* is 'Of Concern' whereas RE 11.3.25 is 'Least Concern'.

RE 11.3.3 formed the most extensive remnant vegetation in the surrounding area, occupying a large area to the south, east and west of the proposed development areas. RE 11.3.25 occupied a narrow

fringe along the bank of the nearby Fitzroy River and occurred in association with RE 11.3.3 to the east and north of the proposed development areas.

3.4 Vegetation Communities in Project Areas

The proposed resource areas, processing and stockpile areas and haul road have been located outside of the mapped remnant vegetation. The ground-truthing of the vegetation during the field assessment confirmed that these areas were located in non-remnant vegetation.

3.4.1 Resource Area 1

Resource Area 1 was surrounded on all sides by remnant vegetation mapped as RE 11.3.3 (*Eucalyptus coolabah* woodland on alluvial plains). The non-remnant vegetation within this area comprised pasture with scattered remnant native trees and woody regrowth. Common native trees included *Corymbia tessellaris* (Moreton Bay ash), *Eucalyptus coolabah* (coolabah) and *E. tereticornis* (forest red gum). *Planchonia careya* (cocky apple), *Casuarina cunninghamiana* (river she-oak) and *Acacia salicina* (sally wattle) were also widespread as a tall shrub/low tree component.

The ground layer was generally dominated by introduced pasture species including *Cenchrus ciliairis* (buffel grass), *Megathyrsus maximus* (green panic) and *Melinis repens* (red Natal grass). Native grasses included *Heteropogon contortus* (bunch spear grass) and *Themeda triandra* (kangaroo grass). Weeds were also prevalent including *Lantana camara* (lantana), *Xanthium occidentale* (noogoora burr) and *Stachytarpheta jamaicensis* (snake weed).

Large specimens of small-leaved figs (*Ficus obliqua*) were also scattered across RA1. One of the largest specimens was over 1m in diameter and up to 18m in height. It's widely spreading canopy, approximately 30m in diameter, created a micro-environment in which other closed forest species occurred. Associated with this large *F. obliqua* were the trees *Dysoxylum gaudichaudianum* (ivory mahogany) and *Mallotus philippinensis* (red kamala). Shrub species beneath the canopy of the fig included *Diospyros humilis* (small-leaved ebony), *Ficus opposita* (sandpaper fig) and *Trophis scandens* (burny vine). Elsewhere these figs occurred as isolated specimens but most of them appeared to have established as stranglers in host trees, usually eucalypts.

3.4.2 Resource Area 2

Resource Area 2, like Resource Area 1, supported non-remnant vegetation that comprised pasture with widely scattered trees and varying densities of native regrowth woody vegetation, however the remnant trees in this area were far more widely dispersed but included a similar suite of species including *Corymbia tessellaris* (Moreton Bay ash), *Eucalyptus coolabah* (coolabah) and *E. tereticornis* (forest red gum). Specimens of *Ficus obliqua* (small-leaved fig), *Dysoxylum gaudichaudianum* (ivory mahogany) and *Casuarina cunninghamiana* (river she-oak) were also present. A similar mix of shrub, small tree and groundcover species to that recorded in Resource Area 1 was observed.

Resource Area 2 occupied a greater area than Resource Area 1 and included some larger swales, representing abandoned channels of the Fitzroy River, some of which supported standing water and aquatic vegetation. One such swale, outside the southeast boundary of Resource Area 2, supported standing water and aquatic vegetation. Aquatic plant species included *Azolla pinnata* (fern, azolla), *Juncus polyanthemus*, the declared Class 2 weed *Hymenachne amplexicaulis* (hymenachne) and *Persicaria attenuata* (velvet knotweed).

3.4.3 Haul Road

The proposed haul road as far as possible traverses existing vehicle tracks and grazing areas, therefore the landscape associated with this infrastructure comprises primarily introduced pasture and weed species. South and west of the homestead small patches of eucalypt regrowth occurs in the vicinity of the proposed road.

3.4.4 Stockpile Area

The stockpile area featured a large *Ficus obliqua* (small-leaved fig) tree that had fallen over, presumably due to the recent cyclone. Although most of the tree's rootball had been exposed there was still live foliage in the canopy. The remainder of the stockpile area was pasture supporting predominantly introduced pasture grasses, legumes and weeds.

Remnant vegetation, mapped as RE 11.3.25, occurred approximately 90m to 100m to the west of the stockpile area and on lower ground. Ground-truthing confirmed this vegetation could be considered remnant although, as with other remnant vegetation within the property, the consequences of pasture species introduction and cattle was evident.

3.4.5 Waterbody in North

A relatively large waterbody was located approximately 500m northeast of the proposed stockpile area. It is understood this waterbody is man-made. Large, mature trees are located along the western bank (possibly the excavated material) included specimens of *Corymbia tessellaris* (Moreton Bay ash), *Eucalyptus tereticornis* (forest red gum) and *Melaleuca viridiflora* var. *viridiflora* (broad-leaved paperbark). The water body, although man-made, offers some natural elements and ecosystem functions.

3.5 Threatened Vegetation Communities

As mentioned in **Section 2.2**, the Commonwealth database identified three Threatened Ecological Communities (TECs) that may occur in the area (Brigalow, Black Box Woodland and Weeping Myall Woodland). **Table 1** below lists the endangered TECs and their corresponding Regional Ecosystems.

Table 1. Threatened Ecological Communities that may occur in the area & equivalent Regional Ecosystems

TEC	Likelihood of occurrence in area*	Equivalent RE (Bioregion 11)
Brigalow (*Acacia harpophylla* dominant & co-dominant)	Community known to occur within area	11.3.1, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.5.16, 11.9.1, 11.9.5, 11.9.6, 11.11.14, 11.12.21
Coolibah - Black Box Woodlands of the Darling Riverine Plains & the Brigalow Belt South Bioregions	Community may occur within area	**11.3.3**, 11.3.15, 11.3.16, 11.3.28, 11.3.37
Weeping Myall Woodlands	Community likely to occur within area	Not mapped as a stand-alone RE, occurs within **11.3.2** and 11.3.28

*Likelihood = as per database; RE bolded occur near or within subject site

No Regional Ecosystems equivalent to the Brigalow (*Acacia harpophylla* dominant and co-dominant) TEC occurred on the property. The Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions TEC was represented on the property by RE 11.3.3 (*Eucalyptus coolabah* woodland on alluvial plains). In addition, Regional Ecosystem 11.3.2 (*Eucalyptus populnea* woodland on alluvial plains), which may contain the Weeping Myall Woodlands TEC, occurred in the vicinity of the property. No specimens of weeping myall (*Acacia pendula*) were recorded within the broader area.

3.3 Significant Flora

A number of sources were used to determine known or likely occurrence of state and federally significant (threatened) flora species (i.e. species listed under the EPBC Act and/or the Regulations of the NC Act). The State and Commonwealth databases revealed eleven threatened species occurred within 10km of the subject site (**Table 2**). Based on reference to State RE mapping for the study area, known habitat information for each species and ground-truthing, it was determined that none of the eleven threatened species had more than a "low" likelihood of occurrence within the development areas on the subject site (refer also **Appendix A** for database records and **Appendix D** for site flora species list).

Table 2. Threatened flora potentially occurring in the local area

Scientific Name	Common Name	Status	Habitat	Likelihood of Occurrence
Cycas megacarpa		CE, QE	Habitat includes 11.3.25 - *Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines, 11.3.4 - *Eucalyptus tereticornis* and/or *Eucalyptus* spp. tall woodland on alluvial plains	**Low** Both regional ecosystems present or nearby to subject property but are outside of the impact area. Furthermore no specimens were observed during in the subject site.
Cycas ophiolitica	Marlborough blue	CE, QE	*Cycas ophiolitica* grows on hills and slopes in sparse, grassy open forest at altitude ranges from 80–400m above sea level. Although this species reaches its best development on red clay soils near Marlborough, it is more frequently found on shallow, stony, infertile soils, which are developed on sandstone and serpentinite, and is associated with species such as *Corymbia dallachiana, C. erythrophloia, C. xanthope and Eucalyptus fibrosa*. *Cycas ophiolitica* has also been found on mudstone in association with *Corymbia dallachiana, C. erythrophloia* and *Eucalyptus crebra*, and on alluvial loams with *Corymbia intermedia, Eucalyptus drepanophylla* and *E. tereticornis*	**Low** Habitat is not present within or adjacent to subject site.
Macrozamia serpentina		QE	*Macrozamia serpentina* occurs in low eucalypt woodland with a mixed grassy understorey at altitudes between 80-160m above sea level. It grows on steep rocky slopes on red clay loams and serpentinite soils.	**Low.** Suitable habitat is not present in the subject site.
Tectaria devexa var. devexa	Cave fern	CE, QE	The cave fern grows in narrow pockets of soil on the walls and floor near the entrance to limestone caves in situations where sufficient natural light and moisture are available to support plant growth.	**Low.** Suitable habitat is not present in the subject site.
Graptophyllum excelsum		ONT	*Graptophyllum excelsum* occurs in semi-evergreen vine thickets, although near Chillagoe the species has also been recorded growing in grassy woodland in association with *Eucalyptus cullenii* and *Corymbia erythrophloia*.	**Low.** Some suitable habitat is present but was highly disturbed, small and fragmented. No specimens were found in the subject site.
Pultenaea setulosa	Ragged bush pea	QV, CV	Grows on serpentinite substrates in *Eucalyptus fibrosa* and/or *Corymbia xanthope* woodlands or open forests.	**Low.** Suitable habitat is not present on the subject site.
Streblus pendulinus	Siah's backbone	CE	Norfolk Island.	**Low.** The taxonomy of this species is confused but recent published information indicates that *Streblus pendulinus* is confined to Norfolk Island while *S. brunonianus* is present on both the Australian mainland as well as on a number of Pacific Islands.

Scientific Name	Common Name	Status	Habitat	Likelihood of Occurrence
Corymbia xanthope	Glen Geddes bloodwood	QV, CV	*Corymbia xanthope* occurs in woodlands with *Eucalyptus fibrosa* on ridges or hill slopes on serpentinite geology with sandy soils. This community is recognised as a distinct regional ecosystem (RE 11.11.7 *E. fibrosa* subsp. (Glen Geddes), *C. xanthope* woodland on serpentinite).	**Low.** Suitable habitat is not present in the subject site.
Eucalyptus raveretiana	Black ironbox	CV	Black ironbox usually grows along watercourses, and sometimes on river flats or open woodland. Occurs in Regional Ecosystem 11.3.25a with *Melaleuca leucadendra, M. fluviatilis, Eucalyptus tereticornis, Corymbia tessellaris*).	**Low.** Suitable habitat occurs adjacent to the Fitzroy River but not within the development areas. Furthermore, no specimens were observed within the subject site.
Corchorus hygrophilus		QV	Grows on vine forest margins or in sclerophyll forests near vine forest, on soils derived from granite or limestone.	**Low.** Suitable habitat is not present in the subject site.
Stackhousia tryonii		QNT	Endemic to the serpentinite soils of the Port Curtis district, central Queensland.	**Low.** Suitable habitat is not present in the subject site.

***Status:** C *Commonwealth*, Q *Queensland*; E *endangered*, V *vulnerable*, NT *near threatened*

3.5 Fauna & Habitat

As described above, the landscape is characterised by grazed and pasture lands with isolated trees/patches of vegetation and remnant woodland associated with the riparian community along the Fitzroy River. Small ephemeral waterbodies occur within the subject site and adjacent, particularly to the east. While the general landscape is typical of agricultural pursuits, habitats and resources potentially available to fauna include those for foraging, nesting and breeding and exist as follows:

- Riparian vegetation along Fitzroy comprises large blue gums and Coolibah woodland. Coolibah woodland associated with Resource Area 1.
- Isolated large paddock trees, stags and large figs across site – habitat for fauna and focus for biodiversity.
- Wetlands and swales with water/wetland vegetation offer habitat for aquatic species, including wetland birds.

During the survey, a number of fauna was recorded, including 70 bird species (**Appendix E**), a number of wallabies, grey kangaroo, dog, feral pig and fresh-water turtle. It is reported (P.Orchard, Station Manager, pers com.) that a number of fauna have been recorded over the years on or near the property, as follows:

- Sugar Gliders and Brushtail Possums
- Scrub Python, Carpet Snake, Black-headed Python, Spotted Python, Brown Snake anc Red-bellied Black Snake
- Saltwater Crocodiles along the Fitzroy River
- Occasional fly-fox foraging in area but no roosts

A large nest (wedge-tailed eagle) was recorded within the paddock in the south and it is reported that historically, Black-necked Storks nested to the east of the subject site a number of years ago (P.Orchard, Station Manager, pers com.).

3.6 Threatened Fauna

A number of sources (including local knowledge) were used to determine known or likely occurrence of threatened fauna (i.e. species listed under the Commonwealth EPBC Act 1999 and/or the Regulations of the Queensland NC Act 1992). **Table 3** provides a list of known records for the locality.

Table 3. Threatened fauna occurring in the local area (known records since 1980)

Species	Common Name	Status*	10km	5km	1km
Haliaeetus leucogaster	white-bellied sea-eagle	QSL	1	1	0
Ardea ibis	cattle egret	QSL	2	1	0
Ardea modesta	eastern great egret	QSL	3	1	0
Rhipidura rufifrons	rufous fantail	QSL	1	0	0
Gallinago hardwickii	Latham's snipe	QSL	1	1	0
Ornithorhynchus anatinus	platypus	QSL	1	1	0
Calyptorhynchus lathami	glossy black-cockatoo	QV	1	1	0
Geophaps scripta scripta	squatter pigeon (southern subspecies)	QV, CV	2	2	0
Macroderma gigas	ghost bat	QV	1	0	0

***Status:** C *Commonwealth*, Q *Queensland*; V *vulnerable*, SL State *special least concern*

Other species listed as threatened and/or migratory, and identified in broad databases (e.g. Commonwealth, **Appendix A**) have also been considered and likelihood of occurrence discussed below:

- Squatter pigeon - habitat on subject site and all agricultural landscapes within Central Queensland, historical record to east and two known records within 10km
- Painted snipe - possible habitat in wetlands to the east of the subject site, species is nomadic and can occur in a range of wetland environments including in farming landscapes, 0 records within 10km
- Large pied bat - possible foraging habitat along riparian areas, 0 records within 10km
- South-eastern long-eared bat - possible habitat along riparian areas and possibly hollow bearing trees, 0 records within 10km
- Fitzroy River turtle - suitable habitat along Fitzroy River – 0 records within 10km, but expected to occur in river
- White bellied sea-eagle - **recorded on site** flying above riparian vegetation in west, likely to nest in large trees associated with large waterways
- Rainbow bee-eater - **recorded on site** flying over site and roosting on trees, not uncommon in this landscape and would forage (aerially) on insects
- Great egret - **recorded** in wetlands to the east of the subject site
- Cattle egret - **recorded on site** in paddocks with cattle, a common species associated with agricultural landscapes

4. Impact Assessment and Management Recommendations

The proposed development (project) footprint is relatively small and has been designed to avoid disturbance to features of ecological value. These features are summarised below with respect to each project component and the information requested by the State and Council as per the pre-lodgement meetings. **Figure 3** provides an overlay of the mapped ecological features and the project infrastructure. Refer also **Photo Plates** attached.

4.1 Ecological Features of Project Areas

4.1.1 Resource Area 1

- Non-remnant area confirmed, few large trees, including figs (one very large fig and associated vegetation in southwest of high value).
- Waterbody in east with some habitat lies beyond extractive area.

4.1.2 Access to Resource Area 1

- Existing track through eucalypt woodland, cleared understorey, shallow depression. Waterway/drainageline lies to the east of the existing access road.
- Area used by cattle.
- Narrowest area (gap between small eucalypt trees) approximately 10m.
- Gap between largest eucalypt trees approximately 20m.
- Road access/construction should be able to minimise tree clearing (i.e. avoid clearing of any large remnant trees).
- Photographs provided in **Photo Plates**.

4.1.3 Resource Area 2

- Generally open paddock landscape.
- Isolated large trees and figs.
- Patches of Moreton Bay ash woodland (regrowth) in northwest and in swales.
- Large nest (bird of prey) north of Processing Area.
- Wetland/swale immediately south of Processing Area (beyond disturbance footprint).
- Small swales north of Processing Area.

4.1.4 Waterbody in North

- Appears to have natural features and supports wetland/aquatic habitat.
- Understood to be artificial waterbody - as remnant trees are well established on "earthen mound" to west.
- Large stags in locality.

4.1.5 Stockpile Area

- Central point has large fig (blown over by recent Cyclone).
- General landscape is typical grazing paddock.
- Remnant vegetation (mapped, although may be questionable) with swale and waterbody to west.
- Tallest tree (generally at "edge" of remnant vegetation) is a forest red gum (*E. tereticornis*) approximately 22m in height.

- The landform drops to the west and the remnant vegetation is generally located on the lower slopes. A 40m setback is proposed from the edge of the "remnant", essentially locating the western boundary generally on the upper slopes.

4.1.6 Haul Road

- Based on mapping, haul road avoids major swales, all "wetlands", all remnant vegetation and most likely large habitat trees.
- The haul road follows an existing easement/reserve in the north which is devoid of woody vegetation.
- The haul road follows a ridgeline with a few isolated paddock trees in the central north (near the homestead).
- South of the homestead the haul road crosses some swales and regrowth Coolibah woodland.
- South (in the east) the haul rod passes along a ridgeline where there are isolated large stags and figs with some wetlands and swales (the wetlands are to the east of the haul road).
- The haul road traverses typical grazing paddock landscape to access the Processing Area.

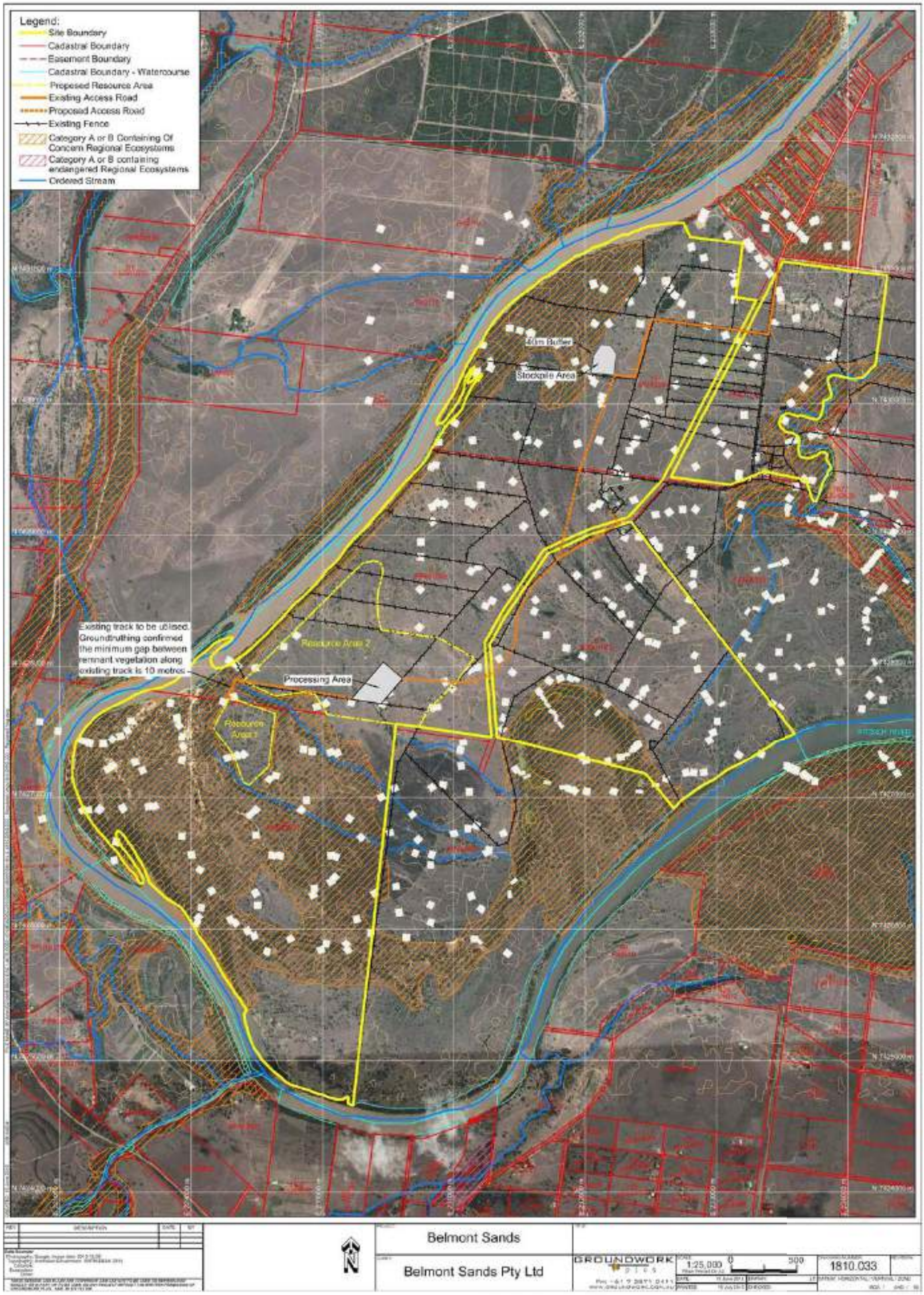
4.2 Potential Impacts on Ecological Values

The identified locations of project infrastructure and extractive areas (i.e. Resource Area 1 and 2, Processing Area, Stockpile Area and Haul Road) are unlikely to impact on any high ecological values. As stated previously, these areas have been specifically located away from features of high value. In summary these areas are:

- outside "actual" ground-truthed remnant vegetation
- in areas that do not support threatened plant species
- outside mapped wetlands and waterways (including access road to Resource Area 1)
- outside any wetlands of "general significance"

The few ecological values that may be potentially impacted (dependent on detailed design stage) are summarised as follows:

- isolated habitat trees within landscape (including large eucalypts, figs and stags)
- regrowth Coolibah woodland
- minor swales/wetlands
- potential habitat for threatened species (e.g. micro-bats, turtle)
- loss of nesting tree for wedge-tailed eagle
- loss of habitat for common fauna and flora


Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Existing Fence
Category A or B Containing Of Concern Regional Ecosystems
Category A or B containing endangered Regional Ecosystems
Ordered Stream
40m Buffer
Stockpile Area
Existing track to be utilised. Groundtruthing confirmed the minimum gap between remnant vegetation along existing track is 10 metres
Resource Area 2
Processing Area
Resource Area 1
Belmont Sands
Belmont Sands Pty Ltd
GROUNDWORK
1:25,000
0
300
1810.033

4.3 Management & Mitigation Measures

Upon consideration of the legislative and associated mapping requirements, it has been confirmed that the project has avoided the features on the larger site with any significant ecological values. The overall impacts on ecology from at a local and strategic perspective are considered minimal.

The following measures are suggested, as part of a 'best practice' approach to local ecology matters, and are therefore recommended as inclusions into any site-based Environmental Management Plan:

- Minimise the extent of clearing within any of the nominated stages, to that which is necessary as a practical working area.
- Avoid removal of large paddock trees, figs and stags on the edges of the nominated resource areas.
- The final internal haul road location is to be determined in consultation with a qualified ecologist, to ensure that any resultant ecology impacts are minimised.
- Implementation of sediment control and erosion control measures to ensure potential impacts to "wetlands" are avoided.
- Provide a fauna spotter on the site during clearing operations, particularly for large trees (e.g. trees with girth greater than 300mm) and other trees with nests or obvious hollows. The spotter is to give particular consideration to nests and breeding periods.
- Relocate/reuse hollow logs and woody debris for habitat.
- Identify areas for progressive rehabilitation.
- Identify (i.e. fencing/flagging) appropriate setbacks to remnant vegetation, wetlands and any other features of ecological value that are identified for retention/protection.
- Implementation of broader management measures to protect environmental values, which may include the following:
  - ecological management (including vegetation clearing and fauna/habitat management)
  - erosion and sediment control
  - air quality (dust) management
  - monitoring (as required by the relevant Authority).

5. STATUTORY CONSIDERATIONS

5.1 Council

Council's significant local vegetation mapping identifies a large area of vegetation in the south of the subject site. It is assumed this mapped is based on a high level mapping approach. Following ground-truthing and with reference to the State regulated mapping and aerial photography, it is evident that Council's mapping is inconsistent with that which occurs on the ground. Portions of the area mapped "locally significant" comprises grazing paddocks. Locally significant vegetation is unlikely to be disturbed as part of the project as the intention is to avoid all State mapped vegetation.

5.2 State

The design of the project has intentionally attempted to avoid MSES, including mapped regulated vegetation and wetlands. In particular, the site assessment confirmed that the vegetation associated with Resource Area 1 is not remnant and that the access to Resource Area 1 will not require the removal of regulated vegetation. Wetlands are to be retained with the proposed works setback from these areas in order to adequately buffer the feature. The proposed development is unlikely to have any significant residual impact on wetlands. It is understood that the SDAP Module 11 will be addressed by Groundwork Plus.

5.3 Commonwealth

As per the EPBC Act 1999 requirements, if an action has the potential to significantly impact on a MNES, consideration needs to be given to whether a referral to the Minister is necessary. An understanding of the site and surrounding habitats and potential for species to occur is necessary to determine the likelihood of an action having a direct or indirect impact on a MNES. Understanding the "action" and mitigation measures is necessary to determine level of impact. The proposed development for extractive industry (the "action") is likely to include a number of activities that may impact on the local ecology, ecosystems and potentially MNES, including:

- Earthworks
- Vegetation clearance
- Changes to hydrological regime
- Changes to local landscape (e.g. noise, traffic, dust etc.)

The Commonwealth Significant Impact Guidelines follow a process to ascertain referral requirements.

1. Are there MNES located in area of proposed action?
   No MNES are considered to occur within or rely on the subject site.
2. Is there potential for impacts on MNES?
   No potential for impact on site. Some low potential for offsite impacts.
3. Are there measures to avoid or reduce impacts?
   Yes, measures to be implemented through design and management will avoid or minimise potential offsite impacts.
4. Are the impacts likely to be significant?
   Impact (if any) will not be significant.

There is some low potential for the project to disturb offsite ecological values that may support MNES (i.e. within the waterbodies to the east). However, following appropriate design of project and implementation of management measures it is not expected that the proposed development would have any significant impact on any MNES. Based on these assumptions and an understanding of the proposed project, a referral to the Commonwealth is not considered necessary.

6. BIBLIOGRAPHY/REFERENCES

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Capricorn Conservation Council - www.cccqld.org.au

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1. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=55794#habitat *Cycas megacarpa* SPRAT Profile
2. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=55797#habitat *Cycas ophiolitica* SPRAT Profile
3. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=16344#habitat *Eucalyptus raveretiana* SPRAT Profile
4. http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?macrozamia-serpentina Wetland Info: *Macrozamia serpentine*
5. http://www.ehp.qld.gov.au/wildlife/threatened-species/endangered/endangered-plants/cave_fern.html Threatened Species: *Tectoria devexa*
6. http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?graptophyllum-excelsum Wetland Info: *Graptophyllum excelsum*
7. http://www.environment.gov.au%2Fbiodiversity%2Fthreatened%2Fspecies%2Fpubs%2F2705-conservation-advice.pdf Approved Conservation Advice for *Pultenaea setulosa*
8. http://environment.gov.au%2Fbiodiversity%2Fthreatened%2Fspecies%2Fpubs%2F64021-conservation-advice.pdf Approved Conservation Advice for *Corymbia xanthope*

PHOTO PLATES

View North. RA2 in grassy patch on ridge beyond.

View Northwards from RA1.

View south towards RA 1.

View Southwards towards RA1 from access track.

View eastwards along "mapped watercourse" from access track.

Riparian/remnant vegetation along Fitzroy River.

Resource Area 1.

PHOTO PLATES

Waterbody in east (east of Haul Road).

View south towards Resource Area 2 (northeast).

Artificial waterbody in north.

Stockpile Area.

Mapped remnant vegetation west of Stockpile Area

Haul Road.

Resource Area 2 (southwest).

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Department of the Environment

APPENDIX A DATABASE RESULTS

EPBC Act Protected Matters Report

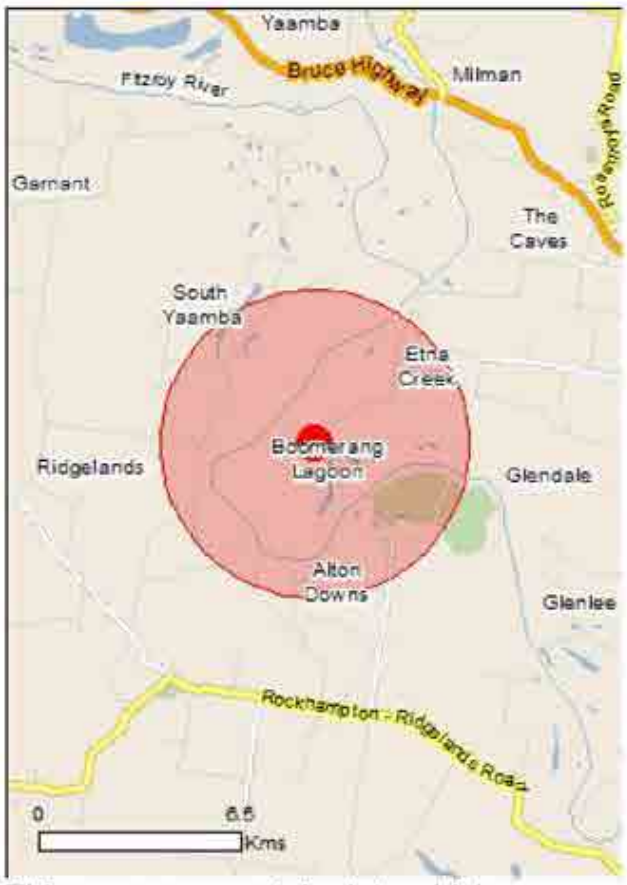
This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

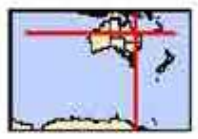
Report created: 02/06/15 16:48:55

Summary
Details
Matters of NES
Other Matters Protected by the EPBC Act
Extra Information
Caveat
Acknowledgements



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates
Buffer: 5.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	29
Listed Migratory Species:	24

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage/index.html

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	24
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	33
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Brigalow (Acacia harpophylla dominant and co-dominant)	Endangered	Community known to occur within area
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community may occur within area
Weeping Myall Woodlands	Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Neochmia ruficauda ruficauda Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area
Poephila cincta cincta Black-throated Finch (southern) [64447]	Endangered	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Thalassarche melanophris impavida Campbell Albatross [82449]	Vulnerable	Species or species habitat may occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat may occur within area
Mammals		

Name	Status	Type of Presence
Chalinolobus dwyeri		
Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus		
Northern Quoll [331]	Endangered	Species or species habitat may occur within area
Nyctophilus corbeni		
South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat may occur within area
Other		
Cycas megacarpa		
[55794]	Endangered	Species or species habitat may occur within area
Cycas ophiolitica		
[55797]	Endangered	Species or species habitat likely to occur within area
Plants		
Eucalyptus raveretiana		
Black Ironbox [16344]	Vulnerable	Species or species habitat known to occur within area
Streblus pendulinus		
Siah's Backbone, Sia's Backbone, Isaac Wood [21618]	Endangered	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Species or species habitat may occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Delma torquata		
Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Denisonia maculata		
Ornamental Snake [1193]	Vulnerable	Species or species habitat likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat may occur within area
Egernia rugosa		
Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
Elseya albagula		
Southern Snapping Turtle, White-throated Snapping Turtle [81648]	Critically Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitat may occur within area
Furina dunmalli		
Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
Lepidochelys olivacea		
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species

Name	Status	Type of Presence
		habitat may occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Rheodytes leukops		
Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Macronectes giganteus		
Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Thalassarche impavida		
Campbell Albatross [64459]	Vulnerable*	Species or species habitat may occur within area
Migratory Marine Species		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Species or species habitat may occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Crocodylus porosus		
Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat may occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitat may occur within area
Lepidochelys olivacea		
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat may occur within area
Manta birostris		
Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Migratory Terrestrial Species		
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus		
White-throated Needletail [682]		Species or species habitat may occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Pandion cristatus Eastern Osprey [82411]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat may occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Thalassarche impavida Campbell Albatross [64459]	Vulnerable*	Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat may occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Long Island Bend	QLD

Invasive Species	[Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Acacia nilotica subsp. indica Prickly Acacia [6196]		Species or species habitat may occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Jatropha gossypifolia Cotton-leaved Physic-Nut, Bellyache Bush, Cotton-leaf Physic Nut, Cotton-leaf Jatropha, Black Physic Nut [7507]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Protasparagus plumosus Climbing Asparagus-fern, Ferny Asparagus [11747]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Vachellia nilotica Prickly Acacia, Blackthorn, Prickly Mimosa, Black Piquant, Babul [84351]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Nationally Important Wetlands	[Resource Information]
Name	State
Fitzroy River Floodplain	QLD

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-23.235 150.37208

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Department of Environment, Climate Change and Water, New South Wales
-Department of Sustainability and Environment, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment and Natural Resources, South Australia
-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts
-Environmental and Resource Management, Queensland
-Department of Environment and Conservation, Western Australia
-Department of the Environment, Climate Change, Energy and Water
-Birds Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-SA Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Atherton and Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
-State Forests of NSW
-Geoscience Australia
-CSIRO
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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Queensland Government

Wildlife Online Extract

Search Criteria:	Species List for a Specified Point
	Species: All
	Type: Native
	Status: Rare and threatened species
	Records: Confirmed
	Date: Since 1980
	Latitude: -23.2283
	Longitude: 150.3879
	Distance: 10
	Email: justin@gondwanaecology.com.au
	Date submitted: Tuesday 02 Jun 2015 16:57:10
	Date extracted: Tuesday 02 Jun 2015 17:00:11

The number of records retrieved = 12

Disclaimer

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all

nimals	birds	Cacatuidae	*Calyptorhynchus lathami*	glossy black-cockatoo	V		1
nimals	birds	Columbidae	*Geophaps scripta scripta*	squatter pigeon (southern subspecies)	V	V	2/2
nimals	mammals	Megadermatidae	*Macroderma gigas*	ghost bat	V		1
lants	cycads	Cycadaceae	*Cycas megacarpa*		E	E	4
lants	cycads	Cycadaceae	*Cycas ophiolitica*	Marlborough blue	E	E	2/2
lants	cycads	Zamiaceae	*Macrozamia serpentina*		E		1/1
lants	ferns	Dryopteridaceae	*Tectaria devexa var. devexa*		E	E	1/1
lants	higher dicots	Acanthaceae	*Graptophyllum excelsum*		NT		5/5
lants	higher dicots	Fabaceae	*Pultenaea setulosa*		V	V	1/1
lants	higher dicots	Myrtaceae	*Corymbia xanthope*	Glen Geddes bloodwood	V	V	1/1
lants	higher dicots	Sparrmanniaceae	*Corchorus hygrophilus*		V		1/1
lants	higher dicots	Stackhousiaceae	*Stackhousia tryonii*		NT		1/1

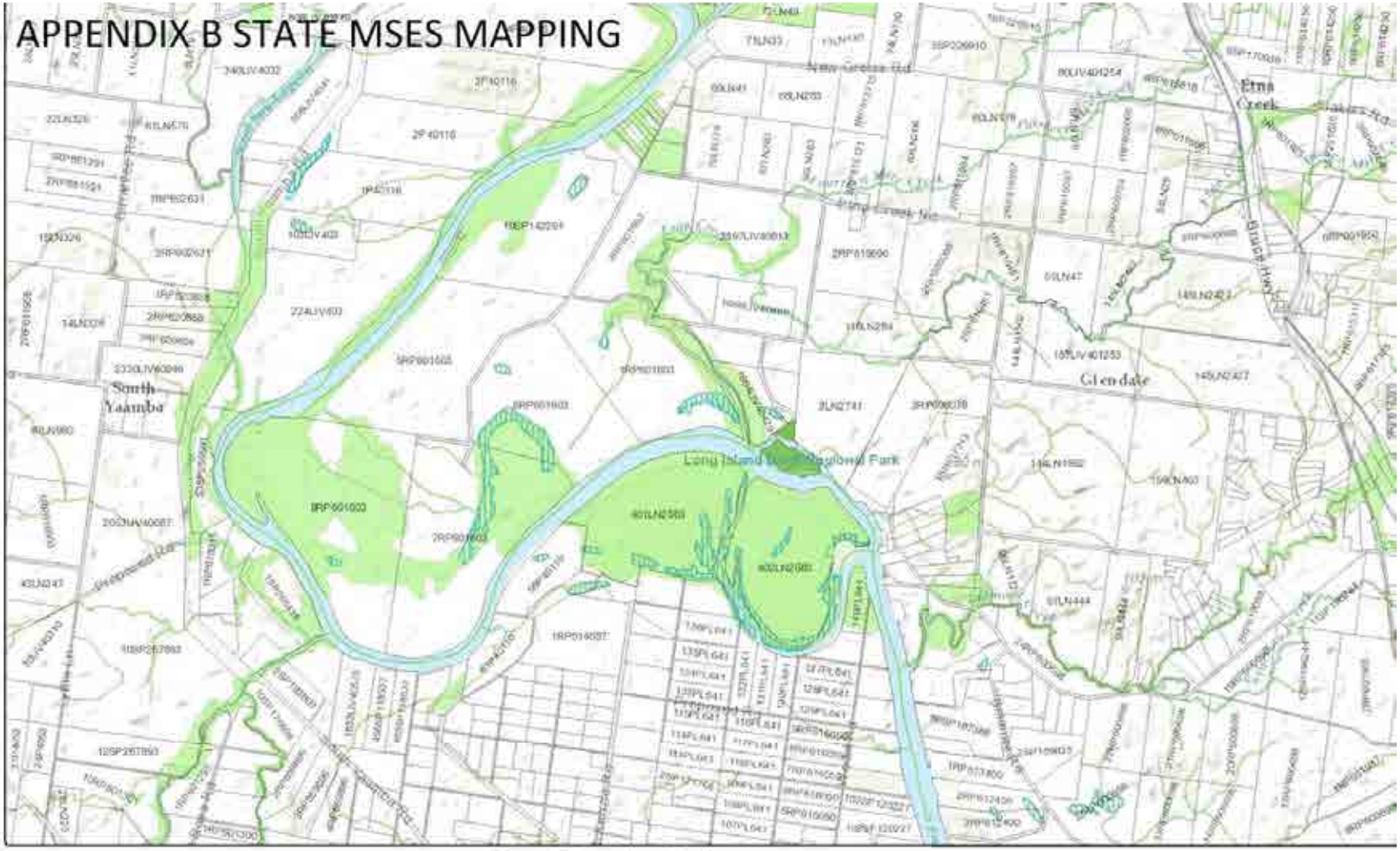
CODES

- Y indicates that the taxon is introduced to Queensland and has naturalised.

) - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct in the Wild (PE), Endangered (E), Vulnerable (V), Near Threatened (NT), Least Concern (C) or Not Protected ( ).

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

tecords – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).
This number is output as 99999 if it equals or exceeds this value. The second number located after the / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.


APPENDIX B STATE MSES MAPPING
South Yaamba
Etna Creek
Glendale
Long Island
Department of Infrastructure, Local Government and Planning
State Planning Policy
Making or amending a local planning instrument and designating land for community infrastructure
0 1,100 2,200 3,300 4,400
Date: 22/06/2015
Disclaimer
This map has been prepared with due care based on the best available information at the time of publication
The State of Queensland holds no responsibility for any errors, inconsistencies or omissions within this

Legend

Cadastre (100k)

Cadastre (100k)

MSES - High ecological value waters (watercourse)

MSES - High ecological value waters (watercourse)

MSES - Regulated vegetation (intersecting a watercourse)

MSES - Regulated vegetation (intersecting a watercourse)

MSES - High Ecological Significance wetlands

MSES - High Ecological Significance wetlands

MSES - High ecological value waters (wetland)

MSES - High ecological value waters (wetland)

MSES - Strategic Environmental Area (Designated Precinct)

MSES - Strategic Environmental Area (Designated Precinct)

MSES - Wildlife habitat

MSES - Wildlife habitat

MSES - Protected area

MSES - Protected area

MSES - Marine park

MSES - Marine park

MSES - Declared fish habitat area

MSES - Declared fish habitat area

MSES - Regulated vegetation

MSES - Regulated vegetation

MSES - Legally secured offset area

MSES - Legally secured offset area

Queensland Government

Department of Infrastructure, Local Government and Planning

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State Planning Policy

Making or amending a local planning instrument and designating land for community infrastructure

Date: 22/06/2015

Disclaimer:
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2/06/2015 16:54:51
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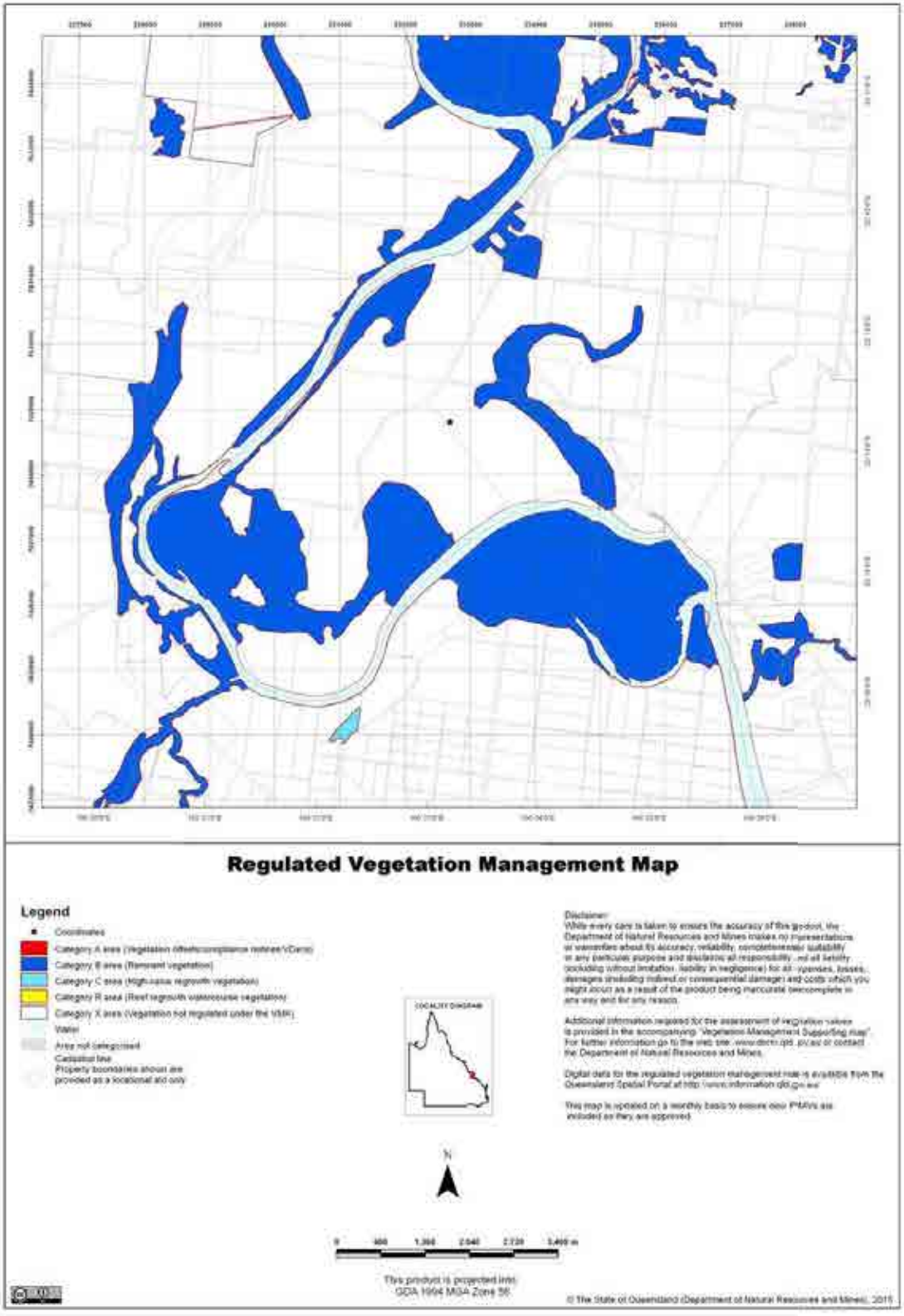

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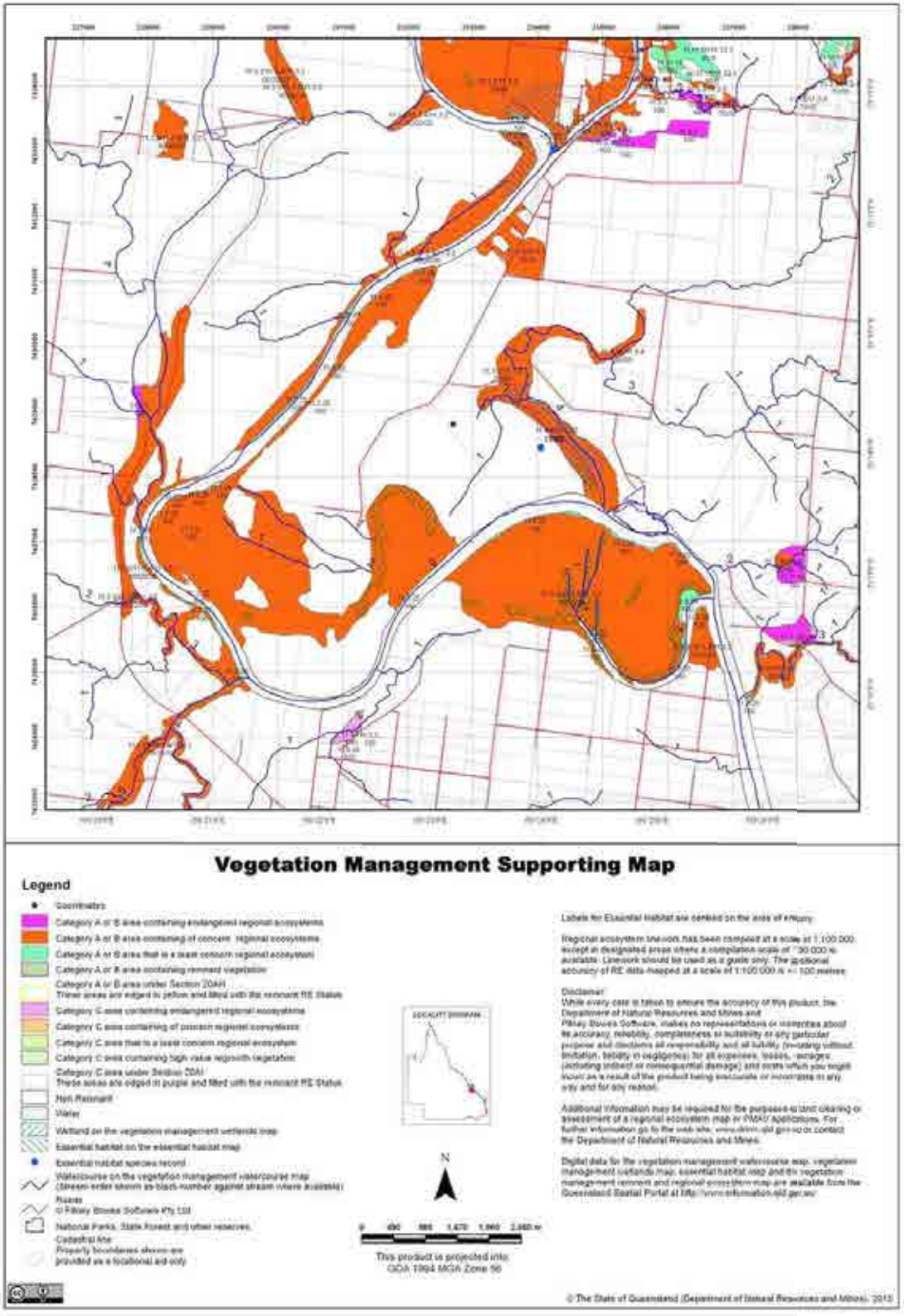

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ongitude: 150.3879 Latitude: -23.2283

Vegetation Management Act 1999 - Extract from the essential habitat database - version 4.0

ssential habitat is required for assessment under the:

- State Development Assessment Provisions - Module 8: Native vegetation clearing which sets out the matters of interest to the state for development assessment under the *Sustainable Planning Act 2009*; and
- Self-assessable vegetation clearing codes made under the *Vegetation Management Act 1999*

ssential habitat for one or more of the following species is found on and within 1.1 km of the identified subject lot/s or on and within 2.2 km of an identified coordinate on the accompanying essential habitat ap.
his report identifies essential habitat in Category A, B and Category C areas.
he numeric labels on the essential habitat map can be cross referenced with the database below to determine which essential habitat factors might exist for a particular species.
ssential habitat is compiled from a combination of species habitat models and buffered species records.
he Department of Natural Resources and Mines website (http://www.dnrm.qld.gov.au) has more information on how the layer is applied under the State Development Assessment Provisions - Module 8: ative vegetation clearing and the *Vegetation Management Act 1999*.
egional ecosystem is a mandatory essential habitat factor, unless otherwise stated.
ssential habitat, for protected wildlife, means a category A area, a category B area or category C area shown on the regulated vegetation management map-

1) (a) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database; or
2) (b) in which the protected wildlife, at any stage of its life cycle, is located.

ssential habitat identifies endangered or vulnerable native wildlife prescribed under the *Nature Conservation Act 1994*.

ssential habitat in Category A and B (Remnant vegetation species record) areas:2200m Species Information

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
1785	Geophaps scripta scripta	Squatter Pigeon (southern subsp.)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	no soil information	Gravelly ridges, traprock and river flats.

ssential habitat in Category A and B (Remnant vegetation species record) areas:2200m Regional Ecosystems Information

Label	Regional Ecosystem (this is a mandatory essential habitat factor, unless otherwise stated)
1785	8.1.5, 8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8,8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19,9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.4, 12.3.10, 12.3.12, 12.3.14, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9-10.7, 12.9-10.8, 12.9-10.12, 12.9-10.13, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.11.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10

ssential habitat in Category A and B (Remnant vegetation) areas:2200m Species Information

o results)

ssential habitat in Category A and B (Remnant vegetation) areas:2200m Regional Ecosystems Information

o results)

ssential habitat in Category C (High value regrowth vegetation) areas:2200m Species Information

o results)

ssential habitat in Category C (High value regrowth vegetation) areas:2200m Regional Ecosystems Information

o results)

Condwana Ecology Group

APPENDIX D FLORA SPECIES LIST (June 2015)

Family	Scientific Name	Common Name	Introduced	NCA Status
Malvaceae	*Abutilon guineense*		Y	
Mimosaceae	*Acacia holosericea*	soapbush wattle		C
Mimosaceae	*Acacia salicina*	sally wattle		C
Amaranthaceae	*Achyranthes aspera*	prickly chaff flower		C
Asteraceae	*Ageratum houstonianum*	blue billygoat weed	Y	
Mimosaceae	*Albizia canescens*	Belmont siris		C
Mimosaceae	*Albizia lebbeck*	Indian siris		C
Rhamnaceae	*Alphitonia excelsa*	soap tree		C
Araucariaceae	*Araucaria cunninghamii*	hoop pine		C
Papaveraceae	*Argemone ochroleuca* subsp. *ochroleuca*	Mexican poppy	Y	
Poaceae	*Aristida* sp.	wiregrass		C
Poaceae	*Arundinella nepalensis*	reedgrass		C
Apocynaceae	*Asclepias curassavica*	red-head cottonbush	Y	
Azollaceae	*Azolla pinnata*	ferny azolla		C
Poaceae	*Bothriochloa bladhii* subsp. *bladhii*	forest bluegrass		C
Capparaceae	*Capparis* sp.			C
Solanaceae	*Capsicum anuum*	chilli	Y	
Casuarinaceae	*Casuarina cunninghamiana*	river sheoak		C
Poaceae	*Cenchrus ciliaris*	buffel grass	Y	
Chenopodiaceae	*Chenopodium album*	fat-hen	Y	
Poaceae	*Chloris gayana*	rhodes grass	Y	
Ebenaceae	*Diospyros humilis*	small-leaved ebony		C
Poaceae	*Chrysopogon fallax*			C
Asteraceae	*Cirsium vulgare*	spear thistle	Y	
Lamiaceae	*Clerodendrum floribundum*	lolly bush		C
Asteraceae	*Conyza* sp.	fleabanes	Y	
Myrtaceae	*Corymbia intermedia*	pink bloodwood		C
Myrtaceae	*Corymbia tessellaris*	Moreton Bay ash		C
Lecythidaceae	*Planchonia careya*	cockatoo apple		C
Myrtaceae	*Corymbia trachyphloia*	brown bloodwood		C
Fabaceae	*Crotalaria* sp.	a rattlepod		C
Apocynaceae	*Cryptostegia grandiflora*	rubber vine	Y	
Cucurbitaceae	*Cucumis althaeoides*			C
Cyperaceae	*Cyperus exaltatus*	tall flatsedge		C
Poaceae	*Digitaria didactyla*	Queensland blue couch	Y	
Meliaceae	*Dysoxylum gaudichaudianum*	ivory mahogany		C
Poaceae	*Eleusine indica*	crowsfoot grass	Y	
Myrtaceae	*Eucalyptus coolabah*	coolabah		C
Myrtaceae	*Eucalyptus platyphylla*	poplar gum		C
Myrtaceae	*Eucalyptus tereticornis*	forest red gum		C
Convolvulaceae	*Evolvulus alsinoides*			C

Family	Scientific Name	Common Name	Introduced	NCA Status
Moraceae	*Ficus obliqua*	small-leaved fig		C
Moraceae	*Ficus opposita*	sandpaper fig		C
Apocynaceae	*Gomphocarpus physocarpus*	balloon cottonbush	Y	
Sparrmanniaceae	*Grewia latifolia*	dysentery plant		C
Poaceae	*Heteropogon contortus*	black speargrass		C
Malvaceae	*Hibiscus diversifolius*	swamp hibiscus		C
Poaceae	*Hymenachne amplexicaulis*	hymenachne	Y	
Poaceae	*Hyparrhenia rufa*	thatch grass	Y	
Fabaceae	*Indigofera linnaei*	Birdsville indigo		C
Juncaceae	*Juncus polyanthemus*			C
Verbenaceae	*Lantana camara*	lantana	Y	
Mimosaceae	*Leucaena leucocephala* subsp. *glabrata*	leucaena	Y	
Laxmanniaceae	*Lomandra longifolia*	matrush		C
Myrtaceae	*Lophostemon suaveolens*	swamp box		C
Onagraceae	*Ludwigia octovalvis*	willow primrose		C
Onagraceae	*Ludwigia peploides*		Y	
Caesalpiniaceae	*Lysiphyllum hookeri*	Queensland ebony		C
Fabaceae	*Macroptilium atropurpureum*	siratro	Y	
Euphorbiaceae	*Mallotus philippensis*	red kamala		C
Anacardiaceae	*Mangifera indica*	mango	Y	
Poaceae	*Megathyrsus maximus* var. *pubiglumis*	green panic	Y	
Myrtaceae	*Melaleuca bracteata*	river teatree		C
Myrtaceae	*Melaleuca fluviatilis*	weeping paperbark		C
Myrtaceae	*Melaleuca linariifolia*	snow-in summer		C
Myrtaceae	*Melaleuca viridiflora* var. *viridiflora*			C
Poaceae	*Melinis repens*	red natal grass	Y	
Nelumbonaceae	*Nelumbo nucifera*	pink waterlily		C
Menyanthaceae	*Nymphoides indica*	water snowflake		C
Lamiaceae	*Ocimum americanum*	hoary basil	Y	
Cactaceae	*Opuntia* sp.	prickly pear	Y	
Oxalidaceae	*Oxalis corniculata*	oxalis	Y	
Poaceae	*Panicum* sp.			C
Passifloraceae	*Passiflora foetida*	stinking passion flower	Y	
Polygonaceae	*Persicaria attenuata*	smartweed		C
Polygonaceae	*Persicaria orientalis*	princes feathers		C
Solanaceae	*Physalis angulata*	ground cherry	Y	
Myrtaceae	*Psidium guajava*	guava	Y	
Rubiaceae	*Richardia brasiliensis*	white eye	Y	
Caesalpiniaceae	*Senna barclayana*			C
Malvaceae	*Sida cordifolia*	flannel weed	Y	
Malvaceae	*Sida spinosa*	spiny sida	Y	
Solanaceae	*Solanum nigrum*	black nightshade	Y	

Family	Scientific Name	Common Name	Introduced	NCA Status
Solanaceae	*Solanum seaforthianum*	Brazilian nightshade	Y	
Solanaceae	*Solanum torvum*	devil's fig	Y	
Verbenaceae	*Stachytarpheta jamaicensis*	Jamaica snakeweed	Y	
Fabaceae	*Stylosanthes* sp.	sylo	Y	
Poaceae	*Themeda triandra*	kangaroo grass		C
Moraceae	*Trophis scandens* subsp. *scandens*	burny vine		C
Malvaceae	*Urena lobata*	urena weed	Y	
Poaceae	*Urochloa mosambicensis*	sabi grass	Y	
Mimosaceae	*Vachellia nilotica*	prickly acacia	Y	
Verbenaceae	*Verbena bonariensis*	purpletop	Y	
Campanulaceae	*Wahlenbergia* sp.			C
Asteraceae	*Xanthium occidentale*	Noogoora burr	Y	
Rhamnaceae	*Ziziphus mauritiana*	Indian jujube	Y	

Y - Introduced = non-native, exotic species

C - *Nature Conservation Act 1992* = Common *of least concern*

Gondwana Ecology Group

APPENDIX E BIRD SPECIES LIST (June 2015)

Species	Scientific Name	Status*
Black Swan	*Cygnus atratus*	-
Australian Wood Duck	*Chenonetta jubata*	-
Cotton Pygmy-Goose	*Nettapus coromandelianus*	-
Grey Teal	*Anas gracilis*	-
Pacific Black Duck	*Anas superciliosa*	-
Hardhead	*Aythya australis*	-
Australasian Grebe	*Tachybaptus novaehollandiae*	-
Crested Pigeon	*Ocyphaps lophotes*	-
Bar-shouldered Dove	*Geopelia humeralis*	-
Australasian Darter	*Anhinga novaehollandiae*	-
Little Pied Cormorant	*Microcarbo melanoleucos*	-
Little Black Cormorant	*Phalacrocorax sulcirostris*	-
Australian Pelican	*Pelecanus conspicillatus*	-
White-necked Heron	*Ardea pacifica*	-
Eastern Great Egret	*Ardea modesta (alba)*	QSL, CMw, CMa
Intermediate Egret	*Ardea intermedia*	-
Cattle Egret	*Ardea ibis*	QSL, CMw, CMa
White-faced Heron	*Egretta novaehollandiae*	-
Little Egret	*Egretta garzetta*	-
Australian White Ibis	*Threskiornis molucca*	-
Straw-necked Ibis	*Threskiornis spinicollis*	-
Yellow-billed Spoonbill	*Platalea flavipes*	-
White-bellied Sea-Eagle	*Haliaeetus leucogaster*	QSL, CMt, CMa
Whistling Kite	*Haliastur sphenurus*	-
Black Kite	*Milvus migrans*	-
Swamp Harrier	*Circus approximans*	-
Wedge-tailed Eagle	*Aquila audax*	-
Nankeen Kestrel	*Falco cenchroides*	-
Brown Falcon	*Falco berigora*	-
Brolga	*Grus rubicunda*	-
Purple Swamphen	*Porphyrio porphyrio*	-
Dusky Moorhen	*Gallinula tenebrosa*	-
Eurasian Coot	*Fulica atra*	-
Black-winged Stilt	*Himantopus himantopus*	-
Black-fronted Dotterel	*Elseyornis melanops*	-
Masked Lapwing	*Vanellus miles*	-
Comb-crested Jacana	*Irediparra gallinacea*	-
Red-tailed Black-Cockatoo	*Calyptorhynchus banksii*	-
Red-winged Parrot	*Aprosmictus erythropterus*	-
Pale-headed Rosella	*Platycercus adscitus*	-
Budgerigar	*Melopsittacus undulatus*	-
Pheasant Coucal	*Centropus phasianinus*	-
Brush Cuckoo	*Cacomantis variolosus*	-
Laughing Kookaburra	*Dacelo novaeguineae*	-
Blue-winged Kookaburra	*Dacelo leachii*	-
Rainbow Bee-eater	*Merops ornatus*	CMt, CMa
Red-backed Fairy-wren	*Malurus melanocephalus*	-

Species	Scientific Name	Status*
White-throated Gerygone	*Gerygone albogularis*	-
Striated Pardalote	*Pardalotus striatus*	-
Noisy Miner	*Manorina melanocephala*	-
White-throated Honeyeater	*Melithreptus albogularis*	-
Blue-faced Honeyeater	*Entomyzon cyanotis*	-
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*	-
White-bellied Cuckoo-shrike	*Coracina papuensis*	-
Rufous Whistler	*Pachycephala rufiventris*	-
Australasian Figbird	*Sphecotheres vieilloti*	-
White-breasted Woodswallow	*Artamus leucorhynchus*	-
Pied Butcherbird	*Cracticus nigrogularis*	-
Australian Magpie	*Cracticus tibicen*	-
Spangled Drongo	*Dicrurus bracteatus*	-
Grey Fantail	*Rhipidura albiscapa*	-
Willie Wagtail	*Rhipidura leucophrys*	-
Torresian Crow	*Corvus orru*	-
Magpie-lark	*Grallina cyanoleuca*	-
Golden-headed Cisticola	*Cisticola exilis*	-
Australian Reed-warbler	*Acrocephalus australis*	-
Brown Songlark	*Cincloramphus cruralis*	-
Welcome Swallow	*Hirunda neoxena*	-
Tree Martin	*Petrochelidon nigricans*	-
Australasian Pipit	*Anthus novaeseelandiae*	-

*Status: Q = Queensland *NC Act 1992; C = Commonwealth EPBC Act 1999*

E = endangered, V=vulnerable, NT = near threatened, SL = special least concern,

Mt = migratory terrestrial, Mw = migratory wetland, Ma = marine,

unattributed = least concern

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Ecological Assessment Report

Meeting Date: 17 July 2018

Attachment No: 5

Gondwana Ecology Group
Pty Ltd

Ecological Assessment

Belmont Sands Quarry

Etna Creek

Prepared for: **Belmont Sands Pty Ltd**
July 2015

Gondwana Ecology Group PO Box 535 Kenmore 4069

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QUALITY ASSURANCE

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Gondwana Ecology Group operates in accordance with the following approvals, permits and ethical principles:

- Scientific Use Registration (*Animal Care & Protection Act 2001*) – 508
- Animal Ethics Committee (DAFF Animal Ethics) – CA 2013/11/732
- Scientific Purposes Permit (*Nature Conservation Regulation 2006*) – WISP 13794613
- *Certified Environmental Practitioner (Environment Institute of Australia & New Zealand)

Gondwana Ecology Group

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1
1. Introduction 2
1.1 Background 2
1.2 Subject Site 2
1.3 Proposed Development 2
1.4 Purpose of the Report 2
1.5 Site Inspections 2
2. Statutory Mapping and Policies 5
2.1 Introduction 5
2.2 Commonwealth 5
2.3 State 5
2.4 Livingstone Shire Council 7
3. Ecology Values 8
3.1 Introduction 8
3.2 Survey Methodology 8
3.2 Broad Vegetation Communities 8
3.3 Remnant Vegetation 8
3.4 Vegetation Communities in Project Areas 9
3.5 Threatened Vegetation Communities 10
3.3 Significant Flora 11
3.5 Fauna & Habitat 12
3.6 Threatened Fauna 13
4. Impact Assessment and Management Recommendations 14
4.1 Ecological Features of Project Areas 14
4.2 Potential Impacts on Ecological Values 15
4.3 Management & Mitigation Measures 17
5. Statutory Considerations 18
5.1 Council 18
5.2 State 18
5.3 Commonwealth 18
6. Bibliography/References 19

PHOTO PLATES.....20

APPENDICES .....
Appendix A: Database Search Results (Commonwealth & State) 22
Appendix B: MSES Mapping (State) 23
Appendix C: Regulated Vegetation (State) 24
Appendix D: Flora Species List 25
Appendix E: Fauna Species List 26

FIGURES.....
Figure 1 Subject Site & Location.....3
Figure 2 Conceptual Layout Plan.....4
Figure 3 Ecological Mapping & Proposed Project.....16

EXECUTIVE SUMMARY

The subject site is located on a number of allotments (research station) in the Etna Creek locality, north of Rockhampton (within the Livingstone Shire) and is currently an agricultural operation. The Fitzroy River lies to the west with the surrounding landscape characterised by agricultural activities. An extractive operation of sand and gravel is proposed from two resource areas. Other infrastructure for the operation includes a northern stockpile, a processing area and a haul road. All project infrastructure and operations is located in existing grazing land. This report provides an analysis of ecological features within the subject site and assessment of potential impacts with consideration of the requirements identified by Council and the State during pre-lodgement meetings. The site vegetation is predominantly grazing landscape of planted pasture and weed species with the balance generally conforming to that which has been mapped "regulated vegetation" by the State. Riparian vegetation along the Fitzroy River comprises large forest red gums and Coolibah woodland. Isolated large paddock trees, stags and large figs are a characteristic feature across the landscape and provide some habitat for fauna and biodiversity foci. Wetlands and swales with water/wetland vegetation offer habitat for aquatic species, including wetland birds and occur primarily to the east of the subject site. No Commonwealth threatened ecological communities occur within the subject site or immediate surrounds. Council's "significant local vegetation" mapping needs to be refined to accurately reflect that which occurs in the landscape. The proposed project has been designed to avoid all features considered "high ecological significance" at a State or Commonwealth level. A number of management measures have been recommended to minimise potential impacts or general ecological values within (and adjacent to) the subject site. Following appropriate implementation of the proposed project, including detailed design and operation management, it is unlikely there would be any significant or residual impact on features of high ecological value. With respect to ecology, the proposed project could be approved with reasonable and relevant conditions.

1. INTRODUCTION

1.1 Background

Gondwana Ecology Group Pty Ltd has been engaged to provide an analysis of ecological values of the subject site. The level of assessment and subsequent reporting is based on an understanding of the proposed development, associated minimal disturbance to native vegetation and in response to relevant statutory requirements. Pre-lodgement meetings (25 March 2015) with Council and the State have assisted in forming the objectives for the ecological reporting.

1.2 Subject Site

The subject site is located on a number of allotments comprising more than 1500ha off Etna Creek Road as Lots 3, 5, 6 and 8 of RP601603 and Lot 10 on SP142291 (Etna Creek, north of Rockhampton) (**Figure 1**).

The subject site lies within the Livingstone Shire and is mapped in the *Rural* zone. The land was part of the CSIRO research station with current practices (operated by Agforce) for rural purposes.

The Fitzroy River lies to the west (and generally to the south) with the surrounding landscape characterised by agricultural activities. The subject site is on an alluvial plain (landzone 3) with a number of wetlands (including Boomerang Lagoon and Etna Creek to the east) and woodland patches throughout the local landscape. The Bruce Highway is less than 10km to the east with Mt Etna National Park a further few kilometres in a north-easterly direction.

1.3 Proposed Development

An extractive operation of sand and gravel is proposed from two resource areas (in the south) (**Figure 2**). A northern stockpile is proposed above the flood-line and a processing area is located in the south, associated with resource area 2. A haul road is proposed through the landscape to Etna Creek Road. All resource areas, roads, processing and stockpile areas are located in existing grazing land and comprise an area approximately 130ha.

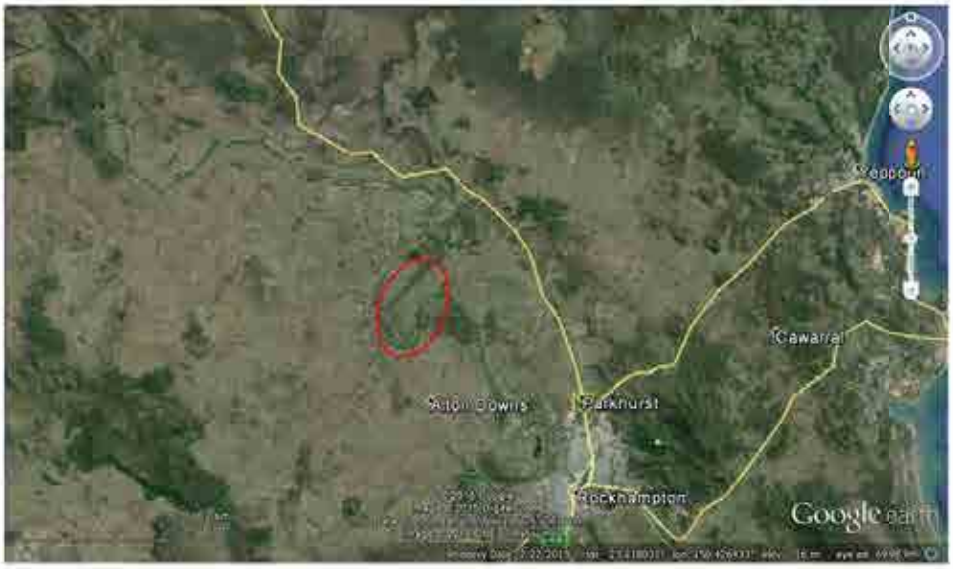
1.4 Purpose of the Report

The objective of this report is to provide a technical assessment of ecological values for the subject site in accordance with statutory requirements within the context of the site values and proposed development and as identified during the pre-lodgement meetings. Specifically, the following:

- Locally significant vegetation mapping (Council)
- Northern wetland and adjacent stockpile (it is acknowledged that, subsequent to the meeting, the stockpile has been relocated away from this wetland)
- Ground-truthing of any watercourse crossings (with photographs), State-mapped vegetation (with tree heights near infrastructure), waterways and wetlands.

1.5 Site Inspections

Gondwana Ecology Group has completed site inspections in June 2015. Local ecological knowledge (e.g. the author, station manager and community/conservation organisations) has also assisted in informing the values within the site and locality.



Belmont Sands Quarry – Ecology Assessment	Source: Google Earth 2015
FIGURE 1 SITE LOCATION	Gondwana Ecology Group

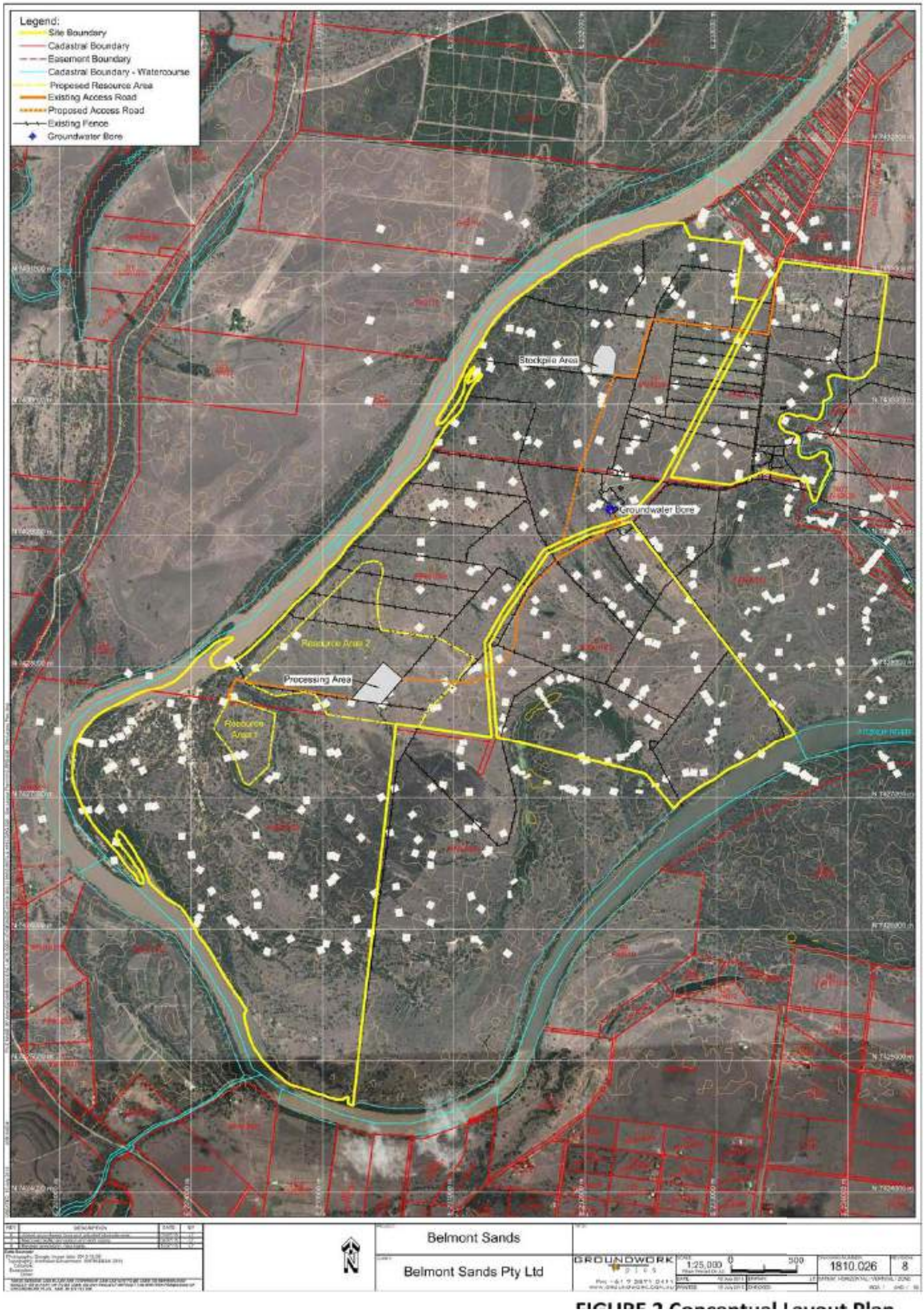


FIGURE 2 Conceptual Layout Plan

2. Statutory Mapping and Policies

2.1 Introduction

Available databases, mapping and aerial photography was reviewed to determine the potential for certain species and/or vegetation communities to occur within or adjacent to the site.

Threatened (or conservation significant) species are those which are listed under the schedules of the Commonwealth *Environment Protection and Biodiversity Conservation* (EPBC) Act 1999 and/or State *Nature Conservation Act* (NCA) 1992 as *critically endangered, endangered, vulnerable* or *near threatened*. The Commonwealth collectively identifies matters of significance as Matters of National Environmental Significance (MNES) while the State identifies ecological values as "State Significant Biodiversity Values" (SSBV) or Matters of State Environmental Significance (MSES). MSESs include flora and fauna, essential habitat and regulated vegetation.

2.2 Commonwealth

The database tool provided by the Commonwealth (Australian Government, 2015) is recognised as broad and general, often capturing species and communities that do not necessarily occur in the location. Confirmation with local databases and ground truthing is necessary to made accurate determinations of likelihood of occurrence. The database considers a number of MNES to occur within 5km of the site (**Appendix A**). This includes:

- three threatened ecological communities - TECs (Brigalow, Coolibah-Blackbox Woodlands, Weeping Myall)
- 29 threatened species (flora and fauna)
- 24 migratory species
- one nationally important wetland (Fitzroy River Floodplain)

Marine species are also listed, but not discussed in this document (i.e. lack of habitat and unlikely potential to occur).

2.3 State

The Department of State Development Infrastructure and Planning (DSDIP) provides a range of mapping to assist development planning. The State maps (DSDIP, 2015) MSES "regulated vegetation", MSES "high ecological significance wetlands and MSES "regulated vegetation intersecting a watercourse" (**Attachment B**).

The *Vegetation Management Act 1999* (VMA) regulates clearing of remnant vegetation on freehold and leasehold land within Queensland. This is achieved by preserving remnant regional ecosystems (RE's), preserving vegetation in areas of high nature conservation value, and protecting areas vulnerable to land degradation. A number of "ecological" layers are provided through the DNRM (2015) mapping database (**Appendix C**). Remnant vegetation is mapped along the Fitzroy River in the west and in the south (forest red gum woodland fringing drainage lines and coolibah woodland in south). There is no *essential habitat* mapped within the subject site. Essential habitat for the squatter pigeon (based on a point record) is mapped approximately 2km to the east (refer **Appendix C**).

One State-mapped (State of Queensland, 2015) wetland of *high ecological significance* is mapped in the north of the subject site (refer **extract** below) with other wetlands mapped to the east. Buffer (or trigger areas) extend from these wetlands into the subject site.

Extract - State Wetland Mapping

HES wetland (blue shading)
Trigger area (hatching)

northern part of subject site

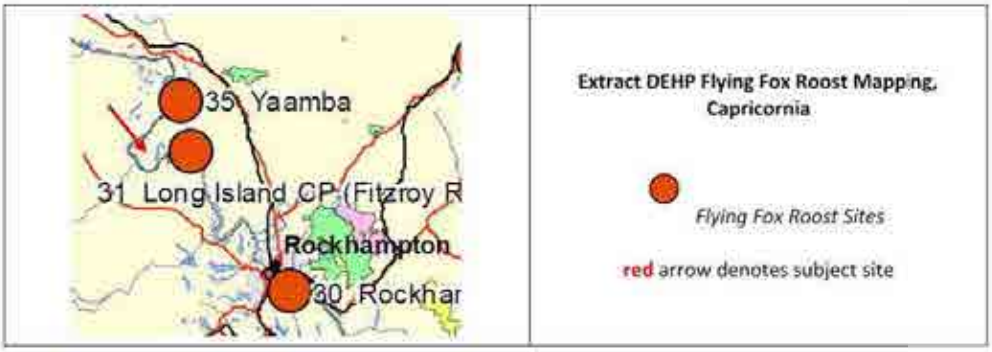
As per the Fish habitat DA Mapping (provided by DSDIP/SARA, June 2015 – refer extract), three waterways are mapped in south of site, one near Processing Area (low value), one associated with access to Resource Area 1 (moderate value) and the third south of Resource Area 1.

Extract – Fish Habitat Mapping

southern part of subject site

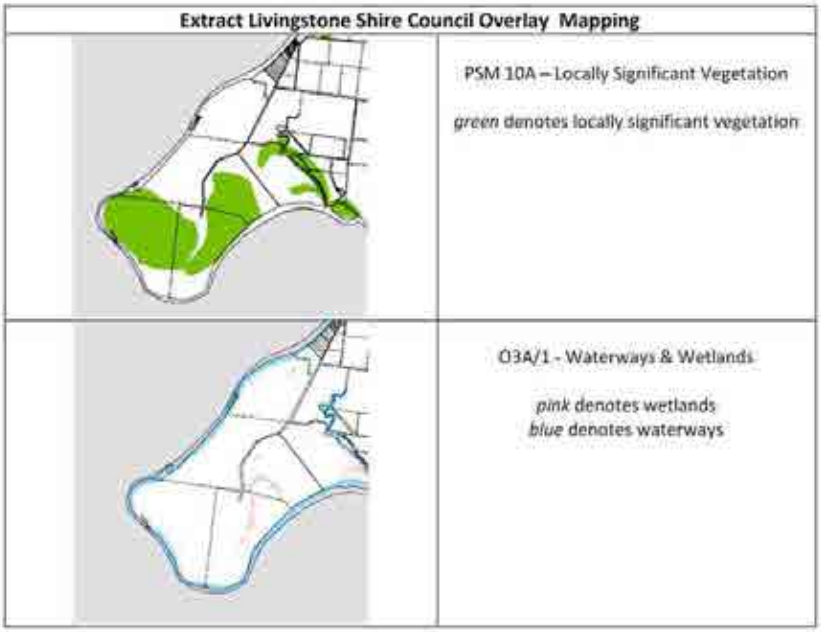
The *Nature Conservation Act 1992* (NCA) provides the framework for the protection of native flora and fauna, and provides a list of threatened flora and fauna at a state level (including endangered, vulnerable, near threatened and of least concern). The subject site **does not** fall within the *protected plants flora survey trigger area* (DEHP, 2015) which identifies knowledge of local protected plant records. The State wildlife database (DISITIA, 2015) indicates that there are confirmed records for listed (under the NCA) species, i.e. three fauna and nine flora (refer **Section 3**) which have been recorded within 10km of the subject site.

The Department of Environment and Heritage Protection has mapped the locations of flying-fox colonies within Southeast Queensland. There are a number of colonies mapped within the Capricornia region, including one at Long Island and another at Yaamba, east and north of the subject site, respectively (DEHP, 2011) (refer **Extract** below).



2.4 Livingstone Shire Council

The Livingstone Shire Council Strategic Map identifies the subject site as lying within the *Rural* zone. Two Council mapping overlays are relevant to ecology, i.e. O3A/1 - Waterways & Wetlands and PSM 10A – Locally Significant Vegetation (refer **Extract** below). No waterways or wetlands are mapped on the subject site, other than a wetland in north. Locally significant vegetation is mapped in the south (associated with Resource Area 1) and to the south east.



The Capricorn Conservation Council (CCC) website (http://www.cccqld.org.au/) provides information on "current issues" and fauna and flora for the region. It is noted that 49 frog species (included a number of threatened species) occur within Central Queensland. Koala, turtle, State vegetation and water bodies were identified by CCC as the key ecological matters for attention (M.McCabe pers.com.).

The Fitzroy Basin Association website (http://www.fba.org.au/) provides information for graziers, farmers, volunteers and community groups. Information on special plants and animals, pest species and the waterways is provided.

3. Ecology Values

3.1 Introduction

Inspections have been undertaken in June 2015 to provide confirmation of the site values and to assist with the design of the extraction operations in order to minimise impacts on ecological values. Survey objectives were therefore as follows:

- Assess the site vegetation and consider State mapping;
- Searches for significant species listed (and habitats) under Council, EPBC and NC Act Schedules; and
- Inspection of ecological values in the immediate surrounds.

3.2 Survey Methodology

A field assessment of the vegetation of the subject property was conducted over two days from the 6th to 7th June 2015. The assessment specifically targeted the areas to be impacted by the proposed development as well as examining any adjacent remnant areas. Within each area of interest, information about the vegetation was recorded using a quaternary site assessment as per the method of Neldner *et al.* (2012). GPS location, major canopy, shrub and groundcover species, structural information including approximate stratum heights and past or ongoing disturbances were recorded at each quaternary site. Photos were also taken at each site facing the four cardinal points (north, south, east and west). The field survey also involved targeted searches for threatened flora species. One or more quaternary sites were assessed for each area. Targeted surveys were undertaken for threatened fauna and/or their habitats in suitable locations. The survey included identification and assessment of fauna habitats and a list of fauna recorded during the inspection.

3.2 Broad Vegetation Communities

Vegetation in the subject site generally comprised non-remnant, grazed pasture with varying densities of native trees and native woody regrowth (refer **Photo Plates**). A total of 96 plant species were recorded during the field assessment, 43 of which were introduced. Common remnant trees across the area included *Casuarina cunninghamiana* (river sheoak), *Corymbia tessellaris* (Moreton Bay ash), *Eucalyptus coolabah* (coolabah), *E. tereticornis* (forest red gum) and *Ficus obliqua* (small-leaved fig). The woody regrowth also featured these tree species as well as some native shrub species. The ground cover was dominated by introduced species, typically pasture grasses and legumes.

There is fairly extensive evidence across the landscape of damage and tree uprooting, primarily as a result of the recent cyclone (i.e. Cyclone Marcia - February 2015) (P.Orchard, Station Manager, pers.com.).

3.3 Remnant Vegetation

Regional Ecosystem (RE) mapping showed three remnant vegetation communities occurred in the area (refer **Attachment C**):

- RE 11.3.2 – *Eucalyptus populnea* woodland on alluvial plains;
- RE 11.3.3 - *Eucalyptus coolabah* woodland on alluvial plains; and
- RE 11.3.25 - *Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines.

The status of both RE 11.3.2 and RE 11.3.3 under the *Vegetation Management Act 1999* is 'Of Concern' whereas RE 11.3.25 is 'Least Concern'.

RE 11.3.3 formed the most extensive remnant vegetation in the surrounding area, occupying a large area to the south, east and west of the proposed development areas. RE 11.3.25 occupied a narrow

fringe along the bank of the nearby Fitzroy River and occurred in association with RE 11.3.3 to the east and north of the proposed development areas.

3.4 Vegetation Communities in Project Areas

The proposed resource areas, processing and stockpile areas and haul road have been located outside of the mapped remnant vegetation. The ground-truthing of the vegetation during the field assessment confirmed that these areas were located in non-remnant vegetation.

3.4.1 Resource Area 1

Resource Area 1 was surrounded on all sides by remnant vegetation mapped as RE 11.3.3 (*Eucalyptus coolabah* woodland on alluvial plains). The non-remnant vegetation within this area comprised pasture with scattered remnant native trees and woody regrowth. Common native trees included *Corymbia tessellaris* (Moreton Bay ash), *Eucalyptus coolabah* (coolabah) and *E. tereticornis* (forest red gum). *Planchonia careya* (cocky apple), *Casuarina cunninghamiana* (river she-oak) and *Acacia salicina* (sally wattle) were also widespread as a tall shrub/low tree component.

The ground layer was generally dominated by introduced pasture species including *Cenchrus ciliairis* (buffel grass), *Megathyrsus maximus* (green panic) and *Melinis repens* (red Natal grass). Native grasses included *Heteropogon contortus* (bunch spear grass) and *Themeda triandra* (kangaroo grass). Weeds were also prevalent including *Lantana camara* (lantana), *Xanthium occidentale* (noogoora burr) and *Stachytarpheta jamaicensis* (snake weed).

Large specimens of small-leaved figs (*Ficus obliqua*) were also scattered across RA1. One of the largest specimens was over 1m in diameter and up to 18m in height. It's widely spreading canopy, approximately 30m in diameter, created a micro-environment in which other closed forest species occurred. Associated with this large *F. obliqua* were the trees *Dysoxylum gaudichaudianum* (ivory mahogany) and *Mallotus philippinensis* (red kamala). Shrub species beneath the canopy of the fig included *Diospyros humilis* (small-leaved ebony), *Ficus opposita* (sandpaper fig) and *Trophis scandens* (burny vine). Elsewhere these figs occurred as isolated specimens but most of them appeared to have established as stranglers in host trees, usually eucalypts.

3.4.2 Resource Area 2

Resource Area 2, like Resource Area 1, supported non-remnant vegetation that comprised pasture with widely scattered trees and varying densities of native regrowth woody vegetation, however the remnant trees in this area were far more widely dispersed but included a similar suite of species including *Corymbia tessellaris* (Moreton Bay ash), *Eucalyptus coolabah* (coolabah) and *E. tereticornis* (forest red gum). Specimens of *Ficus obliqua* (small-leaved fig), *Dysoxylum gaudichaudianum* (ivory mahogany) and *Casuarina cunninghamiana* (river she-oak) were also present. A similar mix of shrub, small tree and groundcover species to that recorded in Resource Area 1 was observed.

Resource Area 2 occupied a greater area than Resource Area 1 and included some larger swales, representing abandoned channels of the Fitzroy River, some of which supported standing water and aquatic vegetation. One such swale, outside the southeast boundary of Resource Area 2, supported standing water and aquatic vegetation. Aquatic plant species included *Azolla pinnata* (fern, azolla), *Juncus polyanthemus*, the declared Class 2 weed *Hymenachne amplexicaulis* (hymenachne) and *Persicaria attenuata* (velvet knotweed).

3.4.3 Haul Road

The proposed haul road as far as possible traverses existing vehicle tracks and grazing areas, therefore the landscape associated with this infrastructure comprises primarily introduced pasture and weed species. South and west of the homestead small patches of eucalypt regrowth occurs in the vicinity of the proposed road.

3.4.4 Stockpile Area

The stockpile area featured a large *Ficus obliqua* (small-leaved fig) tree that had fallen over, presumably due to the recent cyclone. Although most of the tree's rootball had been exposed there was still live foliage in the canopy. The remainder of the stockpile area was pasture supporting predominantly introduced pasture grasses, legumes and weeds.

Remnant vegetation, mapped as RE 11.3.25, occurred approximately 90m to 100m to the west of the stockpile area and on lower ground. Ground-truthing confirmed this vegetation could be considered remnant although, as with other remnant vegetation within the property, the consequences of pasture species introduction and cattle was evident.

3.4.5 Waterbody in North

A relatively large waterbody was located approximately 500m northeast of the proposed stockpile area. It is understood this waterbody is man-made. Large, mature trees are located along the western bank (possibly the excavated material) included specimens of *Corymbia tessellaris* (Moreton Bay ash), *Eucalyptus tereticornis* (forest red gum) and *Melaleuca viridiflora* var. *viridiflora* (broad-leaved paperbark). The water body, although man-made, offers some natural elements and ecosystem functions.

3.5 Threatened Vegetation Communities

As mentioned in **Section 2.2**, the Commonwealth database identified three Threatened Ecological Communities (TECs) that may occur in the area (Brigalow, Black Box Woodland and Weeping Myall Woodland). **Table 1** below lists the endangered TECs and their corresponding Regional Ecosystems.

Table 1. Threatened Ecological Communities that may occur in the area & equivalent Regional Ecosystems

TEC	Likelihood of occurrence in area*	Equivalent RE (Bioregion 11)
Brigalow (*Acacia harpophylla* dominant & co-dominant)	Community known to occur within area	11.3.1, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.5.16, 11.9.1, 11.9.5, 11.9.6, 11.11.14, 11.12.21
Coolibah - Black Box Woodlands of the Darling Riverine Plains & the Brigalow Belt South Bioregions	Community may occur within area	**11.3.3**, 11.3.15, 11.3.16, 11.3.28, 11.3.37
Weeping Myall Woodlands	Community likely to occur within area	Not mapped as a stand-alone RE, occurs within **11.3.2** and 11.3.28

*Likelihood = as per database; RE bolded occur near or within subject site

No Regional Ecosystems equivalent to the Brigalow (*Acacia harpophylla* dominant and co-dominant) TEC occurred on the property. The Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions TEC was represented on the property by RE 11.3.3 (*Eucalyptus coolabah* woodland on alluvial plains). In addition, Regional Ecosystem 11.3.2 (*Eucalyptus populnea* woodland on alluvial plains), which may contain the Weeping Myall Woodlands TEC, occurred in the vicinity of the property. No specimens of weeping myall (*Acacia pendula*) were recorded within the broader area.

3.3 Significant Flora

A number of sources were used to determine known or likely occurrence of state and federally significant (threatened) flora species (i.e. species listed under the EPBC Act and/or the Regulations of the NC Act). The State and Commonwealth databases revealed eleven threatened species occurred within 10km of the subject site (**Table 2**). Based on reference to State RE mapping for the study area, known habitat information for each species and ground-truthing, it was determined that none of the eleven threatened species had more than a "low" likelihood of occurrence within the development areas on the subject site (refer also **Appendix A** for database records and **Appendix D** for site flora species list).

Table 2. Threatened flora potentially occurring in the local area

Scientific Name	Common Name	Status	Habitat	Likelihood of Occurrence
Cycas megacarpa		CE, QE	Habitat includes 11.3.25 - *Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines, 11.3.4 - *Eucalyptus tereticornis* and/or *Eucalyptus* spp. tall woodland on alluvial plains	**Low** Both regional ecosystems present or nearby to subject property but are outside of the impact area. Furthermore no specimens were observed during in the subject site.
Cycas ophiolitica	Marlborough blue	CE, QE	*Cycas ophiolitica* grows on hills and slopes in sparse, grassy open forest at altitude ranges from 80–400m above sea level. Although this species reaches its best development on red clay soils near Marlborough, it is more frequently found on shallow, stony, infertile soils, which are developed on sandstone and serpentinite, and is associated with species such as *Corymbia dallachiana, C. erythrophloia, C. xanthope and Eucalyptus fibrosa*. *Cycas ophiolitica* has also been found on mudstone in association with *Corymbia dallachiana, C. erythrophloia* and *Eucalyptus crebra*, and on alluvial loams with *Corymbia intermedia, Eucalyptus drepanophylla* and *E. tereticornis*	**Low** Habitat is not present within or adjacent to subject site.
Macrozamia serpentina		QE	*Macrozamia serpentina* occurs in low eucalypt woodland with a mixed grassy understorey at altitudes between 80-160m above sea level. It grows on steep rocky slopes on red clay loams and serpentinite soils.	**Low.** Suitable habitat is not present in the subject site.
Tectaria devexa var. devexa	Cave fern	CE, QE	The cave fern grows in narrow pockets of soil on the walls and floor near the entrance to limestone caves in situations where sufficient natural light and moisture are available to support plant growth.	**Low.** Suitable habitat is not present in the subject site.
Graptophyllum excelsum		ONT	*Graptophyllum excelsum* occurs in semi-evergreen vine thickets, although near Chillagoe the species has also been recorded growing in grassy woodland in association with *Eucalyptus cullenii* and *Corymbia erythrophloia*.	**Low.** Some suitable habitat is present but was highly disturbed, small and fragmented. No specimens were found in the subject site.
Pultenaea setulosa	Ragged bush pea	QV, CV	Grows on serpentinite substrates in *Eucalyptus fibrosa* and/or *Corymbia xanthope* woodlands or open forests.	**Low.** Suitable habitat is not present on the subject site.
Streblus pendulinus	Siah's backbone	CE	Norfolk Island.	**Low.** The taxonomy of this species is confused but recent published information indicates that *Streblus pendulinus* is confined to Norfolk Island while *S. brunonianus* is present on both the Australian mainland as well as on a number of Pacific Islands.

Scientific Name	Common Name	Status	Habitat	Likelihood of Occurrence
Corymbia xanthope	Glen Geddes bloodwood	QV, CV	*Corymbia xanthope* occurs in woodlands with *Eucalyptus fibrosa* on ridges or hill slopes on serpentinite geology with sandy soils. This community is recognised as a distinct regional ecosystem (RE 11.11.7 *E. fibrosa* subsp. (Glen Geddes), *C. xanthope* woodland on serpentinite).	**Low.** Suitable habitat is not present in the subject site.
Eucalyptus raveretiana	Black ironbox	CV	Black ironbox usually grows along watercourses, and sometimes on river flats or open woodland. Occurs in Regional Ecosystem 11.3.25a with *Melaleuca leucadendra, M. fluviatilis, Eucalyptus tereticornis, Corymbia tessellaris*).	**Low.** Suitable habitat occurs adjacent to the Fitzroy River but not within the development areas. Furthermore, no specimens were observed within the subject site.
Corchorus hygrophilus		QV	Grows on vine forest margins or in sclerophyll forests near vine forest, on soils derived from granite or limestone.	**Low.** Suitable habitat is not present in the subject site.
Stackhousia tryonii		QNT	Endemic to the serpentinite soils of the Port Curtis district, central Queensland.	**Low.** Suitable habitat is not present in the subject site.

***Status:** C *Commonwealth*, Q *Queensland*; E *endangered*, V *vulnerable*, NT *near threatened*

3.5 Fauna & Habitat

As described above, the landscape is characterised by grazed and pasture lands with isolated trees/patches of vegetation and remnant woodland associated with the riparian community along the Fitzroy River. Small ephemeral waterbodies occur within the subject site and adjacent, particularly to the east. While the general landscape is typical of agricultural pursuits, habitats and resources potentially available to fauna include those for foraging, nesting and breeding and exist as follows:

- Riparian vegetation along Fitzroy comprises large blue gums and Coolibah woodland. Coolibah woodland associated with Resource Area 1.
- Isolated large paddock trees, stags and large figs across site – habitat for fauna and focus for biodiversity.
- Wetlands and swales with water/wetland vegetation offer habitat for aquatic species, including wetland birds.

During the survey, a number of fauna was recorded, including 70 bird species (**Appendix E**), a number of wallabies, grey kangaroo, dog, feral pig and fresh-water turtle. It is reported (P.Orchard, Station Manager, pers com.) that a number of fauna have been recorded over the years on or near the property, as follows:

- Sugar Gliders and Brushtail Possums
- Scrub Python, Carpet Snake, Black-headed Python, Spotted Python, Brown Snake anc Red-bellied Black Snake
- Saltwater Crocodiles along the Fitzroy River
- Occasional fly-fox foraging in area but no roosts

A large nest (wedge-tailed eagle) was recorded within the paddock in the south and it is reported that historically, Black-necked Storks nested to the east of the subject site a number of years ago (P.Orchard, Station Manager, pers com.).

3.6 Threatened Fauna

A number of sources (including local knowledge) were used to determine known or likely occurrence of threatened fauna (i.e. species listed under the Commonwealth EPBC Act 1999 and/or the Regulations of the Queensland NC Act 1992). **Table 3** provides a list of known records for the locality.

Table 3. Threatened fauna occurring in the local area (known records since 1980)

Species	Common Name	Status*	10km	5km	1km
Haliaeetus leucogaster	white-bellied sea-eagle	QSL	1	1	0
Ardea ibis	cattle egret	QSL	2	1	0
Ardea modesta	eastern great egret	QSL	3	1	0
Rhipidura rufifrons	rufous fantail	QSL	1	0	0
Gallinago hardwickii	Latham's snipe	QSL	1	1	0
Ornithorhynchus anatinus	platypus	QSL	1	1	0
Calyptorhynchus lathami	glossy black-cockatoo	QV	1	1	0
Geophaps scripta scripta	squatter pigeon (southern subspecies)	QV, CV	2	2	0
Macroderma gigas	ghost bat	QV	1	0	0

***Status:** C *Commonwealth*, Q *Queensland*; V *vulnerable*, SL State *special least concern*

Other species listed as threatened and/or migratory, and identified in broad databases (e.g. Commonwealth, **Appendix A**) have also been considered and likelihood of occurrence discussed below:

- Squatter pigeon - habitat on subject site and all agricultural landscapes within Central Queensland, historical record to east and two known records within 10km
- Painted snipe - possible habitat in wetlands to the east of the subject site, species is nomadic and can occur in a range of wetland environments including in farming landscapes, 0 records within 10km
- Large pied bat - possible foraging habitat along riparian areas, 0 records within 10km
- South-eastern long-eared bat - possible habitat along riparian areas and possibly hollow bearing trees, 0 records within 10km
- Fitzroy River turtle - suitable habitat along Fitzroy River – 0 records within 10km, but expected to occur in river
- White bellied sea-eagle - **recorded on site** flying above riparian vegetation in west, likely to nest in large trees associated with large waterways
- Rainbow bee-eater - **recorded on site** flying over site and roosting on trees, not uncommon in this landscape and would forage (aerially) on insects
- Great egret - **recorded** in wetlands to the east of the subject site
- Cattle egret - **recorded on site** in paddocks with cattle, a common species associated with agricultural landscapes

4. Impact Assessment and Management Recommendations

The proposed development (project) footprint is relatively small and has been designed to avoid disturbance to features of ecological value. These features are summarised below with respect to each project component and the information requested by the State and Council as per the pre-lodgement meetings. **Figure 3** provides an overlay of the mapped ecological features and the project infrastructure. Refer also **Photo Plates** attached.

4.1 Ecological Features of Project Areas

4.1.1 Resource Area 1

- Non-remnant area confirmed, few large trees, including figs (one very large fig and associated vegetation in southwest of high value).
- Waterbody in east with some habitat lies beyond extractive area.

4.1.2 Access to Resource Area 1

- Existing track through eucalypt woodland, cleared understorey, shallow depression. Waterway/drainageline lies to the east of the existing access road.
- Area used by cattle.
- Narrowest area (gap between small eucalypt trees) approximately 10m.
- Gap between largest eucalypt trees approximately 20m.
- Road access/construction should be able to minimise tree clearing (i.e. avoid clearing of any large remnant trees).
- Photographs provided in **Photo Plates**.

4.1.3 Resource Area 2

- Generally open paddock landscape.
- Isolated large trees and figs.
- Patches of Moreton Bay ash woodland (regrowth) in northwest and in swales.
- Large nest (bird of prey) north of Processing Area.
- Wetland/swale immediately south of Processing Area (beyond disturbance footprint).
- Small swales north of Processing Area.

4.1.4 Waterbody in North

- Appears to have natural features and supports wetland/aquatic habitat.
- Understood to be artificial waterbody - as remnant trees are well established on "earthen mound" to west.
- Large stags in locality.

4.1.5 Stockpile Area

- Central point has large fig (blown over by recent Cyclone).
- General landscape is typical grazing paddock.
- Remnant vegetation (mapped, although may be questionable) with swale and waterbody to west.
- Tallest tree (generally at "edge" of remnant vegetation) is a forest red gum (*E. tereticornis*) approximately 22m in height.

- The landform drops to the west and the remnant vegetation is generally located on the lower slopes. A 40m setback is proposed from the edge of the "remnant", essentially locating the western boundary generally on the upper slopes.

4.1.6 Haul Road

- Based on mapping, haul road avoids major swales, all "wetlands", all remnant vegetation and most likely large habitat trees.
- The haul road follows an existing easement/reserve in the north which is devoid of woody vegetation.
- The haul road follows a ridgeline with a few isolated paddock trees in the central north (near the homestead).
- South of the homestead the haul road crosses some swales and regrowth Coolibah woodland.
- South (in the east) the haul rod passes along a ridgeline where there are isolated large stags and figs with some wetlands and swales (the wetlands are to the east of the haul road).
- The haul road traverses typical grazing paddock landscape to access the Processing Area.

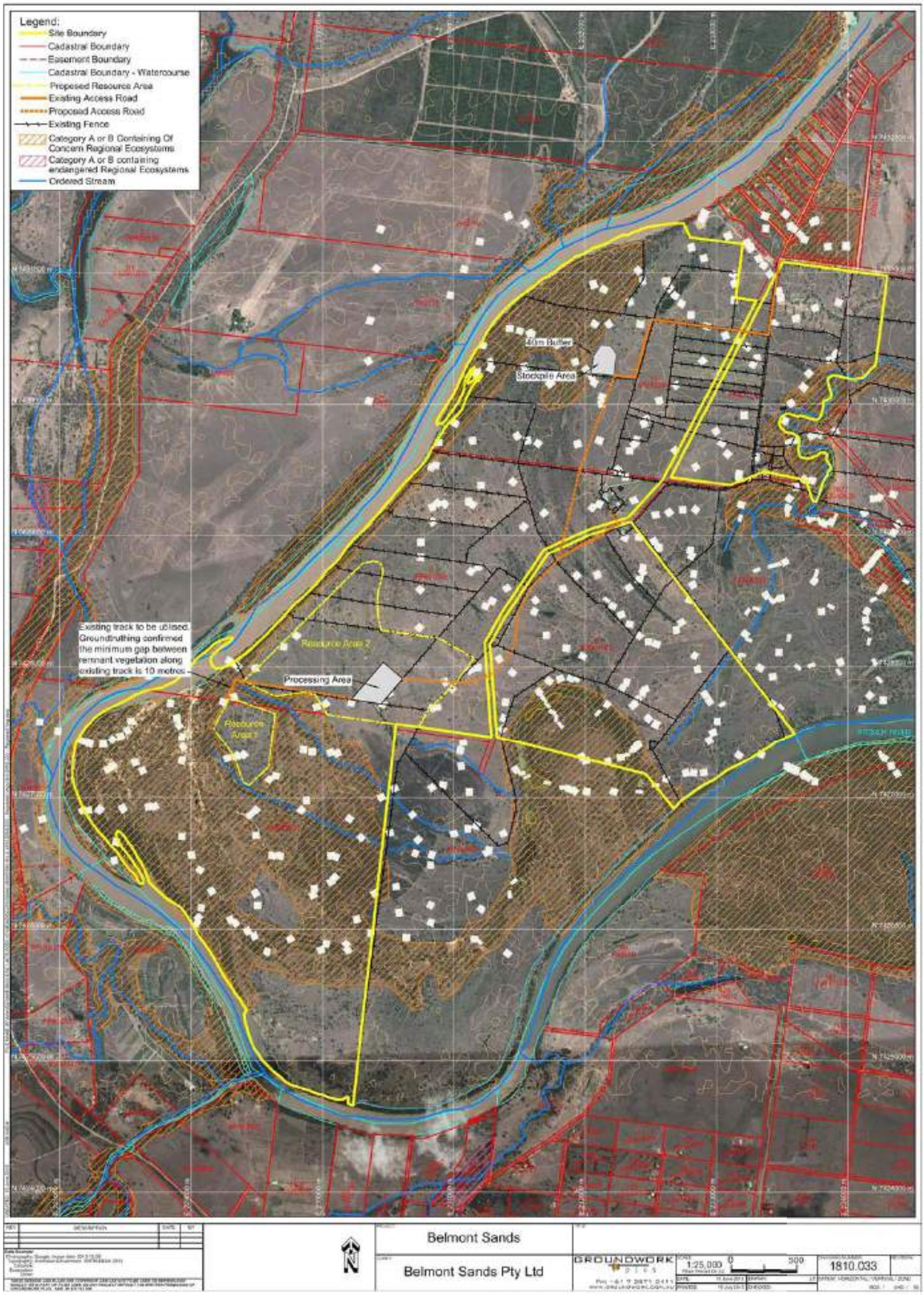
4.2 Potential Impacts on Ecological Values

The identified locations of project infrastructure and extractive areas (i.e. Resource Area 1 and 2, Processing Area, Stockpile Area and Haul Road) are unlikely to impact on any high ecological values. As stated previously, these areas have been specifically located away from features of high value. In summary these areas are:

- outside "actual" ground-truthed remnant vegetation
- in areas that do not support threatened plant species
- outside mapped wetlands and waterways (including access road to Resource Area 1)
- outside any wetlands of "general significance"

The few ecological values that may be potentially impacted (dependent on detailed design stage) are summarised as follows:

- isolated habitat trees within landscape (including large eucalypts, figs and stags)
- regrowth Coolibah woodland
- minor swales/wetlands
- potential habitat for threatened species (e.g. micro-bats, turtle)
- loss of nesting tree for wedge-tailed eagle
- loss of habitat for common fauna and flora


Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Existing Fence
Category A or B Containing Of Concern Regional Ecosystems
Category A or B containing endangered Regional Ecosystems
Ordered Stream
40m Buffer
Stockpile Area
Existing track to be utilised. Groundtruthing confirmed the minimum gap between remnant vegetation along existing track is 10 metres
Resource Area 2
Processing Area
Resource Area 1
Belmont Sands
Belmont Sands Pty Ltd
GROUNDWORK PLANS
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4.3 Management & Mitigation Measures

Upon consideration of the legislative and associated mapping requirements, it has been confirmed that the project has avoided the features on the larger site with any significant ecological values. The overall impacts on ecology from at a local and strategic perspective are considered minimal.

The following measures are suggested, as part of a 'best practice' approach to local ecology matters, and are therefore recommended as inclusions into any site-based Environmental Management Plan:

- Minimise the extent of clearing within any of the nominated stages, to that which is necessary as a practical working area.
- Avoid removal of large paddock trees, figs and stags on the edges of the nominated resource areas.
- The final internal haul road location is to be determined in consultation with a qualified ecologist, to ensure that any resultant ecology impacts are minimised.
- Implementation of sediment control and erosion control measures to ensure potential impacts to "wetlands" are avoided.
- Provide a fauna spotter on the site during clearing operations, particularly for large trees (e.g. trees with girth greater than 300mm) and other trees with nests or obvious hollows. The spotter is to give particular consideration to nests and breeding periods.
- Relocate/reuse hollow logs and woody debris for habitat.
- Identify areas for progressive rehabilitation.
- Identify (i.e. fencing/flagging) appropriate setbacks to remnant vegetation, wetlands and any other features of ecological value that are identified for retention/protection.
- Implementation of broader management measures to protect environmental values, which may include the following:
  - ecological management (including vegetation clearing and fauna/habitat management)
  - erosion and sediment control
  - air quality (dust) management
  - monitoring (as required by the relevant Authority).

Gondwana Ecology Group

5. STATUTORY CONSIDERATIONS

5.1 Council

Council's significant local vegetation mapping identifies a large area of vegetation in the south of the subject site. It is assumed this mapped is based on a high level mapping approach. Following ground-truthing and with reference to the State regulated mapping and aerial photography, it is evident that Council's mapping is inconsistent with that which occurs on the ground. Portions of the area mapped "locally significant" comprises grazing paddocks. Locally significant vegetation is unlikely to be disturbed as part of the project as the intention is to avoid all State mapped vegetation.

5.2 State

The design of the project has intentionally attempted to avoid MSES, including mapped regulated vegetation and wetlands. In particular, the site assessment confirmed that the vegetation associated with Resource Area 1 is not remnant and that the access to Resource Area 1 will not require the removal of regulated vegetation. Wetlands are to be retained with the proposed works setback from these areas in order to adequately buffer the feature. The proposed development is unlikely to have any significant residual impact on wetlands. It is understood that the SDAP Module 11 will be addressed by Groundwork Plus.

5.3 Commonwealth

As per the EPBC Act 1999 requirements, if an action has the potential to significantly impact on a MNES, consideration needs to be given to whether a referral to the Minister is necessary. An understanding of the site and surrounding habitats and potential for species to occur is necessary to determine the likelihood of an action having a direct or indirect impact on a MNES. Understanding the "action" and mitigation measures is necessary to determine level of impact. The proposed development for extractive industry (the "action") is likely to include a number of activities that may impact on the local ecology, ecosystems and potentially MNES, including:

- Earthworks
- Vegetation clearance
- Changes to hydrological regime
- Changes to local landscape (e.g. noise, traffic, dust etc.)

The Commonwealth Significant Impact Guidelines follow a process to ascertain referral requirements.

1. Are there MNES located in area of proposed action?
   No MNES are considered to occur within or rely on the subject site.
2. Is there potential for impacts on MNES?
   No potential for impact on site. Some low potential for offsite impacts.
3. Are there measures to avoid or reduce impacts?
   Yes, measures to be implemented through design and management will avoid or minimise potential offsite impacts.
4. Are the impacts likely to be significant?
   Impact (if any) will not be significant.

There is some low potential for the project to disturb offsite ecological values that may support MNES (i.e. within the waterbodies to the east). However, following appropriate design of project and implementation of management measures it is not expected that the proposed development would have any significant impact on any MNES. Based on these assumptions and an understanding of the proposed project, a referral to the Commonwealth is not considered necessary.

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1. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=55794#habitat *Cycas megacarpa* SPRAT Profile
2. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=55797#habitat *Cycas ophiolitica* SPRAT Profile
3. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=16344#habitat *Eucalyptus raveretiana* SPRAT Profile
4. http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?macrozamia-serpentina Wetland Info: *Macrozamia serpentine*
5. http://www.ehp.qld.gov.au/wildlife/threatened-species/endangered/endangered-plants/cave_fern.html Threatened Species: *Tectoria devexa*
6. http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?graptophyllum-excelsum Wetland Info: *Graptophyllum excelsum*
7. http://www.environment.gov.au%2Fbiodiversity%2Fthreatened%2Fspecies%2Fpubs%2F2705-conservation-advice.pdf Approved Conservation Advice for *Pultenaea setulosa*
8. http://environment.gov.au%2Fbiodiversity%2Fthreatened%2Fspecies%2Fpubs%2F64021-conservation-advice.pdf Approved Conservation Advice for *Corymbia xanthope*

PHOTO PLATES

View North. RA2 in grassy patch on ridge beyond.

View Northwards from RA1.

View south towards RA 1.

View Southwards towards RA1 from access track.

View eastwards along "mapped watercourse" from access track.

Riparian/remnant vegetation along Fitzroy River.

Resource Area 1.

PHOTO PLATES

Waterbody in east (east of Haul Road).

View south towards Resource Area 2 (northeast).

Artificial waterbody in north.

Stockpile Area.

Mapped remnant vegetation west of Stockpile Area

Haul Road.

Resource Area 2 (southwest).

Ecology Assessment - Belmont Sands Quarry
Etna Creek

Australian Government
Department of the Environment

APPENDIX A DATABASE RESULTS

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

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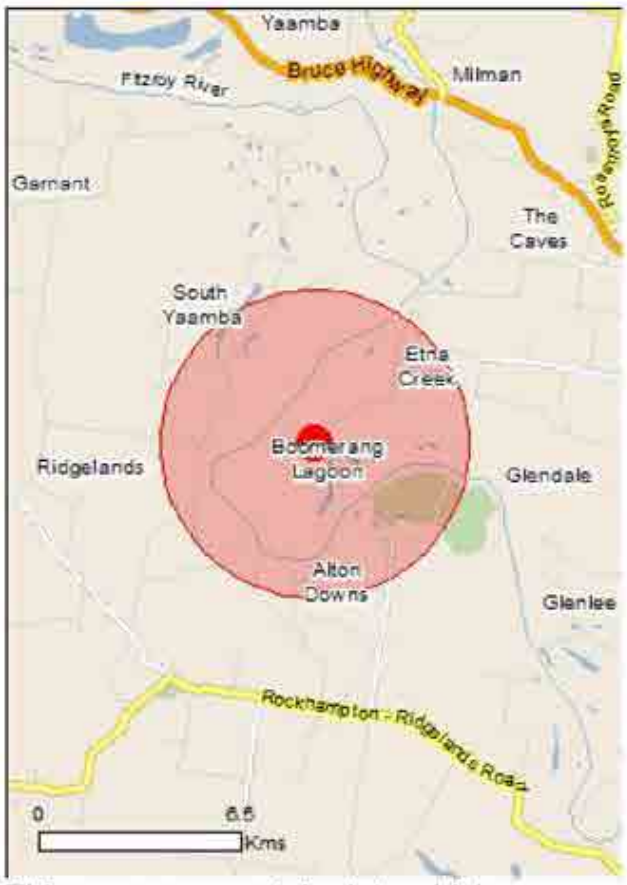
Summary
Details
Matters of NES
Other Matters Protected by the EPBC Act
Extra Information
Caveat
Acknowledgements



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Coordinates
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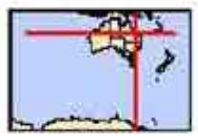

Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	29
Listed Migratory Species:	24

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage/index.html

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	24
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	33
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Brigalow (Acacia harpophylla dominant and co-dominant)	Endangered	Community known to occur within area
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community may occur within area
Weeping Myall Woodlands	Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Neochmia ruficauda ruficauda Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area
Poephila cincta cincta Black-throated Finch (southern) [64447]	Endangered	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Thalassarche melanophris impavida Campbell Albatross [82449]	Vulnerable	Species or species habitat may occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat may occur within area
Mammals		

Name	Status	Type of Presence
Chalinolobus dwyeri		
Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus		
Northern Quoll [331]	Endangered	Species or species habitat may occur within area
Nyctophilus corbeni		
South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat may occur within area
Other		
Cycas megacarpa		
[55794]	Endangered	Species or species habitat may occur within area
Cycas ophiolitica		
[55797]	Endangered	Species or species habitat likely to occur within area
Plants		
Eucalyptus raveretiana		
Black Ironbox [16344]	Vulnerable	Species or species habitat known to occur within area
Streblus pendulinus		
Siah's Backbone, Sia's Backbone, Isaac Wood [21618]	Endangered	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Species or species habitat may occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Delma torquata		
Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Denisonia maculata		
Ornamental Snake [1193]	Vulnerable	Species or species habitat likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat may occur within area
Egernia rugosa		
Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
Elseya albagula		
Southern Snapping Turtle, White-throated Snapping Turtle [81648]	Critically Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitat may occur within area
Furina dunmalli		
Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
Lepidochelys olivacea		
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species

Name	Status	Type of Presence
		habitat may occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Rheodytes leukops		
Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Macronectes giganteus		
Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Thalassarche impavida		
Campbell Albatross [64459]	Vulnerable*	Species or species habitat may occur within area
Migratory Marine Species		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Species or species habitat may occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Crocodylus porosus		
Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat may occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitat may occur within area
Lepidochelys olivacea		
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat may occur within area
Manta birostris		
Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Migratory Terrestrial Species		
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus		
White-throated Needletail [682]		Species or species habitat may occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Pandion cristatus Eastern Osprey [82411]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat may occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel [1060]	Endangered	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Thalassarche impavida Campbell Albatross [64459]	Vulnerable*	Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat may occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Long Island Bend	QLD

Invasive Species	[Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Acacia nilotica subsp. indica Prickly Acacia [6196]		Species or species habitat may occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Jatropha gossypifolia Cotton-leaved Physic-Nut, Bellyache Bush, Cotton-leaf Physic Nut, Cotton-leaf Jatropha, Black Physic Nut [7507]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Protasparagus plumosus Climbing Asparagus-fern, Ferny Asparagus [11747]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Vachellia nilotica Prickly Acacia, Blackthorn, Prickly Mimosa, Black Piquant, Babul [84351]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Nationally Important Wetlands	[Resource Information]
Name	State
Fitzroy River Floodplain	QLD

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-23.235 150.37208

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Department of Environment, Climate Change and Water, New South Wales
-Department of Sustainability and Environment, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment and Natural Resources, South Australia
-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts
-Environmental and Resource Management, Queensland
-Department of Environment and Conservation, Western Australia
-Department of the Environment, Climate Change, Energy and Water
-Birds Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-SA Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Atherton and Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
-State Forests of NSW
-Geoscience Australia
-CSIRO
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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+61 2 6274 1111

Queensland Government

Wildlife Online Extract

Search Criteria:	Species List for a Specified Point
	Species: All
	Type: Native
	Status: Rare and threatened species
	Records: Confirmed
	Date: Since 1980
	Latitude: -23.2283
	Longitude: 150.3879
	Distance: 10
	Email: justin@gondwanaecology.com.au
	Date submitted: Tuesday 02 Jun 2015 16:57:10
	Date extracted: Tuesday 02 Jun 2015 17:00:11

The number of records retrieved = 12

Disclaimer

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all

nimals	birds	Cacatuidae	*Calyptorhynchus lathami*	glossy black-cockatoo	V		1
nimals	birds	Columbidae	*Geophaps scripta scripta*	squatter pigeon (southern subspecies)	V	V	2/2
nimals	mammals	Megadermatidae	*Macroderma gigas*	ghost bat	V		1
lants	cycads	Cycadaceae	*Cycas megacarpa*		E	E	4
lants	cycads	Cycadaceae	*Cycas ophiolitica*	Marlborough blue	E	E	2/2
lants	cycads	Zamiaceae	*Macrozamia serpentina*		E		1/1
lants	ferns	Dryopteridaceae	*Tectaria devexa var. devexa*		E	E	1/1
lants	higher dicots	Acanthaceae	*Graptophyllum excelsum*		NT		5/5
lants	higher dicots	Fabaceae	*Pultenaea setulosa*		V	V	1/1
lants	higher dicots	Myrtaceae	*Corymbia xanthope*	Glen Geddes bloodwood	V	V	1/1
lants	higher dicots	Sparrmanniaceae	*Corchorus hygrophilus*		V		1/1
lants	higher dicots	Stackhousiaceae	*Stackhousia tryonii*		NT		1/1

CODES

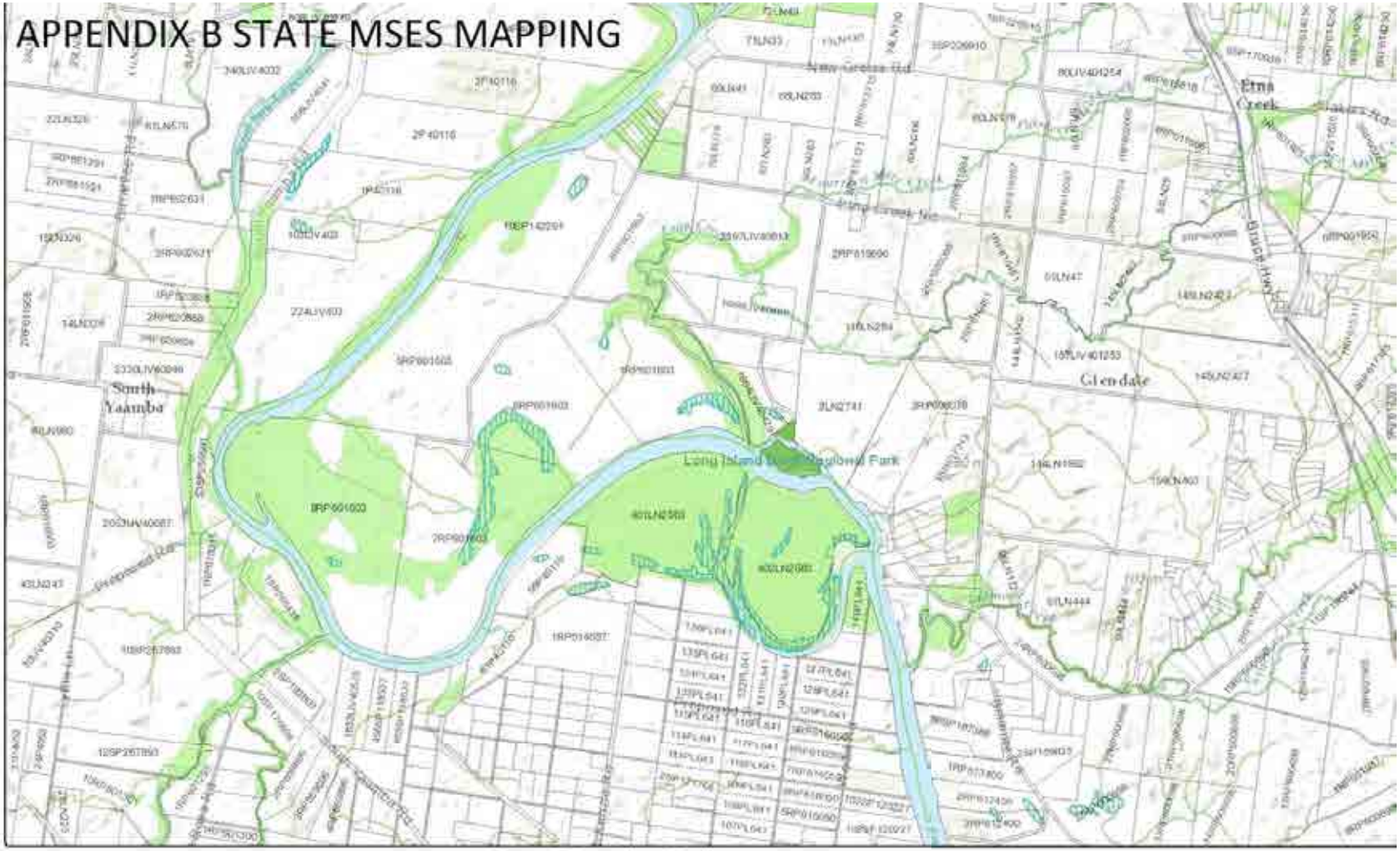
- Y indicates that the taxon is introduced to Queensland and has naturalised.

) - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct in the Wild (PE), Endangered (E), Vulnerable (V), Near Threatened (NT), Least Concern (C) or Not Protected ( ).

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

ecords – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).
his number is output as 99999 if it equals or exceeds this value. The second number located after the / indicates the number of specimen records for the taxon.
his number is output as 999 if it equals or exceeds this value.

APPENDIX B STATE MSES MAPPING



State Planning Policy

Making or amending a local planning instrument and designating land for community infrastructure

Department of Infrastructure, Local Government and Planning

0 1,100 2,200 3,300 4,400

Date: 22/06/2015

Disclaimer
This map has been prepared with due care based on the best available information at the time of publication
The State of Queensland holds no responsibility for any errors, inconsistencies or omissions within this

Legend
Cadastre (100k)
Cadastre (100k)
MSES - High ecological value waters (watercourse)
MSES - High ecological value waters (watercourse)
MSES - Regulated vegetation (intersecting a watercourse)
MSES - Regulated vegetation (intersecting a watercourse)
MSES - High Ecological Significance wetlands
MSES - High Ecological Significance wetlands
MSES - High ecological value waters (wetland)
MSES - High ecological value waters (wetland)
MSES - Strategic Environmental Area (Designated Precinct)
MSES - Strategic Environmental Area (Designated Precinct)
MSES - Wildlife habitat
MSES - Wildlife habitat
MSES - Protected area
MSES - Protected area
MSES - Marine park
MSES - Marine park
MSES - Declared fish habitat area
MSES - Declared fish habitat area
MSES - Regulated vegetation
MSES - Regulated vegetation
MSES - Legally secured offset area
MSES - Legally secured offset area
Queensland Government
Department of Infrastructure, Local Government and Planning
© The State of Queensland 2015
State Planning Policy
Making or amending a local planning instrument and designating land for community infrastructure
Date: 22/06/2015
Disclaimer:
This map has been prepared with due care based on the best available information at the time of publication. The State of Queensland holds no responsibility for any errors, inconsistencies or omissions within this document. Any decisions made by other parties based on this document are solely the responsibility of those parties. Please note whilst Bushfire Hazard Areas have not been triggered they may still apply.

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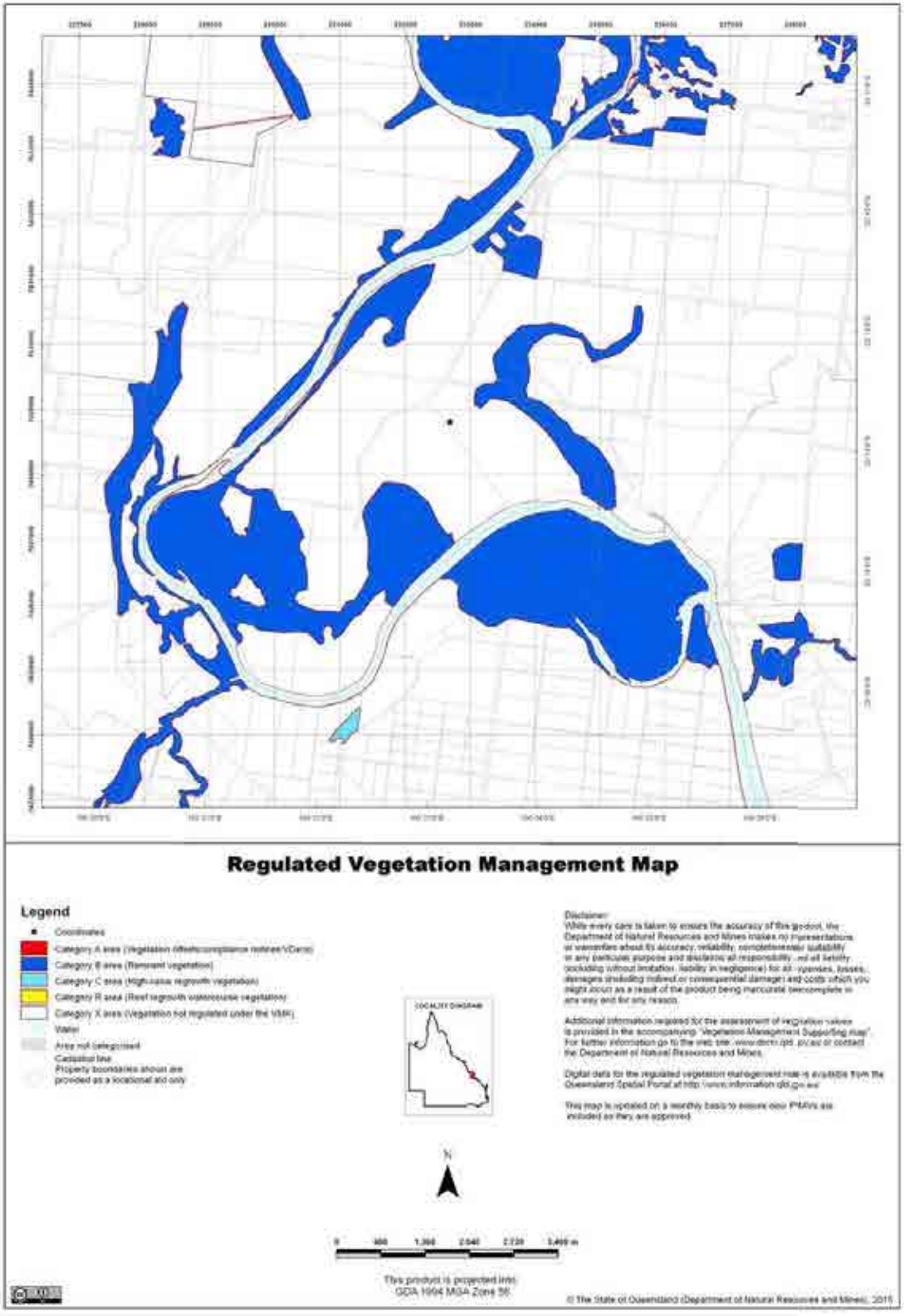

2/06/2015 16:54:51
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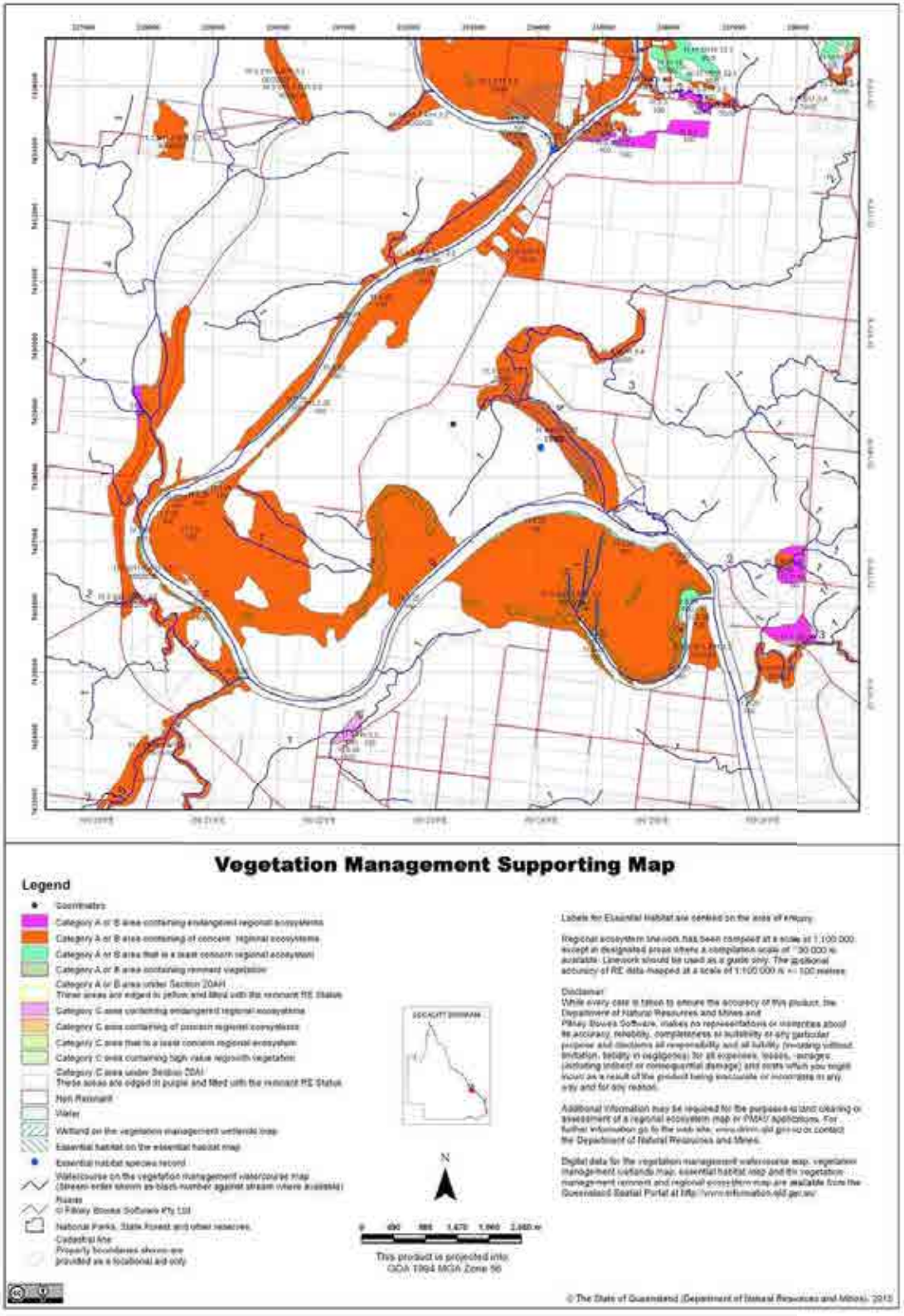

2/06/2015 16:54:51
ongitude: 150.3879 Latitude: -23.2283

Vegetation Management Act 1999 - Extract from the essential habitat database - version 4.0

ssential habitat is required for assessment under the:

- State Development Assessment Provisions - Module 8: Native vegetation clearing which sets out the matters of interest to the state for development assessment under the *Sustainable Planning Act 2009*; and
- Self-assessable vegetation clearing codes made under the *Vegetation Management Act 1999*

ssential habitat for one or more of the following species is found on and within 1.1 km of the identified subject lot/s or on and within 2.2 km of an identified coordinate on the accompanying essential habitat ap.
his report identifies essential habitat in Category A, B and Category C areas.
he numeric labels on the essential habitat map can be cross referenced with the database below to determine which essential habitat factors might exist for a particular species.
ssential habitat is compiled from a combination of species habitat models and buffered species records.
he Department of Natural Resources and Mines website (http://www.dnrm.qld.gov.au) has more information on how the layer is applied under the State Development Assessment Provisions - Module 8: ative vegetation clearing and the *Vegetation Management Act 1999*.
egional ecosystem is a mandatory essential habitat factor, unless otherwise stated.
ssential habitat, for protected wildlife, means a category A area, a category B area or category C area shown on the regulated vegetation management map-

1) (a) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database; or
2) (b) in which the protected wildlife, at any stage of its life cycle, is located.

ssential habitat identifies endangered or vulnerable native wildlife prescribed under the *Nature Conservation Act 1994*.

ssential habitat in Category A and B (Remnant vegetation species record) areas:2200m Species Information

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
1785	Geophaps scripta scripta	Squatter Pigeon (southern subsp.)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	no soil information	Gravelly ridges, traprock and river flats.

ssential habitat in Category A and B (Remnant vegetation species record) areas:2200m Regional Ecosystems Information

Label	Regional Ecosystem (this is a mandatory essential habitat factor, unless otherwise stated)
1785	8.1.5, 8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8,8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19,9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.4, 12.3.10, 12.3.12, 12.3.14, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9-10.7, 12.9-10.8, 12.9-10.12, 12.9-10.13, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.11.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10

ssential habitat in Category A and B (Remnant vegetation) areas:2200m Species Information

o results)

ssential habitat in Category A and B (Remnant vegetation) areas:2200m Regional Ecosystems Information

o results)

ssential habitat in Category C (High value regrowth vegetation) areas:2200m Species Information

o results)

ssential habitat in Category C (High value regrowth vegetation) areas:2200m Regional Ecosystems Information

o results)

Condwana Ecology Group

APPENDIX D FLORA SPECIES LIST (June 2015)

Family	Scientific Name	Common Name	Introduced	NCA Status
Malvaceae	*Abutilon guineense*		Y	
Mimosaceae	*Acacia holosericea*	soapbush wattle		C
Mimosaceae	*Acacia salicina*	sally wattle		C
Amaranthaceae	*Achyranthes aspera*	prickly chaff flower		C
Asteraceae	*Ageratum houstonianum*	blue billygoat weed	Y	
Mimosaceae	*Albizia canescens*	Belmont siris		C
Mimosaceae	*Albizia lebbeck*	Indian siris		C
Rhamnaceae	*Alphitonia excelsa*	soap tree		C
Araucariaceae	*Araucaria cunninghamii*	hoop pine		C
Papaveraceae	*Argemone ochroleuca* subsp. *ochroleuca*	Mexican poppy	Y	
Poaceae	*Aristida* sp.	wiregrass		C
Poaceae	*Arundinella nepalensis*	reedgrass		C
Apocynaceae	*Asclepias curassavica*	red-head cottonbush	Y	
Azollaceae	*Azolla pinnata*	ferny azolla		C
Poaceae	*Bothriochloa bladhii* subsp. *bladhii*	forest bluegrass		C
Capparaceae	*Capparis* sp.			C
Solanaceae	*Capsicum annuum*	chilli	Y	
Casuarinaceae	*Casuarina cunninghamiana*	river sheoak		C
Poaceae	*Cenchrus ciliaris*	buffel grass	Y	
Chenopodiaceae	*Chenopodium album*	fat-hen	Y	
Poaceae	*Chloris gayana*	rhodes grass	Y	
Ebenaceae	*Diospyros humilis*	small-leaved ebony		C
Poaceae	*Chrysopogon fallax*			C
Asteraceae	*Cirsium vulgare*	spear thistle	Y	
Lamiaceae	*Clerodendrum floribundum*	lolly bush		C
Asteraceae	*Conyza* sp.	fleabanes	Y	
Myrtaceae	*Corymbia intermedia*	pink bloodwood		C
Myrtaceae	*Corymbia tessellaris*	Moreton Bay ash		C
Lecythidaceae	*Planchonia careya*	cockatoo apple		C
Myrtaceae	*Corymbia trachyphloia*	brown bloodwood		C
Fabaceae	*Crotalaria* sp.	a rattlepod		C
Apocynaceae	*Cryptostegia grandiflora*	rubber vine	Y	
Cucurbitaceae	*Cucumis althaeoides*			C
Cyperaceae	*Cyperus exaltatus*	tall flatsedge		C
Poaceae	*Digitaria didactyla*	Queensland blue couch	Y	
Meliaceae	*Dysoxylum gaudichaudianum*	ivory mahogany		C
Poaceae	*Eleusine indica*	crowsfoot grass	Y	
Myrtaceae	*Eucalyptus coolabah*	coolabah		C
Myrtaceae	*Eucalyptus platyphylla*	poplar gum		C
Myrtaceae	*Eucalyptus tereticornis*	forest red gum		C
Convolvulaceae	*Evolvulus alsinoides*			C

Family	Scientific Name	Common Name	Introduced	NCA Status
Moraceae	*Ficus obliqua*	small-leaved fig		C
Moraceae	*Ficus opposita*	sandpaper fig		C
Apocynaceae	*Gomphocarpus physocarpus*	balloon cottonbush	Y	
Sparrmanniaceae	*Grewia latifolia*	dysentery plant		C
Poaceae	*Heteropogon contortus*	black speargrass		C
Malvaceae	*Hibiscus diversifolius*	swamp hibiscus		C
Poaceae	*Hymenachne amplexicaulis*	hymenachne	Y	
Poaceae	*Hyparrhenia rufa*	thatch grass	Y	
Fabaceae	*Indigofera linnaei*	Birdsville indigo		C
Juncaceae	*Juncus polyanthemus*			C
Verbenaceae	*Lantana camara*	lantana	Y	
Mimosaceae	*Leucaena leucocephala* subsp. *glabrata*	leucaena	Y	
Laxmanniaceae	*Lomandra longifolia*	matrush		C
Myrtaceae	*Lophostemon suaveolens*	swamp box		C
Onagraceae	*Ludwigia octovalvis*	willow primrose		C
Onagraceae	*Ludwigia peploides*		Y	
Caesalpiniaceae	*Lysiphyllum hookeri*	Queensland ebony		C
Fabaceae	*Macroptilium atropurpureum*	siratro	Y	
Euphorbiaceae	*Mallotus philippensis*	red kamala		C
Anacardiaceae	*Mangifera indica*	mango	Y	
Poaceae	*Megathyrsus maximus* var. *pubiglumis*	green panic	Y	
Myrtaceae	*Melaleuca bracteata*	river teatree		C
Myrtaceae	*Melaleuca fluviatilis*	weeping paperbark		C
Myrtaceae	*Melaleuca linariifolia*	snow-in summer		C
Myrtaceae	*Melaleuca viridiflora* var. *viridiflora*			C
Poaceae	*Melinis repens*	red natal grass	Y	
Nelumbonaceae	*Nelumbo nucifera*	pink waterlily		C
Menyanthaceae	*Nymphoides indica*	water snowflake		C
Lamiaceae	*Ocimum americanum*	hoary basil	Y	
Cactaceae	*Opuntia* sp.	prickly pear	Y	
Oxalidaceae	*Oxalis corniculata*	oxalis	Y	
Poaceae	*Panicum* sp.			C
Passifloraceae	*Passiflora foetida*	stinking passion flower	Y	
Polygonaceae	*Persicaria attenuata*	smartweed		C
Polygonaceae	*Persicaria orientalis*	princes feathers		C
Solanaceae	*Physalis angulata*	ground cherry	Y	
Myrtaceae	*Psidium guajava*	guava	Y	
Rubiaceae	*Richardia brasiliensis*	white eye	Y	
Caesalpiniaceae	*Senna barclayana*			C
Malvaceae	*Sida cordifolia*	flannel weed	Y	
Malvaceae	*Sida spinosa*	spiny sida	Y	
Solanaceae	*Solanum nigrum*	black nightshade	Y	

Family	Scientific Name	Common Name	Introduced	NCA Status
Solanaceae	*Solanum seaforthianum*	Brazilian nightshade	Y	
Solanaceae	*Solanum torvum*	devil's fig	Y	
Verbenaceae	*Stachytarpheta jamaicensis*	Jamaica snakeweed	Y	
Fabaceae	*Stylosanthes* sp.	sylo	Y	
Poaceae	*Themeda triandra*	kangaroo grass		C
Moraceae	*Trophis scandens* subsp. *scandens*	burny vine		C
Malvaceae	*Urena lobata*	urena weed	Y	
Poaceae	*Urochloa mosambicensis*	sabi grass	Y	
Mimosaceae	*Vachellia nilotica*	prickly acacia	Y	
Verbenaceae	*Verbena bonariensis*	purpletop	Y	
Campanulaceae	*Wahlenbergia* sp.			C
Asteraceae	*Xanthium occidentale*	Noogoora burr	Y	
Rhamnaceae	*Ziziphus mauritiana*	Indian jujube	Y	

Y - Introduced = non-native, exotic species

C - *Nature Conservation Act 1992* = Common *of least concern*

Gondwana Ecology Group

APPENDIX E BIRD SPECIES LIST (June 2015)

Species	Scientific Name	Status*
Black Swan	*Cygnus atratus*	-
Australian Wood Duck	*Chenonetta jubata*	-
Cotton Pygmy-Goose	*Nettapus coromandelianus*	-
Grey Teal	*Anas gracilis*	-
Pacific Black Duck	*Anas superciliosa*	-
Hardhead	*Aythya australis*	-
Australasian Grebe	*Tachybaptus novaehollandiae*	-
Crested Pigeon	*Ocyphaps lophotes*	-
Bar-shouldered Dove	*Geopelia humeralis*	-
Australasian Darter	*Anhinga novaehollandiae*	-
Little Pied Cormorant	*Microcarbo melanoleucos*	-
Little Black Cormorant	*Phalacrocorax sulcirostris*	-
Australian Pelican	*Pelecanus conspicillatus*	-
White-necked Heron	*Ardea pacifica*	-
Eastern Great Egret	*Ardea modesta (alba)*	QSL, CMw, CMa
Intermediate Egret	*Ardea intermedia*	-
Cattle Egret	*Ardea ibis*	QSL, CMw, CMa
White-faced Heron	*Egretta novaehollandiae*	-
Little Egret	*Egretta garzetta*	-
Australian White Ibis	*Threskiornis molucca*	-
Straw-necked Ibis	*Threskiornis spinicollis*	-
Yellow-billed Spoonbill	*Platalea flavipes*	-
White-bellied Sea-Eagle	*Haliaeetus leucogaster*	QSL, CMt, CMa
Whistling Kite	*Haliastur sphenurus*	-
Black Kite	*Milvus migrans*	-
Swamp Harrier	*Circus approximans*	-
Wedge-tailed Eagle	*Aquila audax*	-
Nankeen Kestrel	*Falco cenchroides*	-
Brown Falcon	*Falco berigora*	-
Brolga	*Grus rubicunda*	-
Purple Swamphen	*Porphyrio porphyrio*	-
Dusky Moorhen	*Gallinula tenebrosa*	-
Eurasian Coot	*Fulica atra*	-
Black-winged Stilt	*Himantopus himantopus*	-
Black-fronted Dotterel	*Elseyornis melanops*	-
Masked Lapwing	*Vanellus miles*	-
Comb-crested Jacana	*Irediparra gallinacea*	-
Red-tailed Black-Cockatoo	*Calyptorhynchus banksii*	-
Red-winged Parrot	*Aprosmictus erythropterus*	-
Pale-headed Rosella	*Platycercus adscitus*	-
Budgerigar	*Melopsittacus undulatus*	-
Pheasant Coucal	*Centropus phasianinus*	-
Brush Cuckoo	*Cacomantis variolosus*	-
Laughing Kookaburra	*Dacelo novaeguineae*	-
Blue-winged Kookaburra	*Dacelo leachii*	-
Rainbow Bee-eater	*Merops ornatus*	CMt, CMa
Red-backed Fairy-wren	*Malurus melanocephalus*	-

Species	Scientific Name	Status*
White-throated Gerygone	*Gerygone albogularis*	-
Striated Pardalote	*Pardalotus striatus*	-
Noisy Miner	*Manorina melanocephala*	-
White-throated Honeyeater	*Melithreptus albogularis*	-
Blue-faced Honeyeater	*Entomyzon cyanotis*	-
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*	-
White-bellied Cuckoo-shrike	*Coracina papuensis*	-
Rufous Whistler	*Pachycephala rufiventris*	-
Australasian Figbird	*Sphecotheres vieilloti*	-
White-breasted Woodswallow	*Artamus leucorhynchus*	-
Pied Butcherbird	*Cracticus nigrogularis*	-
Australian Magpie	*Cracticus tibicen*	-
Spangled Drongo	*Dicrurus bracteatus*	-
Grey Fantail	*Rhipidura albiscapa*	-
Willie Wagtail	*Rhipidura leucophrys*	-
Torresian Crow	*Corvus orru*	-
Magpie-lark	*Grallina cyanoleuca*	-
Golden-headed Cisticola	*Cisticola exilis*	-
Australian Reed-warbler	*Acrocephalus australis*	-
Brown Songlark	*Cincloramphus cruralis*	-
Welcome Swallow	*Hirundo neoxena*	-
Tree Martin	*Petrochelidon nigricans*	-
Australasian Pipit	*Anthus novaeseelandiae*	-

*Status: Q = Queensland *NC Act 1992; C = Commonwealth EPBC Act 1999*

E = endangered, V=vulnerable, NT = near threatened, SL = special least concern,

Mt = migratory terrestrial, Mw = migratory wetland, Ma = marine,

unattributed = least concern

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Bushfire Management Plan

Meeting Date: 17 July 2018

Attachment No: 6

THE CONSULTANCY BUREAU

BUSHFIRE MANAGEMENT PLAN

FOR

PROPOSED SAND QUARRY ON PART OF BELMONT RESEARCH STATION

by

L.S. Hawkes, B.Sc.(For), MIFA, MRFAQ
The Consultancy Bureau Pty Ltd
October 2015

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Table of Contents

1. Introduction 1
2. Description of the Site 2
3. Potential Bushfire Hazard Assessment 3
4. Bushfire Risk Analysis 4
5. Proposed Mitigating Actions 5
   5.1 General Mitigating Action 5
   5.2 The Extraction Site 6
   5.3 The Processing Site 6
   5.4 The Storage Site 6
6. Compliance with Special Management Area Code Specific Outcome 05-010 7

1. Introduction

A large cattle breeding station (3442 Ha) contains a significant sand resource in the southern section of the property (see Figure 2 – Site Layout Plan).

A proposed extraction area with separate processing and stockpile areas has been identified. These three sites are necessary to allow efficient extraction, washing and storage.

The Development Application to Livingstone Shire Council has resulted in an Information Request to provide a Bushfire Hazard Assessment along with a Bushfire Management Plan (see Appendix 1).

This requires the addressing of the Bushfire Code for Special Management Areas (see Appendix 2).

2. Description of the Site

The entire property of 3442 Ha includes a section of some 2000 Ha that is contained entirely by the Fitzroy River (see Photographs 1 & 2).

From the 1950s to early 2000s the property was a CSIRO Research Station. It is now owned by Agforce (an industry organisation) and is a cattle breeding property with a continuing research and education commitment.

The property enjoys extensive sub-division into small and large paddocks, four bores, a large irrigation licence out of the river, and improved pasture and cultivation (see Photographs 3 & 4).

There are three residences along with extensive equipment including Bushfire firefighting capacity. This includes a D4 dozer, grader and two slip-on firefighting pumps. Neighbours also have extensive capacity to assist with unplanned fires including large water tankers.

The site has a carrying capacity of some 1200 adult equivalent beasts and uses extensive rotational grazing along with fuel reduction burning as a component of its management.

Vegetation is largely restricted to isolated trees with many planted mature Fig Trees being a feature of the property (see Photograph 5). Along the river edge, especially in the southern section, there is a low tier of River Red Gums/Blue Gums (*E. tereticornis*) (see Photograph 6).

There are many wetland areas, many resulting from old river courses and overland flood paths (see Photographs 7 & 8).

The entire area is flat and much of the southern section below the station headquarters floods when the Fitzroy River peaks above 13m.

3. Potential Bushfire Hazard Assessment

State Planning Policy 12/13 does not have a methodology detailing the Bushfire Hazard assessment. Until an update is provided, it is appropriate to continue to use SPP 01/03 methodology (see Appendix 3). This methodology measures slope, aspect and vegetation type to provide a total score. These scores determine the indicative Potential Bushfire Hazard for any unit.

The subject site and surrounds has been divided into six units (see Aerial Photograph No. 1). The assessment of these units provides the following Hazard values.

Assessment Unit	Slope		Aspect		Vegetation		Total Score	Hazard Rating
	°	Score	NSEW	Score	Type	Score		
1	0-5	1	0-5	0	Grazed Pasture	4	5	LOW
2	0-5	1	0-5	0	Blue Gum Woodland	6	7	MEDIUM
3	0-5	1	0-5	0	Grazed Pasture	4	5	LOW
4	5-10	2	N	1	Woodland	6	8	MEDIUM
5	0-5	1	0-5	0	Grazed Pasture	4	5	LOW
6	5-10	2	N to NE	1	Woodland	6	8	MEDIUM

The majority of the property is a Low Hazard situation with the river flats moving into Medium by virtue of the vegetation. The fuel loads are low in these areas and grazing maintains this situation (see Photograph 6).

The external unit no. 4 is a National Park and is regularly burnt to maintain low fuel loads (burnt Winter 2015). Unit no. 6 is a small area of broken woodland with the river as a major separation.

4. Bushfire Risk Analysis

The assessment of the Potential Bushfire Hazard of an area is a measure of the physical attributes of the site. The risk of these hazards starting and developing into a threatening unplanned fire include sources of ignition, weather etc.

The risk of a fire internally on the property is very low because of the intensive management, grazing, use of fuel reduction burning and the ongoing monitoring of the situation.

Externally, the Fitzroy River provides an excellent separation that would halt most fires that could develop in the surroundings. It is possible for burning embers to reach the subject site and the proposed development nodes. This is a low risk but worthy of assessing the mitigating actions.

The proposed Development Nodes (3) represent a very small area of the overall property and the ongoing management of the property for cattle grazing reduces any risk of an unplanned fire.

5. Proposed Mitigating Actions

5.1 General Mitigating Action

It is not intended for the development nodes to have any permanent structures or residences and activities will be the extraction, washing and storage of sand products.

The fire fighting capacity of the greater property is available for the proposed project as ownership is the same. This includes the following equipment:-

- 4 water bores for water supply with tank storage at the homestead
- Major pumping capacity out of the river for large water tankers if needed
- 1 grader
- 1 D4 dozer
- 2 fire fighting units with slip-on water firefighting pumps
- Permanent on-site management with trained assistance.

Adjoining landholders are also well equipped, including rural fire fighting appliances and water tankers.

For a low risk situation, the fire fighting capacity is considerable and well maintained.

There is only one major access proposed from the resource out to the processing plant and onto the stockpile area. There will be adequate time for any evacuation and it is not envisaged that a high intensity fire is possible with the fuel loads available (see Aerial Photograph No 1).

It is proposed to confirm the existing station headquarters with its map room as the Emergency Assembly Point and operational hub in the case of any unplanned fire action.

5.2 The Extraction Site

This is an ex-cultivation site and will not be fenced. It is proposed to have excavation and loading machinery only on site. These can be quickly moved to the processing site if necessary.

This is a Low Hazard and Risk situation and no further action is required.

5.3 The Processing Site

This will be fenced and have a considerable water resource in as part of the washing of the product. It is proposed to have a 3m graded fire line on both sides of the fence to allow ongoing farm management in the surrounds and to separate the site. This provides a 6m separation.

5.4 The Storage Site

This is out of the flood line and will be fenced to protect the integrity of the produced products. It is proposed to have a 3m graded fire line on both sides of the fence to allow ongoing farm management in the surrounds and to provide a 6m separation.

These actions will ensure the safety of onsite employees and equipment.

This is a very low risk situation.

6. Compliance with Special Management Area Code Specific Outcome 05-010

(Livingstone Shire Planning Scheme 2005 – refer to Appendix 2)

O5	***"Public safety, lives and property are not placed at unacceptable levels of risk."*** There will be only workers on site in daylight hours and with no residential component. The risks of a threatening unplanned fire are very low and there is an evacuation plan in place to assemble at the station headquarters.
O6	***"The highest intensity of use occurs in those parts of the site which are least bushfire prone and limits the intensity of use elsewhere."*** The highest intensity of use (2-4 machine operators) will be in a Low Hazard and Risk environment, while the only activities in the surrounds will be ongoing cattle grazing.
O7	***"Purposes resulting in high concentrations of people on a site (including child care centre, educational establishment, hospital, residential purposes comprising multi-unit long term accommodation and short term accommodation, commercial and industrial purposes) being exposed to unacceptable levels of risk are inconsistent with the outcomes sought for this special management area."*** The level of risk is very low and for a very small number of part-time operators. Any risk will be managed as part of the overall Property Management.
O8	***"Development is sited and designed to minimise bushfire risk having regard to:*** ***(a) aspect,*** ***(b) elevation,*** ***(c) slope, and*** ***(d) vegetation."*** The three development nodes are all on Low Hazard and Low Risk sites with additional actions in place to render them entirely safe.
O9	***"Road layouts facilitate easy and safe movement in the event of encroaching fire and provides for alternative safe access if one direction is blocked in the event of fire."*** While this is not a residential situation, safe evacuation to the station headquarters will be accommodated by an Evacuation Plan and training.
O10	***"A sufficient supply of water is available for firefighting purposes."*** With four bores and a major irrigation pumping licence out of the adjoining Fitzroy River, water is not in short supply on the proposed area. There is currently a generous storage system and ready access to water for firefighting appliances.

Overall, this proposal and the surrounding operational grazing property are well placed to comply with the Council's Code and to place the operation in an extremely bushfire safe environment for its operation.

Bushfire is not a limiting factor with this proposal.

L.S. Hawkes, B.Sc.(For), MIFA, MRFAQ
Senior Associate

cv attached

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Hydrology Assessment Report

Meeting Date: 17 July 2018

Attachment No: 7

GROUNDWORK plus

BELMONT SANDS
HYDROLOGY ASSESSMENT REPORT

Prepared for:
Belmont Sands Pty Ltd
Date:
12/11/2015

Reference
1810.610.002

Resources Environment Planning Laboratories

www.groundwork.com.au

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Table of Contents

1. Introduction 4
1.1 Project Overview 4
1.2 Report Scope and Objectives 4
2. Hydrology Assessment – Surface Water 6
2.1 Existing Surface Topography and Features 6
2.2 Hydrology Assessment 6
2.2.1 *Drainage Line Channel Profiles* 6
2.2.2 *Drainage Line Catchment Delineation* 6
2.2.3 *Drainage Line Catchment Hydrology* 7
2.2.4 *Boomerang Lagoon Catchment Hydrology* 8
2.2.5 *Proposed Development Catchment Hydrology and Stormwater Quality* 9
2.3 Regional Flooding 11
3. Hydrology Assessment – Groundwater 12
3.1 Existing Groundwater Resource 12
3.1.1 *Registered Groundwater Bores* 12
3.1.2 *2015 Drill Logs* 14
3.2 Potential Impact to Groundwater 15
3.3 Mitigation Measures 15

TABLES

Table 1 – Drainage Line Channel Features 6
Table 2 – Drainage Line Catchment Details 7
Table 3 – IFD Data (Source: BoM) 7
Table 4 – Drainage Line Local Catchment Details 8
Table 5 – Drainage Line Local Catchment Hydrology – Existing Case (Minor Storm ARI Events) 8
Table 6 – Drainage Line Local Catchment Hydrology – Developed Case (Minor Storm ARI Events) 9
Table 7 – Drainage Line Runoff Volume Comparison (Existing VS Developed) 10
Table 8 – Existing Registered Bores 12
Table 9 – Water Quality of Existing Registered Bores 13
Table 10 – Groundwater Water Quality Objectives 13

FIGURES

Figure 1 Site Location Plan *(Drawing No.DRG.008r2)*
Figure 2 Existing Surface Topography *(Drawing No.DRG.046A)*
Figure 3 Drainage Catchment Plan (Existing Case) *(Drawing No.DRG.046B)*
Figure 4 Drainage Catchment Plan (Developed Case) *(Drawing No.DRG.046C)*
Figure 5 Existing Groundwater Bore Locations *(Drawing No.DRG.047)*
Figure 6 Cross Section Location Plan *(Drawing No.DRG.049A)*
Figure 7 Cross Section of Resource Areas *(Drawing No.DRG.049B)*
Figure 8 Proposed Groundwater Monitoring Bore Locations *(Drawing No.DRG.048)*

Table of Contents

ATTACHMENTS

Attachment 1 DRAINS Model Results
Attachment 2 Flood Hazard Assessment Report
Attachment 3 Registered Groundwater Bore Logs

1. Introduction

1.1 Project Overview

Belmont Sands Pty Ltd ('Belmont Sands') propose to develop an extractive resource in the Livingstone Shire Council (Council) area for the supply of sand and gravel to the building and construction industry (extractive industry). The site accessed by Etna Creek Road, Etna Creek QLD 4702 refer **Figure 1 – Site Location Plan** ('site'). The site comprises of the following lots:

- Lot 8 on RP601603
- Lot 5 on RP601603
- Lot 10 on SP142291
- Lot 6 on RP601603 (for road/access purposes only)
- Lot 3 on RP601603 (for road/access purposes only).

Prior to commencement of extraction, access and haul roads will be developed. Construction of site infrastructure including the stockpile/processing plant area, office/amenities, weighbridge (if required), storage shed and processing plant will also occur at this juncture. Once the infrastructure is established, topsoil stripping and stockpiling will be completed in a logical sequence, to enable extraction to commence.

Material will be extracted via conventional methods, which includes an excavator and then transported to the processing plant by truck. Processing will involve screening and washing (if required) to remove fine silt and clay particles and dewatering of the final product, prior to stockpiling. No blasting or crushing is to occur as part of the process.

The extraction of material will be carried out in a sequential and logical manner to promote progressive rehabilitation where practicable. As batters reach their final form, they will be shaped, stabilised and revegetated with suitable pasture grasses. Where practicable, stripped topsoil from an area to be extracted will be directly placed on another area undergoing rehabilitation. Otherwise (e.g. in the initial stages of extraction), topsoil will be stockpiled, shaped and grassed until it can be used in rehabilitation activities.

1.2 Report Scope and Objectives

Groundwork Plus has been commissioned by Belmont Sands to prepare a Hydrology Assessment report as part of a response to an information request received from the Department of Infrastructure, Local Government and Planning (dated 10 September 2015) comprising additional information requested by the Department of Environment and Heritage Protection.

The additional information requested included:

> ***Impacts on hydrology***
>
> 1. *Disturbance to land as a result of the proposed activity is likely to alter overland flow paths of water. Please provide information using appropriate hydrological models or tools to demonstrate how the activity can be managed to mitigate or minimise impacts to the following:*
>   a. *Hydrology of the nearby drainage lines;*
>   b. *Hydrology of the nearby wetlands (particularly Boomerang Lagoon); and*
>   c. *Existing ecological corridors (likely impacts on flora and fauna inhabiting the local environment).*
>
> *Impacts on hydrology need to consider likely impacts upon flow frequency, flow volumes, changes in quality and timing of flows, changes in physical and biological quality of the nearby wetland, and likely*

impacts on species inhabiting the wetland. Please refer to the Fitzroy River Sub-basin Environmental Values and Water Quality Objectives.

Impacts on groundwater

5. *Please identify the risks the activity poses to the values of groundwater or any associated surface ecological systems, and how the activity will be managed to prevent or minimise adverse effects on these values. In particular, please provide information on the following:*
   - *Groundwater resources (including depth to groundwater, quality of groundwater and connectivity of aquifers);*
   - *Impacts on the watertable as a result of proposed activity (including details of disruption and contamination of the aquifer).*
   - *Mitigation measures proposed to manage risks identified above.*

This report includes a hydrology assessment of the following:

- Surface Water
  - Hydrology of the nearby drainage lines
  - Hydrology of the Boomerang Lagoon
  - Potential impact of the development on ecological corridors (flora / fauna)
  - Stormwater Management (Quality) constraints, locations of release points, water quality objectives and impacts on receiving environment.
- Groundwater
  - Existing groundwater resource including depth, quality and connectivity
  - Potential impact of the development on groundwater resources
  - Mitigation measures proposed to manage any risks identified.

The objectives of this report are to assess the existing surface and groundwater hydrology conditions and identify any mitigation measures required as a result of the proposed development.

2. Hydrology Assessment – Surface Water

2.1 Existing Surface Topography and Features

LiDAR survey data from 2009 was obtained from the Livingstone Shire Council in order to understand the existing surface topography and features, as shown in **Figure 2 – Existing Surface Topography**.

The site is situated on the floodplain of the Fitzroy River. The surrounding land is level, with a general gradient of 0.5-3.0%. Within the floodplain a number of drainage lines and natural ponds/wetlands are evident. The most prominent natural feature is the Boomerang Lagoon 700m southeast from the extent of "Resource Area 2".

2.2 Hydrology Assessment

Based on the available LiDAR survey information and aerial photography, there are a number of existing drainage lines in the vicinity of the site and surrounding area. These drainage lines were assessed in order to identify impacts of the proposed development, and how the development could be managed to mitigate or minimise impacts if necessary.

2.2.1 *Drainage Line Channel Profiles*

The longitudinal channel profiles of each drainage line presented in **Figure 3 – Drainage Catchment Plan (Existing Case)** were examined. A summary of the channel profile features is presented in **Table 1 – Drainage Line Channel Features**.

Table 1 – Drainage Line Channel Features

Drainage Line ID	Description	Length (m)	Average Gradient (%)
A	Locally significant vegetation area, defined channel, level, with a number of ponding areas forming natural lakes / wetlands	3282	0.00-0.20
B	Locally significant vegetation area, defined channel, level, with a number of ponding areas forming natural lakes / wetlands	2393	0.00-0.20
C	Cleared for grazing upstream, locally significant vegetation downstream, poorly defined channel, flat, with a number of ponding areas forming natural lakes / wetlands	2749	0.10-0.30
D	Cleared for grazing, no defined channel, broad sheet flow, floodplain characteristics	2060	0.10-0.50

As indicated, the drainage lines are level, and flow paths are either within a cleared grazing area or locally significant vegetation area.

2.2.2 *Drainage Line Catchment Delineation*

A catchment assessment was undertaken using the LiDAR survey in order to understand the extent of the local catchment influence of the nearby drainage lines. Catchments were delineated with reference to the channel profiles identified in **Section 2.2.1**.

Table 2 – Drainage Line Catchment Details

Catchment ID	Sub-catchment ID	Discharge Location	Area (ha)
A	A1	Fitzroy River	26.4
	A2	Junction with Drainage Line B	77.7
B	-	Boomerang Lagoon	98.2
C	-	Boomerang Lagoon	55.7
D	-	Boomerang Lagoon	98.7

The local surface topography indicates that the catchments are poorly defined, with surface gradients ranging from 0.00-3.00% in contributing runoff areas. In various areas the surface is observed to have undulating characteristics, localised natural ponds and lakes, and no clear direction of surface flow.

2.2.3 *Drainage Line Catchment Hydrology*

A hydrology assessment was undertaken based on the drainage line channel and catchment details. Time-area hydrologic modelling was undertaken using DRAINS (a computer simulation tool by Watercom) in order to generate runoff hydrographs from site based rainfall hyetograph input data. The DRAINS model was also developed to model rainfall infiltration losses, in order to examine the existing site conditions.

Site-based rainfall polynomial coefficients were obtained using the Intensity-Frequency-Duration (IFD) generation tool, available on the Bureau of Meteorology's website. The IFD data is shown below in **Table 3 – IFD Data (Source: BoM)**.

Table 3 – IFD Data (Source: BoM)

	ARI (year)						
DURATION	1	2	5	10	20	50	100
5Mins	105	136	176	200	233	278	314
6Mins	98.2	127	165	188	219	261	295
10Mins	81.2	105	135	154	179	214	241
20Mins	61	78.7	100	113	131	156	175
30Mins	50.2	64.6	82	92.6	107	127	142
1Hr	34.1	43.9	55.8	63	72.9	86.2	96.6
2Hrs	21.7	28.1	36.1	41.1	47.8	56.8	63.9
3Hrs	16.4	21.3	27.7	31.6	36.9	44.1	49.8
6Hrs	10	13.1	17.4	20.1	23.6	28.6	32.5
12Hrs	6.21	8.19	11.1	12.9	15.4	18.8	21.6
24Hrs	3.91	5.2	7.2	8.52	10.2	12.7	14.6
48Hrs	2.43	3.27	4.65	5.58	6.79	8.52	9.95
72Hrs	1.77	2.4	3.47	4.2	5.16	6.54	7.68

Design storm durations of 1 hour and 24 hours were simulated in DRAINS for the 1, 2, and 5 year Average Recurrence Interval (ARI) events, to determine the baseline hydrology for the minor storm events. Results are shown in **Table 4 – Drainage Line Local Catchment Details** and **Table 5 – Drainage Line Local Catchment Hydrology – Existing Case (Minor Storm ARI Events)**.

Table 4 – Drainage Line Local Catchment Details

Catchment ID	Sub-catchment ID	Area (ha)	Time of Concentration (mins)^	Fraction Impervious (%)	Soil Hydrologic Group*
A	A1	26.4	48	0	B/C
	A2	77.7	134	0	B/C
B	-	98.2	133	0	B/C
C	-	55.7	152	0	B/C
D	-	98.7	114	0	B/C

^Time of concentration based on assumed stream flow velocity of 0.3m/s Table 4.6.6 (QUDM)
* Soil with low/moderate to moderate/high infiltration capacity, based on QUDM and Groundwork assessment

Table 5 – Drainage Line Local Catchment Hydrology – Existing Case (Minor Storm ARI Events)

ARI	Peak Discharge (Q) and Runoff Volume (V)	Catchment ID A1	A2	B	C	D
1yr (1h)	Q (m^3/s)	0.498	0.525	0.669	0.332	0.784
	V (m^3)	1,053	1,120	1,426	708	1,672
1yr (24h)	Q (m^3/s)	0#	0#	0#	0#	0#
	V (m^3)	0#	0#	0#	0#	0#
2yr (1h)	Q (m^3/s)	1.280	1.350	1.710	0.850	2.010
	V (m^3)	3,264	4,967	6,324	3,139	7,416
2yr (24h)	Q (m^3/s)	0.574	0.605	0.771	0.383	0.904
	V (m^3)	1,818	4,694	5,943	3,248	6,144
5yr (1h)	Q (m^3/s)	2.270	2.390	3.050	1.510	3.580
	V (m^3)	6,112	13,107	16,640	8,418	18,148
5yr (24h)	Q (m^3/s)	1.840	2.420	3.080	1.580	3.510
	V (m^3)	8,152	21,923	27,734	15,443	28,430

These ARI events produce no nett surface runoff, and rainfall is absorbed into the groundwater system.

Results of the DRAINS model simulation are presented in **Attachment 1 – DRAINS Model Results**. As shown in **Table 5 – Drainage Line Local Catchment Hydrology – Existing Case (Minor Storm ARI Events)**, it is estimated that no nett runoff is generated during the lower rainfall intensity 1 year ARI event (24 hour duration). This is representative of the capturing of surface water in the extensive ponding areas within the drainage lines, infiltration behaviour of the soil hydrologic conditions (considered to be "Group B" – moderate to high infiltration capacity (QUDM)), and the length of drainage lines with their relative time of concentrations.

2.2.4 *Boomerang Lagoon Catchment Hydrology*

The Boomerang Lagoon is situated approximately 700m southeast of "Resource Area 2". The nearby drainage lines convey rainfall runoff to the Boomerang Lagoon, with reference to the assessment in **Section 2.2.3**. The Boomerang Lagoon also receives surface runoff from additional drainage lines and surface topography as shown in **Figure 3 – Drainage Catchment Plan (Existing Case).** The hydrology of the broader catchment is not affected by the development from a surface water perspective and as such only the nearby drainage lines that are directed towards the Boomerang Lagoon are examined as part of this study.

At the time of the LiDAR survey (2009), the standing water level in the Boomerang Lagoon was approximately RL3.500m, compared to the Fitzroy River level of RL4.000m. A profile of the river bank reveals that floodwater will overtop the bank crest and enter the lagoon at RL8.500m, at the locations indicated on **Figure 3 – Drainage Catchment Plan (Existing Case)**.

Water will overtop the river bank and enter the Boomerang Lagoon at higher flood frequencies than the drainage lines near to the development site, as the bank crest and extraction areas are at approximately RL14.000m.

2.2.5 *Proposed Development Catchment Hydrology and Stormwater Quality*

The development will include impervious areas including bunding associated with fuel storage, roof areas of buildings, areas comprising screening machinery and to an extent, pavement haulage routes (gravel). The increase of impervious area is considered to be negligible with reference to the overall drainage line contributing catchments (less than 1% total area). It is noted that all access haul roads and cross drainage will be provided as close to existing surface levels as possible (i.e. no regional flood level immunity).

The development involves altering the surface topography through the process of sand extraction and stockpiling. Over the course of the extraction lease, the area subject to the development will increase. The result is a redirection and capture of the generated runoff in the proposed extraction area.

A DRAINS model was established for the developed case, with Resource Areas 1 and 2 treated as 'Basin' areas, effectively capturing 100% of generated runoff. The results are shown in **Table 6 – Drainage Line Local Catchment Hydrology – Developed Case (Minor Storm ARI Events)**, and **Table 7 – Drainage Line Runoff Volume Comparison (Existing VS Developed)** details on the changes from the developed case on runoff being conveyed by the nearby drainage lines. The developed case catchment plan is shown in **Figure 4 – Drainage Catchment Plan (Developed Case)**. DRAINS outputs are presented in **Attachment 1 – DRAINS Model Results**.

Table 6 – Drainage Line Local Catchment Hydrology – Developed Case (Minor Storm ARI Events)

ARI	Q(m³/s) V(m³)	Catchment ID									
		A1	RA1(a)	A2	RA1(b)	B	RA2(B)	C	RA2(C)	D	RA2(D)
1yr (1h)	Q	0.291	0.856	0.472	0.641	0.467	1.070	0.286	1.060	0.425	1.860
	V	615	587	1,006	439	996	1,487	610	1,472	907	2,320
1yr (24h)	Q	0#	0#	0#	0#	0#	0#	0#	0#	0#	0#
	V	0#	0#	0#	0#	0#	0#	0#	0#	0#	0#
2yr (1h)	Q	0.744	1.780	1.210	1.330	1.200	2.690	0.732	2.660	1.090	4.590
	V	1,904	1,500	4,462	1,123	4,418	3,975	2,583	3,934	4,020	6,121
2yr (24h)	Q	0.335	0.477	0.544	0.357	0.538	1.220	0.329	1.210	0.490	1.900
	V	1,060	812	4,217	607	4,152	2,119	1,707	2,098	3,308	3,269
5yr (1h)	Q	1.320	2.610	2.150	1.950	2.130	4.530	1.300	4.490	1.940	7.620
	V	3,565	2,695	11,774	2,017	11,624	7,197	5,427	7,124	9,837	11,077
5yr (24h)	Q	1.070	0.829	2.180	0.620	2.150	2.200	1.170	2.180	1.900	3.39
	V	4,755	3,493	19,694	2,615	19,374	9,318	7,808	9,223	15,410	14,319

These ARI events produce no nett surface runoff, and rainfall is absorbed into the groundwater system.

Table 7 – Drainage Line Runoff Volume Comparison (Existing VS Developed)

ARI	Runoff Volume (V) (m³)	Drainage Line ID				
		A1	A2	B	C	D
1yr (1h)	Existing	1,053	1,120	1,426	708	1,672
	Developed (Conveyed)	615	1,006	996	610	907
	Developed (Captured)	587	439	1,487	1,472	2,320
1yr (24h)	Existing	0#	0#	0#	0#	0#
	Developed (Conveyed)	0#	0#	0#	0#	0#
	Developed (Captured)	0#	0#	0#	0#	0#
2yr (1h)	Existing	3,264	4,967	6,324	3,139	7,416
	Developed (Conveyed)	1,904	4,462	4,418	2,583	4,020
	Developed (Captured)	1,500	1,123	3,975	3,934	6,121
2yr (24h)	Existing	1,818	4,694	5,943	3,248	6,144
	Developed (Conveyed)	1,060	4,217	4,152	1,707	3,308
	Developed (Captured)	812	607	2,119	2,098	3,269
5yr (1h)	Existing	6,112	13,107	16,640	8,418	18,148
	Developed (Conveyed)	3,565	11,774	11,624	5,427	9,837
	Developed (Captured)	2,695	2,017	7,197	7,124	11,077
5yr (24h)	Existing	8,152	21,923	27,734	15,443	28,430
	Developed (Conveyed)	4,755	19,694	19,374	7,808	15,410
	Developed (Captured)	3,493	2,615	9,318	9,223	14,319

These ARI events produce no nett surface runoff, and rainfall is absorbed into the groundwater system.

As shown in **Table 5 – Drainage Line Local Catchment Hydrology – Existing Case (Minor Storm ARI Events)**, the development is expected to reduce the volume of direct runoff volume being conveyed into the nearby drainage lines, with a balance being captured within Resource Areas 1 and 2. These results have been based on the assumption of 100% capture in each resource area, and to the full extent of the extraction boundary. Hence, the results are only for indicative assessment purposes and are not likely to be reflective of the actual activity, as the extraction will be undertaken over the course of many years and the geology is predominately sand and gravel in which water is likely to infiltrate.

Furthermore, while the extraction areas result in redirecting a portion of runoff when compared to existing conditions, any captured surface water is able to be treated onsite through appropriate sediment control measures, and released back into the drainage system with reference to the applicable water quality objectives and targets, thus preserving hydrological conditions.

Therefore, in order to ensure the development does not adversely impact on the existing hydrology of the drainage lines and Boomerang Lagoon, the following mitigation measures are proposed:

- Ensure that all captured runoff within each Resource Area is adequately treated onsite to meet the water quality objectives of the *Environmental Protection (Water) Policy 2009 - Fitzroy River Sub-basin Environmental Values and Water Quality Objectives* and Environmental Authority (EA) requirements.
- Ensure that captured surface water is released at the approved water release points in accordance with the EA, to preserve the existing hydrological cycle of the drainage lines and Boomerang Lagoon. See indicative water release points proposed in **Figure 4 – Drainage Catchment Plan (Developed Case)** to correlate discharge points to the nearby drainage lines.
- Ensure that peak discharge is mitigated to ensure no increase or worsening from the existing discharge rates for the ARI events shown in **Table 5 – Drainage Line Local Catchment Hydrology – Existing Case (Minor Storm ARI Events)**.
- Ensure that the site Stormwater Management Plan (SMP) is regularly reviewed and updated to reflect the staged extraction extents, and ensure all upstream clean water is diverted around the disturbed catchment areas during non-flood events.

- Ensure that the site SMP is regularly reviewed and updated to reflect any changes to stormwater catchments resulting from the development.

In order to ensure that the impact on the surrounding ecological corridors are minimised, the following management and monitoring procedures are proposed to be adopted during the operational phase of the development:

- Prior to any water release from the extraction pits to drainage lines, the quality of extraction pond water will be tested for turbidity, total suspended solids, pH, dissolved oxygen and visual oil & grease to ensure compliance with state regional Water Quality Objectivities (WQOs) Criteria (*Environmental Protection (Water) Policy 2009 - Fitzroy River Sub-basin Environmental Values and Water Quality Objectives*).
- The Site Manager may engage the services of a suitably qualified and experienced person to conduct water quality sampling if required and review monitoring results to provide advice in relation to the water quality management.
- All surface water sampling will be undertaken in accordance with the Department of Environment and Heritage Protection (EHP) *Monitoring and Sampling Manual*, September 2009.
- Water pH, turbidity and dissolved oxygen levels will be measured in the field in-situ, whilst all laboratory analysis will be undertaken by a NATA certified laboratory.
- The Site Manager or delegate will undertake monthly, inspections, and as required after rainfall events, of the extraction pits and the settling pond in the northern stockpile area and conduct any necessary maintenance.

2.3 Regional Flooding

It is evident that the drainage lines have formed historically from scouring of the natural surface during flooding and rising flood waters of the Fitzroy River. This is made apparent as the drainage lines generally follow a flow path from the river bank toward the low point of the Boomerang Lagoon, and the local catchments are poorly defined. Hence the drainage lines are considered to be influenced by the regional river system hydrology as well as the local surface drainage.

A flood study was commissioned by the Queensland Reconstruction Authority (QRA) in 2013, and the study boundary includes the northern extents of the site. The results indicate that the nearby drainage lines become inundated during the 1%, and 2% Annual Exceedance Probability (AEP) events. Refer **Attachment 2 – Flood Hazard Assessment Report**, prepared by DHI Water and Environment Pty Ltd, for a record of the flood hazard assessment and inundation maps.

As discussed in **Section 2.2.4**, the Boomerang Lagoon is expected to flood more frequently than the development and extraction areas, with a river bank level of approximately RL8.50m, compared to a level of approximately RL14.0m for the development and extraction areas. Based on this observation, the flood frequency and regional catchment hydrology of the Boomerang Lagoon will not be altered by the development as the extraction area occurs above its inundation line. Hence the Boomerang Lagoon will be fully inundated before the nearby drainage lines receive break in flows from the Fitzroy River.

The development is not considered to be influential on the hydrology conditions of the Fitzroy River Basin, with a relative area of 1km^2 within a total basin catchment of 142,700km^2 (i.e 0.0001% of the catchment area). However, the changes in surface topography during the extractive process may result in water inundating the site during regional flooding. This will be dependent on the river flooding to levels above the river bank and nearby drainage lines at approximately RL14.0m.

Prior to any dewatering after a flood event, all releases must ensure compliance with the EA and/or approved SMP to return the site to operating conditions. Where feasible, it is proposed that excess water from the extraction pit post inundation will be irrigated to pasture.

This assessment is limited to a desktop analysis of the detailed LiDAR survey and reference to the QRA flood study. In order to confirm flood flow frequency, inundation depths and flow velocities pre/post development, a detailed flood modelling analysis would be required.

3. Hydrology Assessment – Groundwater

3.1 Existing Groundwater Resource

The geology of the proposed extraction area is fluvial, lithic quartose sand giving rise to the Fitzroy River alluvium aquifer which is approximately 19 – 20m below surface level in the proposed extraction areas.

There are a number of registered groundwater bores that currently exist on the site which provide information regarding the depth and quality of the fluvial groundwater. This information is presented in **Section 3.1.1** below. In addition, a detailed drilling program was undertaken in February 2015 within the proposed extraction pits which also provides valuable information on the local groundwater depth. Details on groundwater and geology from the drilling program are provided in **Section 3.1.2** below.

3.1.1 Registered Groundwater Bores

A representation of the closest existing registered bores to the proposed extraction areas were provided in Environmental Assessment Report (Groundwork Plus), previously submitted to EHP. A summary of the closest bores that have standing water level recorded are summarised below for ease of reference in **Table 8 – Existing Registered Bores.**

Table 8 – Existing Registered Bores

Bore Reg. No.	Bore Status	Property/ Description	Lat. (°) Long. (°)	Distance from quarry development area ~~~	Bore Depth (m)	Standing Water Levels m /date
RN151494	Existing	Lot 10 SP142291	-23.2288 150.3839269	2.5km NNE	29	-10.4 / 2011
RN85289	Existing	Lot 10 SP142291	-23.21378649 150.3827335	2.5km NNE	30	-11.63 / 1984
RN111645	Existing	Lot 3 RP601603	-23.208419908 150.395759169	3.9km NNE	19.2	-11.0 / 2002
RN151501	Existing	Lot 5 RP601603	-23..22460002 150.383303	1.9kmNE	29.9	-10.4 / 2011

Figure 5 – Existing Groundwater Bore Locations shows the proximity of the groundwater bores to the proposed extraction pits. These bores are located approximately two (2) to three (3) kilometres to the north east and north, north east. Whilst these bores are some distance away, the information contained within the bore logs provides an indication of the likely depth and quality of groundwater at that time. The standing water levels recorded in **Table 8 – Existing Registered Bores** are assumed to be from the top of the casing.

Bore logs for the bores identified in **Table 8 – Existing Registered Bores** are attached (refer **Attachment 3 – Registered Groundwater Bore Logs**). Water quality results sampled when the bores were installed are presented below in **Table 9 – Water Quality of Existing Registered Bores**.

No water quality analysis was undertaken for Bore RN151494 which was drilled on 3 June 2011.

Bore RN88289 was drilled on 26 September 1984 and the relevant water quality analysis results are presented in **Table 9 – Water Quality of Existing Registered Bores** below.

Bore RN111645 was drilled on 21 January 2002 and the relevant water quality monitoring results are presented in **Table 9 – Water Quality of Existing Registered Bores** below.

Bore RN151501 was drilled on 11 June 2011 and only electrical conductivity was recorded at 365µS/cm.

Table 9 – Water Quality of Existing Registered Bores

Bore	Zone	EC (µScm)	Hardness (mgLas CaCO3)	pH	Ca (mgL^{-3})	Mg (mgL^{-3})	Na (mgL^{-3})	Cl (mgL^{-3})	Fe (mgL^{-3})	Zn (mgL^{-3})	Cu (mgL^{-3})
11645	14	11890	7411.81	6.9	350	380	1800	3750	0.03	NA	NA
88289	22	1300	341	7.3	46	55	120	290	NA	NA	NA

As outlined in the Environmental Assessment Report (Groundwork Plus), the Groundwater Environmental Values for the local area are prescribed by Fitzroy River Sub-Basin Environmental Values and WQOs include stock watering, aquatic ecosystems, irrigation, farm supply/use, primary recreation, drinking water and cultural and spiritual values. The majority of the site is mapped as Zone 22 for Groundwater within the Fitzroy River Sub-Basin Environmental values and WQOs with the north west corner mapped as Zone 14.

The WQOs for Zone 14 and Zone 22 for shallow (less than 30m) groundwater are provided in **Table 10 – Groundwater Water Quality Objectives** below:

Table 10 – Groundwater Water Quality Objectives

Zone	Depth	Percentile	EC (µScm)	Hardness (mgLas CaCO3)	pH	Ca (mgL^{-3})	Mg (mgL^{-3})	Na (mgL^{-3})	Cl (mgL^{-3})	Fe (mgL^{-3})	Zn (mgL^{-3})	Cu (mgL^{-3})
22	<30m	20th	1403	367	7.2	60	41	145	218	0.000	0.010	0.000
22	<30m	50th	2220	591	7.7	105	76	240	475	0.000	0.020	0.010
22	<30m	80th	3722	1001	8.0	175	145	420	979	0.050	0.080	0.037
14	<30m	20th	1006	294	7.5	51	36	88	129	0.000	0.010	0.010
14	<30m	50th	1619	458	7.9	80	61	164	260	0.005	0.030	0.020
14	<30m	80th	2150	743	8.1	125	108	308	604	0.030	0.091	0.050

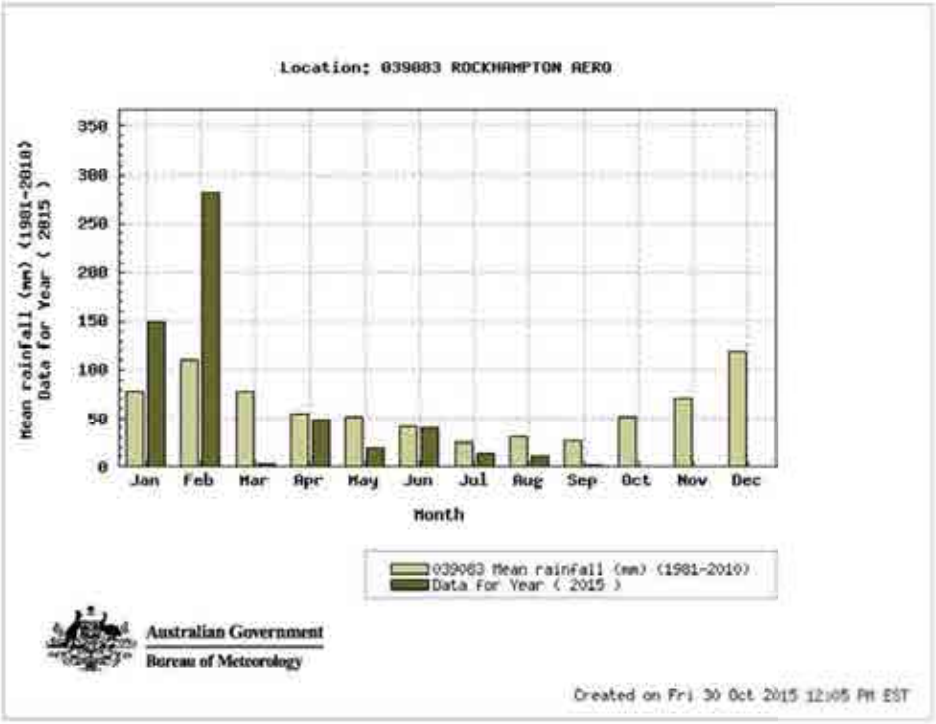
Of the two (2) bores that have been monitored for water quality, bore RN88289 is the closer of the two (2) to the proposed extraction located approximately 2.5km north, north east of Resource Area 2. The water quality results for this bore show that the groundwater is of a high quality, below the 20th percentile WQO's for electrical conductivity, hardness, calcium and sodium and below the 50th percentile WQO's for pH and magnesium.

Bore 11645 is approximately 3.9 km north, north east of Resource Area 2 and the water quality results indicate an exceedance of the WQOs which may indicate the impact of the drought being experienced within the monitoring period.

3.1.2 2015 Drill Logs

A detailed drilling program was undertaken within the proposed extraction areas at the site in February 2015. The results of the drill cores show that there is a small topsoil/overburden cap across the resource ranging from 0m to 3m of dark brown fluvial clay material. This material will be removed and stored by ensuring it is covered with grass, or used for bunding (also grassed) around the edge of the extraction pit to redirect clean overland flow around the pit. Below the topsoil the drill logs within the extraction area show medium to course grained lithic quartzose sand with minor gravel in Resource Area 1 and 2 ranging from the surface to 20m in depth. It is noted that the drill logs are commercial in confidence and as a result have not been included in this report. They drill logs can be provided to EHP upon request for assessment purposes only if required. During this drilling program, no groundwater was encountered despite it occurring within the wet season.

Rainfall data from the Bureau of Meteorology shows that January and February 2015 were particularly wet months, receiving well above the average rainfall, therefore, the expected height of the groundwater table was be shallowest (i.e. nearest to the surface) at this time of year (refer **Graph 1 – Monthly Rainfall data for Rockhampton Aero BOM Station in Comparison to Mean Rainfall**).



Graph 1 – Monthly Rainfall data for Rockhampton Aero BOM Station in Comparison to Mean Rainfall

A cross section of the ground level heights is provided in **Figure 6 – Cross Section Location Plan** and **Figure 7 – Cross Section of Resource Areas** which shows that the proposed extraction areas are elevated well above the Fitzroy River and indeed above the Boomerang Lagoon. Any recharge of groundwater from rainfall is therefore likely to replenish the river and lagoon well before having any impact on the groundwater within the proposed extraction areas.

3.2 Potential Impact to Groundwater

Given the depth of groundwater in the proposed extraction areas is 19-20m below the surface, it is unlikely that the proposed sand extraction will have an impact on groundwater level, quality or connectivity as it will not be interacting with it.

As the resource to be extracted is sand and gravel, groundwater will move through the substrate and will not be retained within the extraction void. As a result, the standing water level of groundwater is likely to change as the climate changes. Resource drilling on the site was undertaken at a time of year when the groundwater table is expected to be at its highest, therefore the depth of 19 – 20m is considered to be conservative and it may be lower than this during dryer periods.

The majority of the resource has less than 10% fine material. As the proposed extraction is of relatively clean sand with minimal fines, it is unlikely that any degradation of quality of the groundwater will be observed.

Nevertheless, a groundwater monitoring program has been proposed to ensure that if groundwater is encountered as part of the extraction activities, monitoring of the groundwater will occur to identify any potential down-gradient impacts as outlined in **Section 3.3** below.

In addition, a surface water monitoring program has also been proposed to ensure that the water quality within the extraction voids is maintained within the relevant surface water quality parameters as specified in the Environmental Management Plan.

3.3 Mitigation Measures

An appropriate mitigation measure, tailored to the low level of risk of interaction with groundwater, is for the operator to design and implement a groundwater monitoring program. It is proposed that quarterly monitoring is proposed at the five locations identified in **Figure 8 – Proposed Groundwater Monitoring Bore Locations**. These five locations have been selected to ensure that there is at least one up-gradient monitoring location for each proposed extraction area and one down-gradient. An additional down gradient bore has been proposed for Resource Area 2 as the proposed extraction area is relatively large.

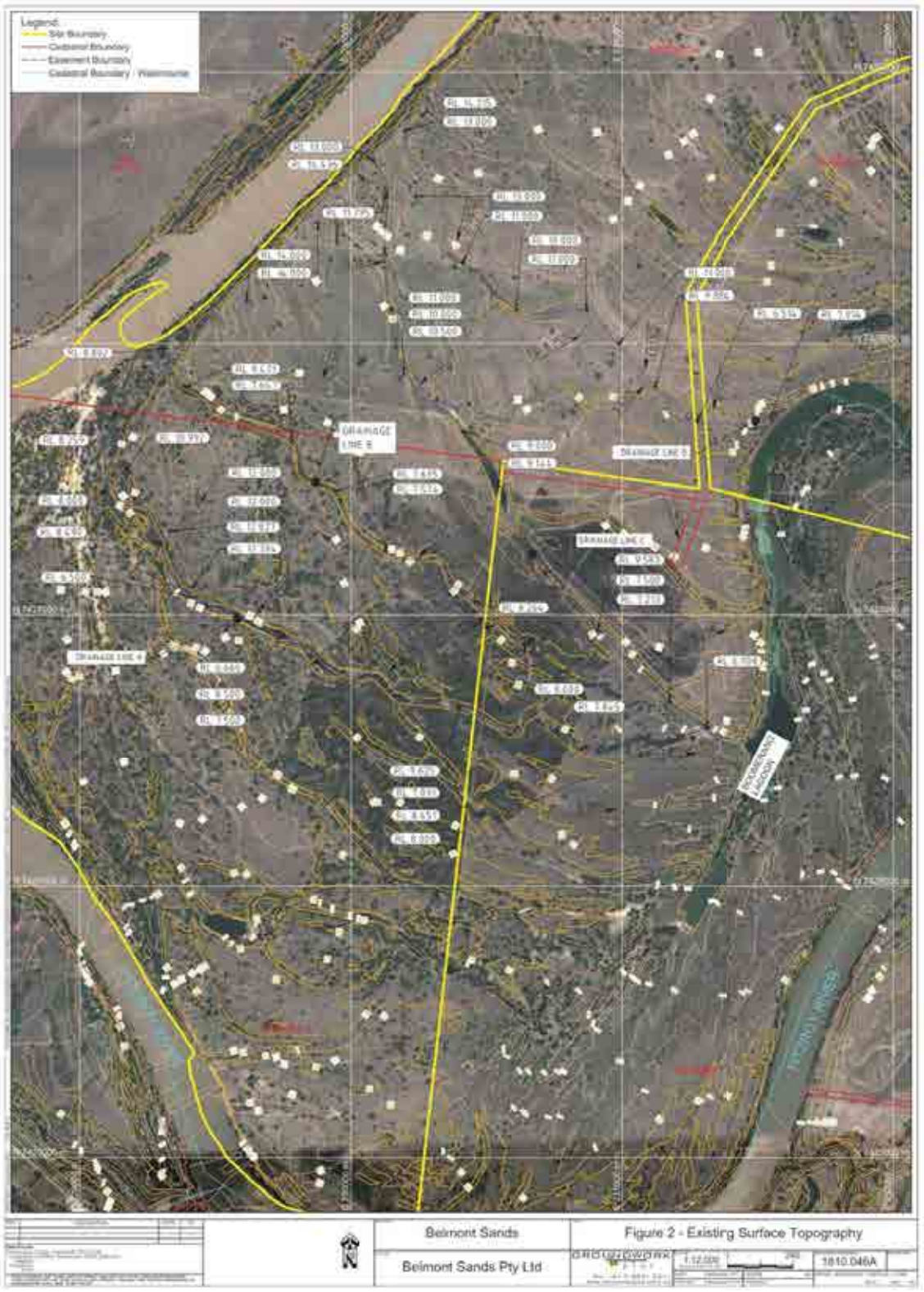
It is proposed that the five groundwater monitoring bores are staged in line with the extraction of the two resource areas. Bore locations 1, 2, and 3 are proposed prior to commencement of extraction within Resource Area 2, and Bores 4 and 5 are proposed to be installed prior to commencement of extraction within Resource Area 1.

The proposed groundwater monitoring parameters will include standing groundwater level, EC and pH. Electrical conductivity has been selected as a monitoring parameter to ensure that there are no impacts to salinity as a result of the extraction and pH has been selected to ensure that there is no acidification of extracted materal which may result in changes to pH. As the drill logs show the material to be extraction is relatively clean sand and gravel it is highly unlikely that any impact to the quality of groundwater will be observed.

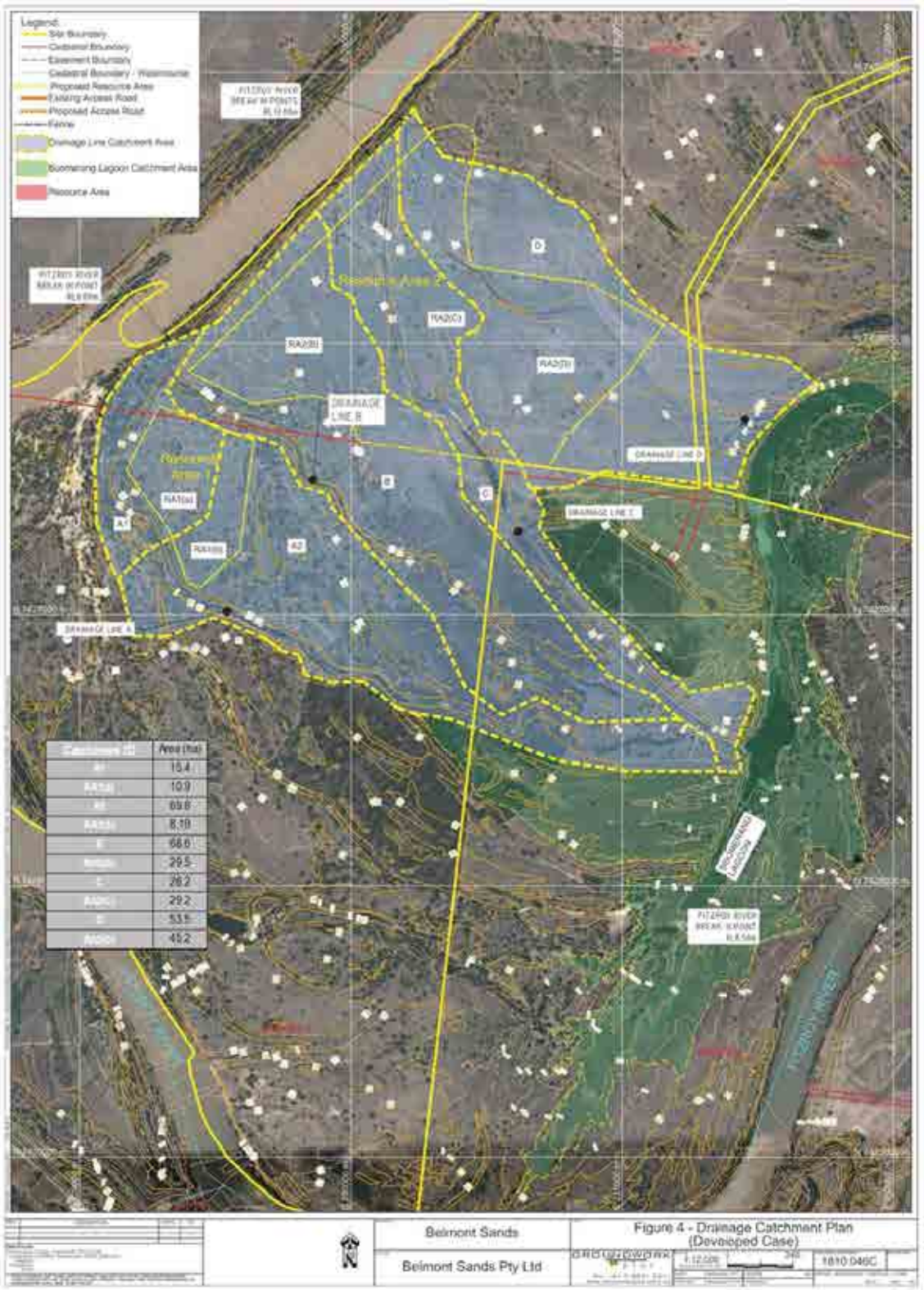
The proposed limits for EC in accordance with the 80th percentile of the WQO's for Groundwater (Zone 22) is 3722 µScm. The proposed range to be maintained for pH is 7.2 (20th percentile) to 8.0 (80th percentile).

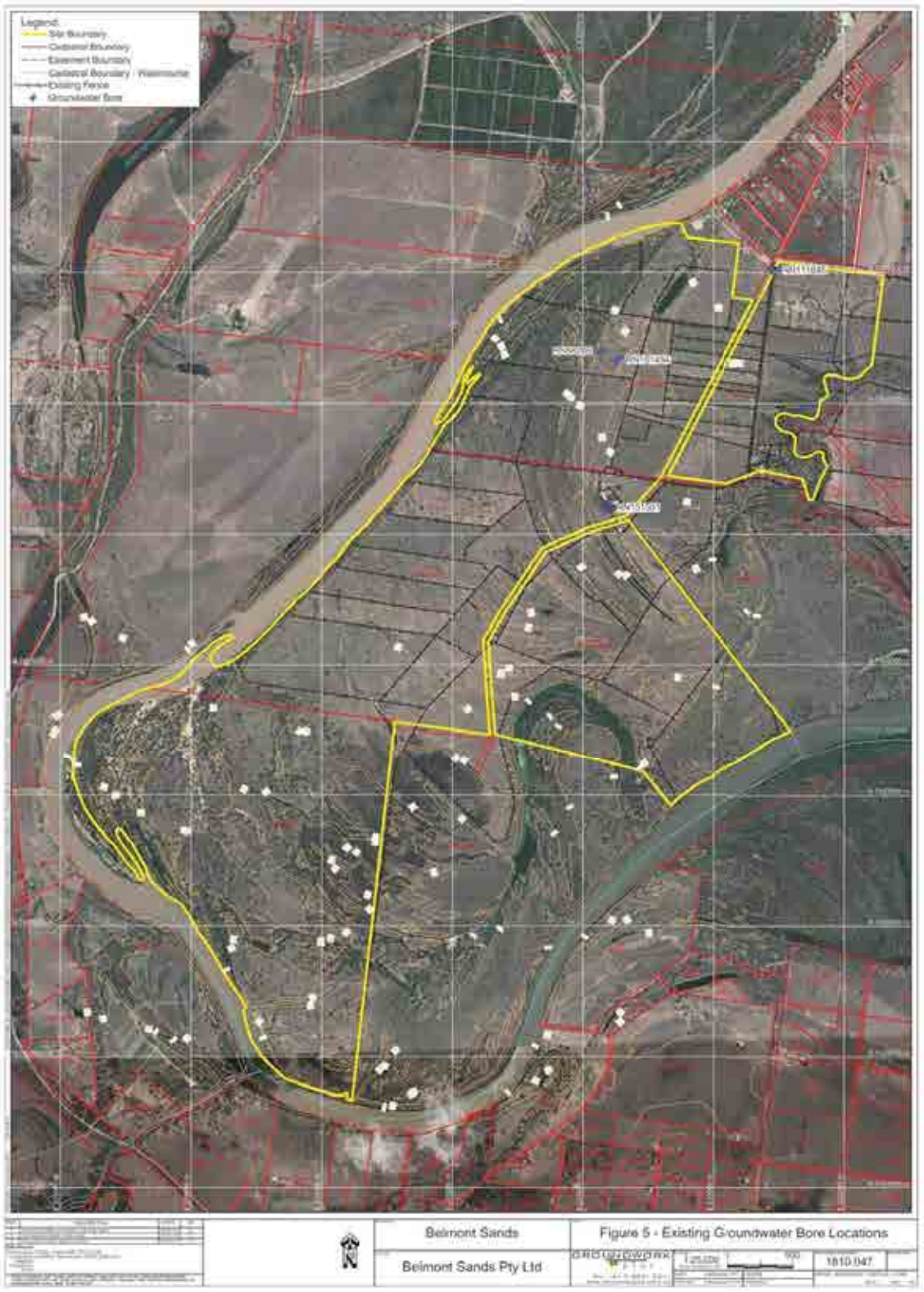
figures

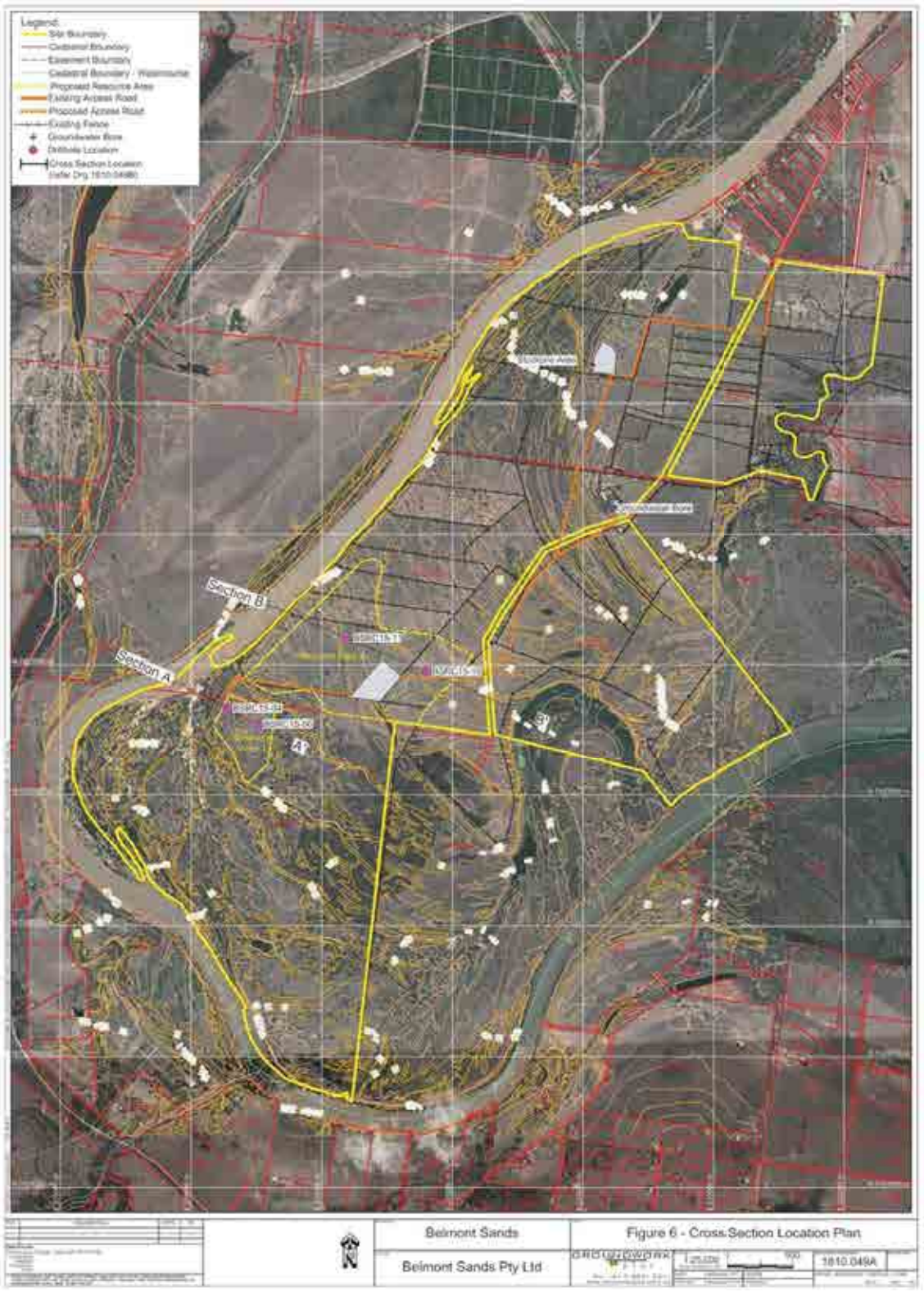
Rockhampton
Site
Legend:
Site Boundary
State Controlled Road
Belmont Sands
Belmont Sands Pty Ltd
Figure 1 - Site Location Plan
1810.008
2

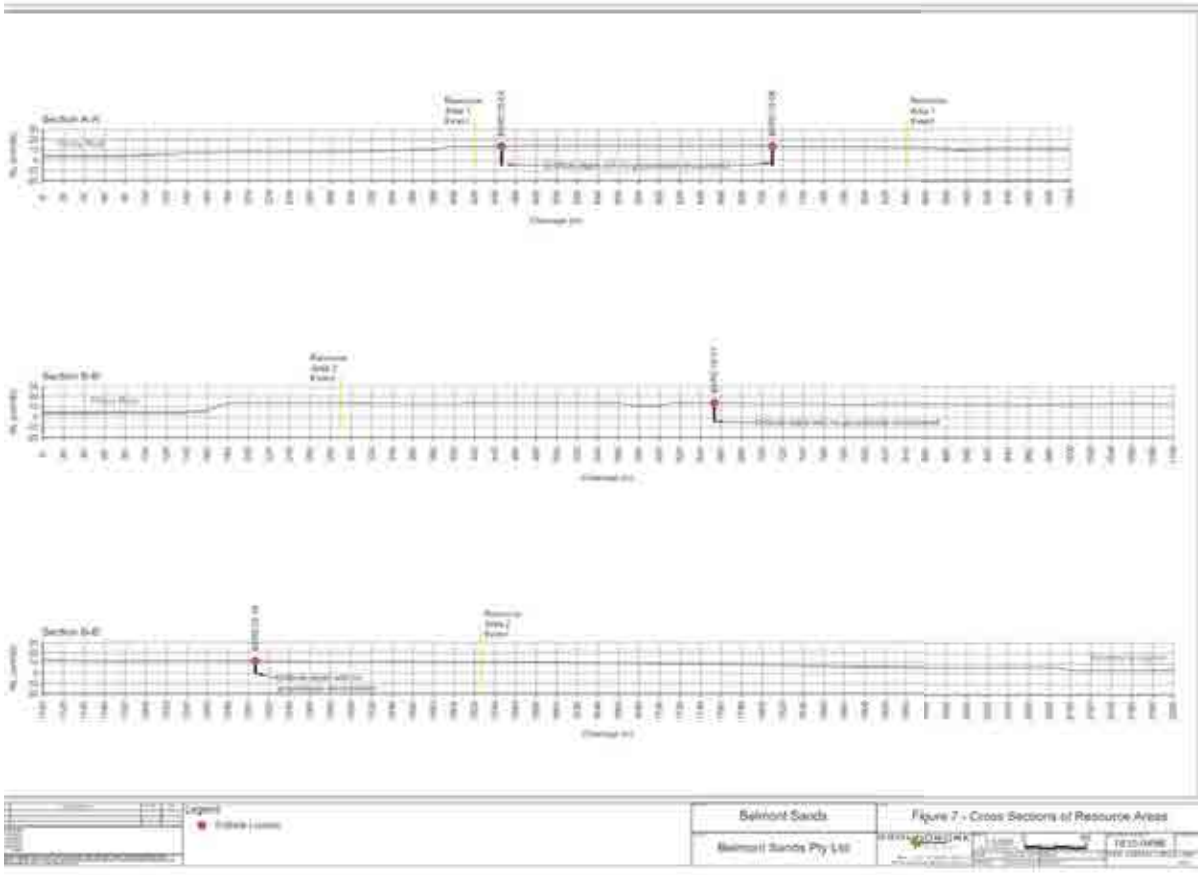

Legend:
DRAINAGE LINE E
DRAINAGE LINE C
DRAINAGE LINE A
Belmont Sands
Belmont Sands Pty Ltd
Figure 2 - Existing Surface Topography
1810.046A

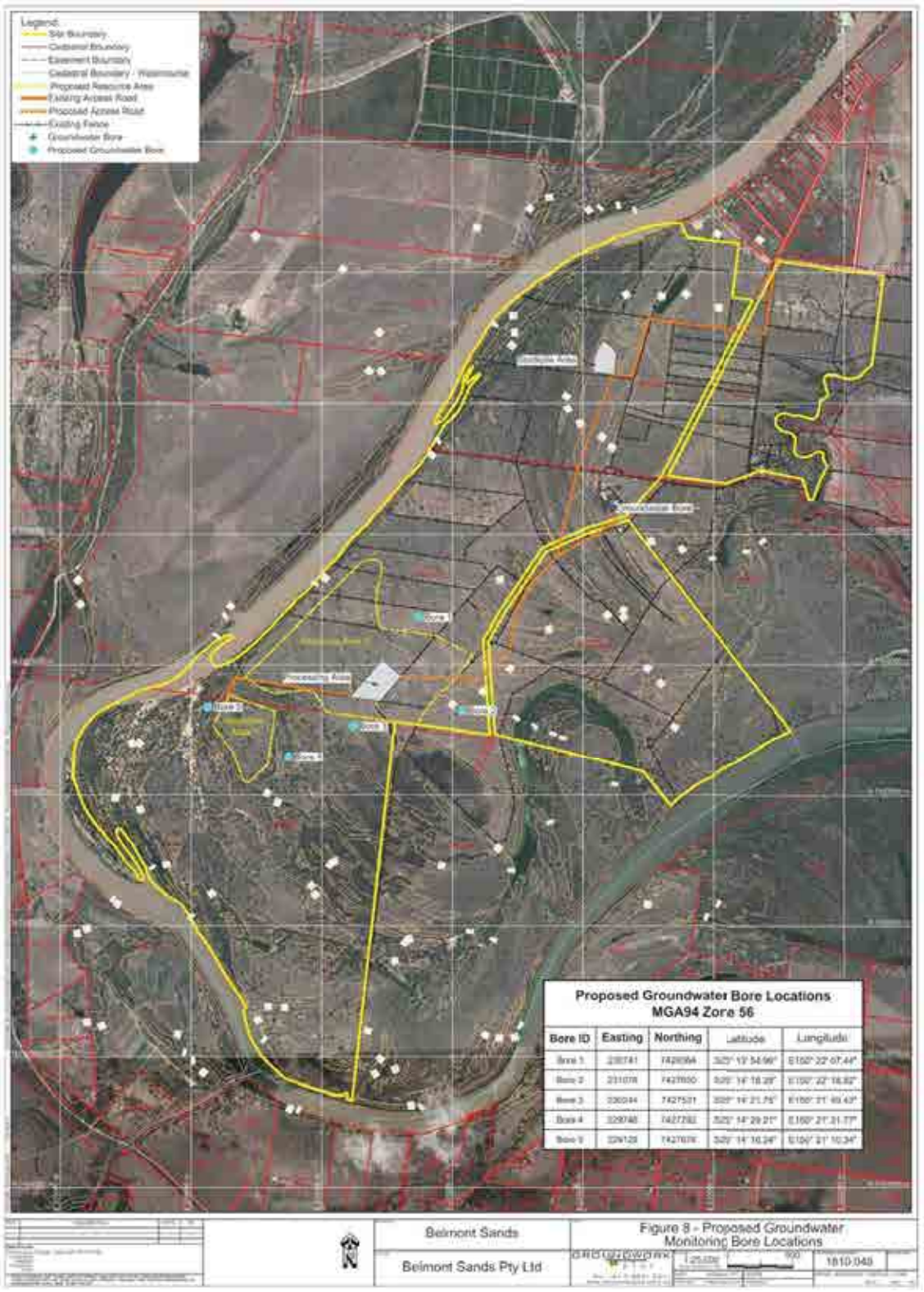
Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Fence
Drainage Line Catchment Area
Boomerang Lagoon Catchment Area
CATCHMENT B
Area = 98.2ha
CATCHMENT C
Area = 55.7ha
CATCHMENT D
Area = 98.7ha
DRAINAGE LINE B
CATCHMENT A1
Area = 29.4ha
DRAINAGE LINE C
CATCHMENT A2
Area = 77.7ha
DRAINAGE LINE A
Area (ha)
29.4
77.7
98.2
55.7
98.7
Belmont Sands
Belmont Sands Pty Ltd
Figure 3 - Drainage Catchment Plan (Existing Case)
1810.0468


Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Fence
Drainage Line Catchment Area
Boomerang Lagoon Catchment Area
Resource Area
Resource Area 2
RA2(C)
RA2(B)
RA2(D)
DRAINAGE LINE B
DRAINAGE LINE D
DRAINAGE LINE C
DRAINAGE LINE A
RA1(a)
RA1(b)
A1
A2
B
C
D
Area (ha)
15.4
10.9
69.8
8.10
68.6
29.5
26.2
29.2
53.5
45.2
Belmont Sands
Belmont Sands Pty Ltd
Figure 4 - Drainage Catchment Plan (Developed Case)
1810 046C


Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary / Watercourse
Existing Fence
Groundwater Bore
Belmont Sands
Belmont Sands Pty Ltd
Figure 5 - Existing Groundwater Bore Locations
1810.047


Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Existing Fence
Groundwater Bore
Drillhole Location
Cross Section Location
Refer Drg 1810.049B)
Section B
Section A
Belmont Sands
Belmont Sands Pty Ltd
Figure 6 - Cross Section Location Plan
1810.049A


Belmont Sands
Belmont Sands Pty Ltd
Figure 7 - Cross Sections of Resource Areas


Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Existing Fence
Groundwater Bore
Proposed Groundwater Bore
Proposed Groundwater Bore Locations
MGA94 Zone 56
Bore ID | Easting | Northing | Latitude | Longitude
Bore 1 | 230741 | 7428994 | 525° 13' 54.96" | E150° 22' 07.44"
Bore 2 | 231078 | 7427800 | 525° 14' 18.28" | E150° 22' 18.82"
Bore 3 | 230044 | 7427521 | 525° 14' 27.75" | E150° 21' 49.43"
Bore 4 | 229748 | 7427783 | 525° 14' 29.21" | E150° 21' 31.77"
Bore 5 | 229128 | 7427676 | 525° 14' 16.24" | E150° 21' 10.34"
Belmont Sands
Belmont Sands Pty Ltd
Figure 8 - Proposed Groundwater Monitoring Bore Locations
1810-048

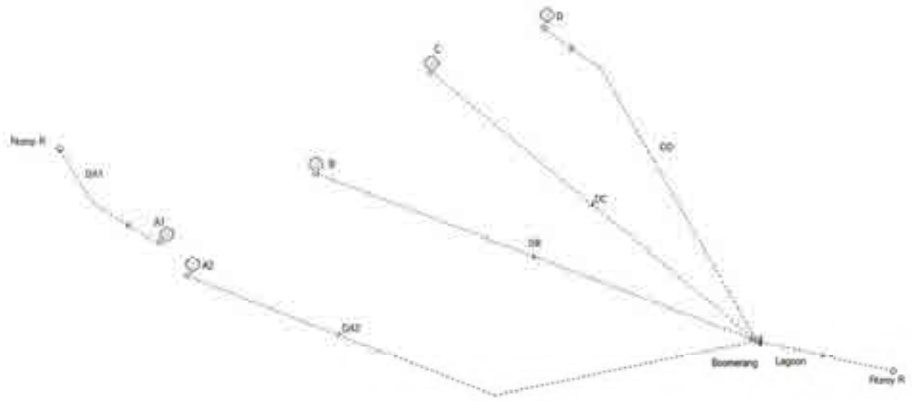
attachments

Attachment 1

DRAINS Model Results

12/11/2015
1810.610.002

DRAINS SCHEMATIC AND RESULTS – EXISTING CASE



1626_610_002 GROUNDWORK plus

DRAINS results prepared 29 October, 2015 from Version 2015.11								
PIT / NODE DETAILS				Version 8				
Name	Max HGL	Max Pond	Max Surface	Max Pond	Min	Overflow	Constraint	
		HGL	Flow Arriving	Volume	Freeboard	(cu.m/s)		
			(cu.m/s)	(cu.m)	(m)			
SUB-CATCHMENT DETAILS								
Name	Max	Paved	Grassed	Paved	Grassed	Supp.	Due to Storm	
	Flow Q	Max Q	Max Q	Tc	Tc	Tc		
	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)		
B	11.467	0	11.467	0	133	0	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	
D	12.629	0	12.629	0	114	0	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	
A1	5.951	0	5.951	0	48	0	AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3	
A2	9.026	0	9.026	0	134	0	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	
C	5.899	0	5.899	0	152	0	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	
Outflow Volumes for Total Catchment (0.00 impervious + 357 pervious = 357 total ha)								
Storm	Total Rainfall	Total Runoff	Impervious Runoff	Pervious Runoff				
	cu.m	cu.m (Runoff %)	cu.m (Runoff %)	cu.m (Runoff %)				
AR&R 1 year, 20 minutes storm, average 61.0 mm/h, Zone 3	72514.14	907.49 (1.3%)	0.00 (0.0%)	907.49 (1.3%)				

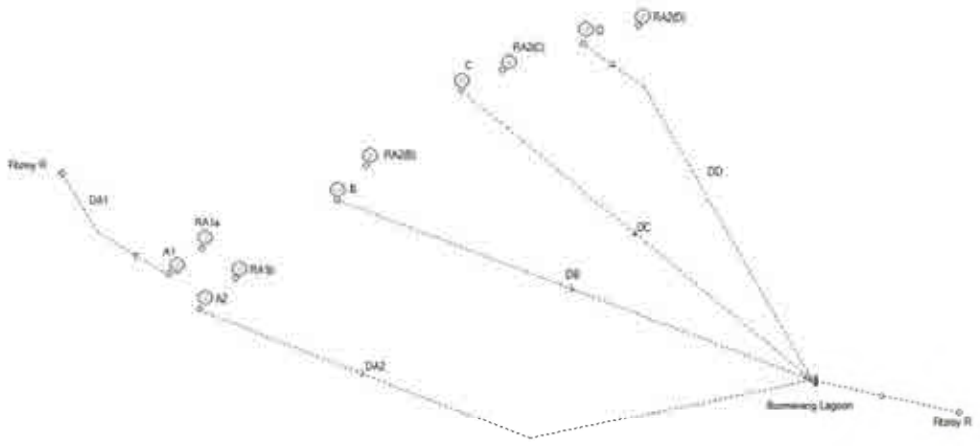
AR&R 1 year, 1 hour storm, average 34.1 mm/h, Zone 3	121560.39	5981.04 (4.9%)	0.00 (0.0%)	5981.04 (4.9%)				
AR&R 1 year, 3 hours storm, average 16.5 mm/h, Zone 3	176976.7	4169.43 (2.4%)	0.00 (0.0%)	4169.43 (2.4%)				
AR&R 1 year, 24 hours storm, average 4.0 mm/h, Zone 3	340363.19	0.00 (0.0%)	0.00 (0.0%)	0.00 (0.0%)				
AR&R 2 year, 20 minutes storm, average 78.7 mm/h, Zone 3	93633.75	4812.17 (5.1%)	0.00 (0.0%)	4812.17 (5.1%)				
AR&R 2 year, 1 hour storm, average 44.0 mm/h, Zone 3	156778.58	25111.89 (16.0%)	0.00 (0.0%)	25111.89 (16.0%)				
AR&R 2 year, 3 hours storm, average 21.5 mm/h, Zone 3	229768.31	43993.95 (19.1%)	0.00 (0.0%)	43993.95 (19.1%)				
AR&R 2 year, 24 hours storm, average 5.3 mm/h, Zone 3	452402.66	21845.91 (4.8%)	0.00 (0.0%)	21845.91 (4.8%)				
AR&R 5 year, 20 minutes storm, average 101 mm/h, Zone 3	119553.96	14272.50 (11.9%)	0.00 (0.0%)	14272.50 (11.9%)				
AR&R 5 year, 1 hour storm, average 56.0 mm/h, Zone 3	199713.36	62438.72 (31.3%)	0.00 (0.0%)	62438.72 (31.3%)				
AR&R 5 year, 3 hours storm, average 27.8 mm/h, Zone 3	298013.94	105495.41 (35.4%)	0.00 (0.0%)	105495.41 (35.4%)				
AR&R 5 year, 24 hours storm, average 7.3 mm/h, Zone 3	623047.88	101684.04 (16.3%)	0.00 (0.0%)	101684.04 (16.3%)				

AR&R 10 year, 20 minutes storm, average 114 mm/h, Zone 3	135427.11	22964.27 (17.0%)	0.00 (0.0%)	22964.27 (17.0%)				
AR&R 10 year, 1 hour storm, average 63.3 mm/h, Zone 3	225930.83	86794.39 (38.4%)	0.00 (0.0%)	86794.39 (38.4%)				
AR&R 10 year, 3 hours storm, average 31.8 mm/h, Zone 3	340407.75	144878.23 (42.6%)	0.00 (0.0%)	144878.23 (42.6%)				
AR&R 10 year, 24 hours storm, average 8.6 mm/h, Zone 3	736335.88	169674.17 (23.0%)	0.00 (0.0%)	169674.17 (23.0%)				
AR&R 20 year, 20 minutes storm, average 132 mm/h, Zone 3	156948	38812.37 (24.7%)	0.00 (0.0%)	38812.37 (24.7%)				
AR&R 20 year, 1 hour storm, average 73.3 mm/h, Zone 3	261487.84	120011.09 (45.9%)	0.00 (0.0%)	120011.09 (45.9%)				
AR&R 20 year, 3 hours storm, average 37.1 mm/h, Zone 3	397247.91	198458.97 (50.0%)	0.00 (0.0%)	198458.97 (50.0%)				
AR&R 20 year, 24 hours storm, average 10.3 mm/h, Zone 3	883474.56	268435.72 (30.4%)	0.00 (0.0%)	268435.72 (30.4%)				
AR&R 50 year, 20 minutes storm, average 157 mm/h, Zone 3	186090.39	62146.20 (33.4%)	0.00 (0.0%)	62146.20 (33.4%)				
AR&R 50 year, 1 hour storm, average 86.8 mm/h, Zone 3	309529.44	163700.55 (52.9%)	0.00 (0.0%)	163700.55 (52.9%)				
AR&R 50 year, 3 hours storm, average 44.4 mm/h, Zone 3	474821.19	269507.31 (56.8%)	0.00 (0.0%)	269507.31 (56.8%)				

AR&R 50 year, 24 hours storm, average 12.7 mm/h, Zone 3	1090467.5	397366.50 (36.4%)	0.00 (0.0%)	397366.50 (36.4%)				
AR&R 100 year, 20 minutes storm, average 176 mm/h, Zone 3	208957.83	80682.00 (38.6%)	0.00 (0.0%)	80682.00 (38.6%)				
AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3	347298.03	199445.25 (57.4%)	0.00 (0.0%)	199445.25 (57.4%)				
AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	536253.94	328782.28 (61.3%)	0.00 (0.0%)	328782.28 (61.3%)				
AR&R 100 year, 24 hours storm, average 14.7 mm/h, Zone 3	1258972.63	533551.94 (42.4%)	0.00 (0.0%)	533551.94 (42.4%)				
PIPE DETAILS								
Name	Max Q	Max V	Max U/S	Max D/S	Due to Storm			
	(cu.m/s)	(m/s)	HGL (m)	HGL (m)				
CHANNEL DETAILS								
Name	Max Q	Max V			Due to Storm			
	(cu.m/s)	(m/s)						
OVERFLOW ROUTE DETAILS								
Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
DB	11.467	11.467	3.101	0.458	1.61	10.11	3.52	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3
Lagoon	0	0	0.159	0	0	0	0	
DD	12.629	12.629	1.201	0.536	2.07	8.85	3.85	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3

DA1	5.951	5.951	1.484	0.366	1.06	8.86	2.9	AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3
DA2	9.026	9.026	1.201	0.467	1.58	8.85	3.39	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3
DC	5.899	5.899	1.484	0.365	1.05	8.86	2.88	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3
DETENTION BASIN DETAILS								
Name	Max WL	MaxVol	Max Q	Max Q	Max Q			
			Total	Low Level	High Level			
Boomerang	6.76	493016.6	0	0	0			
CONTINUITY CHECK for AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3								
Node	Inflow	Outflow	Storage Change	Difference				
	(cu.m)	(cu.m)	(cu.m)	%				
Fitzroy R	0	0	0	0				
	90119.48	90119.48	0	0				
Boomerang	284634.88	0	284304.5	0.1				
	91549.83	91549.83	0	0				
	25297.89	25297.89	0	0				
Fitzroy R	25297.89	25297.89	0	0				
	71265.66	71265.66	0	0				
	50549.71	50549.71	0	0				
Run Log for 1810_DRAINS v3.drn run at 15:15:40 on 29/10/2015								

DRAINS SCHEMATIC AND RESULTS – DEVELOPED CASE



1626_610_002 GROUNDWORK p l u s

DRAINS results prepared 29 October, 2015 from Version 2015.11								
PIT / NODE DETAILS				Version 8				
Name	Max HGL	Max Pond	Max Surface	Max Pond	Min	Overflow	Constraint	
		HGL	Flow Arriving	Volume	Freeboard	(cu.m/s)		
			(cu.m/s)	(cu.m)	(m)			
SUB-CATCHMENT DETAILS								
Name	Max	Paved	Grassed	Paved	Grassed	Supp.	Due to Storm	
	Flow Q	Max Q	Max Q	Tc	Tc	Tc		
	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)		
B	8.011	0	8.011	0	133	0	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	
D	6.846	0	6.846	0	114	0	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	
A1	3.471	0	3.471	0	48	0	AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3	
A2	8.108	0	8.108	0	134	0	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	
C	3.921	0	3.921	0	83	0	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	
RA1a	6.277	0	6.277	0	10	0	AR&R 100 year, 20 minutes storm, average 176 mm/h, Zone 3	
RA1b	4.099	0	4.099	0	10	0	AR&R 100 year, 20 minutes storm, average 176 mm/h, Zone 3	
RA2(B)	10.490	0	10.490	0	25	0	AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3	
RA2(C)	10.389	0	10.389	0	25	0	AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3	
RA2(D)	16.985	0	16.985	0	22	0	AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3	

1626_810_002 GROUNDWORK plus

Outflow Volumes for Total Catchment (0.00 impervious + 356 pervious = 356 total ha)								
Storm	Total Rainfall	Total Runoff	Impervious Runoff	Pervious Runoff				
	cu.m	cu.m (Runoff %)	cu.m (Runoff %)	cu.m (Runoff %)				
AR&R 1 year, 20 minutes storm, average 61.0 mm/h, Zone 3	72465.35	2399.44 (3.3%)	0.00 (0.0%)	2399.44 (3.3%)				
AR&R 1 year, 1 hour storm, average 34.1 mm/h, Zone 3	121478.6	10440.89 (8.6%)	0.00 (0.0%)	10440.89 (8.6%)				
AR&R 1 year, 3 hours storm, average 16.5 mm/h, Zone 3	176857.63	5155.57 (2.9%)	0.00 (0.0%)	5155.57 (2.9%)				
AR&R 1 year, 24 hours storm, average 4.0 mm/h, Zone 3	340134.19	0.00 (0.0%)	0.00 (0.0%)	0.00 (0.0%)				
AR&R 2 year, 20 minutes storm, average 78.7 mm/h, Zone 3	93570.76	11184.67 (12.0%)	0.00 (0.0%)	11184.67 (12.0%)				
AR&R 2 year, 1 hour storm, average 44.0 mm/h, Zone 3	156673.11	34043.55 (21.7%)	0.00 (0.0%)	34043.55 (21.7%)				
AR&R 2 year, 3 hours storm, average 21.5 mm/h, Zone 3	229613.72	46349.13 (20.2%)	0.00 (0.0%)	46349.13 (20.2%)				
AR&R 2 year, 24 hours storm, average 5.3 mm/h, Zone 3	452098.28	23375.02 (5.2%)	0.00 (0.0%)	23375.02 (5.2%)				
AR&R 5 year, 20 minutes storm, average 101 mm/h, Zone 3	119473.52	26161.92 (21.9%)	0.00 (0.0%)	26161.92 (21.9%)				
AR&R 5 year, 1 hour storm, average 56.0 mm/h, Zone 3	199579	72341.45 (36.2%)	0.00 (0.0%)	72341.45 (36.2%)				
AR&R 5 year, 3 hours storm, average 27.8 mm/h, Zone 3	297813.44	108947.04 (36.6%)	0.00 (0.0%)	108947.04 (36.6%)				
AR&R 5 year, 24 hours storm, average 7.3 mm/h, Zone 3	622628.69	106013.68 (17.0%)	0.00 (0.0%)	106013.68 (17.0%)				

AR&R 10 year, 20 minutes storm, average 114 mm/h, Zone 3	135335.98	37471.74 (27.7%)	0.00 (0.0%)	37471.74 (27.7%)				
AR&R 10 year, 1 hour storm, average 63.3 mm/h, Zone 3	225778.81	97079.72 (43.0%)	0.00 (0.0%)	97079.72 (43.0%)				
AR&R 10 year, 3 hours storm, average 31.8 mm/h, Zone 3	340178.72	148927.84 (43.8%)	0.00 (0.0%)	148927.84 (43.8%)				
AR&R 10 year, 24 hours storm, average 8.6 mm/h, Zone 3	735840.5	174987.11 (23.8%)	0.00 (0.0%)	174987.11 (23.8%)				
AR&R 20 year, 20 minutes storm, average 132 mm/h, Zone 3	156842.41	55520.24 (35.4%)	0.00 (0.0%)	55520.24 (35.4%)				
AR&R 20 year, 1 hour storm, average 73.3 mm/h, Zone 3	261311.91	130886.72 (50.1%)	0.00 (0.0%)	130886.72 (50.1%)				
AR&R 20 year, 3 hours storm, average 37.1 mm/h, Zone 3	396980.63	203207.27 (51.2%)	0.00 (0.0%)	203207.27 (51.2%)				
AR&R 20 year, 24 hours storm, average 10.3 mm/h, Zone 3	882880.19	274874.41 (31.1%)	0.00 (0.0%)	274874.41 (31.1%)				
AR&R 50 year, 20 minutes storm, average 157 mm/h, Zone 3	185965.19	80866.55 (43.5%)	0.00 (0.0%)	80866.55 (43.5%)				
AR&R 50 year, 1 hour storm, average 86.8 mm/h, Zone 3	309321.19	175463.08 (56.7%)	0.00 (0.0%)	175463.08 (56.7%)				
AR&R 50 year, 3 hours storm, average 44.4 mm/h, Zone 3	474501.72	275500.28 (58.1%)	0.00 (0.0%)	275500.28 (58.1%)				
AR&R 50 year, 24 hours storm, average 12.7 mm/h, Zone 3	1089733.88	403931.88 (37.1%)	0.00 (0.0%)	403931.88 (37.1%)				
AR&R 100 year, 20 minutes storm, average 176 mm/h, Zone 3	208617.25	101166.52 (48.4%)	0.00 (0.0%)	101166.52 (48.4%)				
AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3	347064.34	211987.75 (61.1%)	0.00 (0.0%)	211987.75 (61.1%)				
AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3	535893.13	335150.88 (62.5%)	0.00 (0.0%)	335150.88 (62.5%)				
AR&R 100 year, 24 hours storm, average 14.7 mm/h, Zone 3	1258125.63	540535.75 (43.0%)	0.00 (0.0%)	540535.75 (43.0%)				
PIPE DETAILS								

Name	Max Q	Max V	Max U/S	Max D/S	Due to Storm			
	(cu.m/s)	(m/s)	HGL (m)	HGL (m)				
CHANNEL DETAILS								
Name	Max Q	Max V			Due to Storm			
	(cu.m/s)	(m/s)						
OVERFLOW ROUTE DETAILS								
Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
DB	8.011	8.011	0	0.395	1.21	10.11	3.07	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3
Lagoon	0	0	-999	0	0	0	0	
DD	6.846	6.846	0	0.419	1.28	8.85	3.06	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3
DA1	3.471	3.471	0	0.3	0.71	8.86	2.37	AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3
DA2	8.108	8.108	0	0.447	1.46	8.85	3.26	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3
DC	3.921	3.921	0	0.313	0.77	8.86	2.47	AR&R 100 year, 3 hours storm, average 50.1 mm/h, Zone 3
DETENTION BASIN DETAILS								
Name	Max WL	MaxVol	Max Q	Max Q	Max Q			
			Total	Low Level	High Level			
Boomerang	6.2	326521.9	0	0	0			
CONTINUITY CHECK for AR&R 100 year, 1 hour storm, average 97.4 mm/h, Zone 3								

Node	Inflow	Outflow	Storage Change	Difference				
	(cu.m)	(cu.m)	(cu.m)	%				
Fitzroy R	0	0	0	0				
	38341.39	38341.39	0	0				
Boomerang	44495.27	0	44197.32	0.7				
	30742.55	30742.55	0	0				
	9588.5	9588.5	0	0				
Fitzroy R	9588.5	9588.5	0	0				

Attachment 2

Flood Hazard Assessment Report

12/11/2015
1810.610.002

Flood Hazard Mapping – Yaamba & South Yaamba Bundle 9

Final Report

2013

The expert in WATER ENVIRONMENTS

QLDRA
Final Report
April 2013

Flood Hazard Mapping – Yaamba & South Yaamba
Bundle 9

April 2013

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Client	Client's representative
Queensland Reconstruction Authority (QLDRA)	Greg Scroope

Project	Project No
Flood Hazard Mapping – Yaamba & South Yaamba Bundle 9	43800978-1
Authors Monika Balicki Mark Britton Mark Dugan	Date 3 April 2013 Approved by Terry Van Kalken

02	Final	MOBA	MFB	TVK	3/04/13
01	Draft	MOBA	MFB	TVK	4/02/13
Revision	Description	By	Checked	Approved	Date

Key words	Classification
Flood Hazard Mapping, Modelling, MIKE21	☐ Open ☐ Internal ☒ Proprietary

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QLDRA	Greg Scroope	1

CONTENTS

1	INTRODUCTION	2
2	METHODOLOGY & DELIVERABLES	3
2.1	Stage 1-Data Compilation and Review	3
2.1.1	Topographical Data	3
2.1.2	Historical Flood Information and Flood Frequency Analysis	3
2.2	Stage 2-Model Setup and Validation	4
2.3	Stage 3-Completion of Modelling and Digital Mapping	4
2.3.1	Design Flood Modelling	4
2.3.2	Flood Hazard Categorisation and Mapping	4
2.4	Stage 4-Deliverables	6
2.4.1	Flood Maps	6
2.4.2	Geodatabase	6
2.4.3	Flood Animations	7
3	HYDRODYNAMIC MODEL DEVELOPMENT	8
3.1	Model Domain and Setup	8
3.1.1	Bathymetry Development	9
3.1.2	Model Roughness	9
3.1.3	Flooding and Drying Depths	11
3.1.4	Eddy Viscosity	11
3.1.5	Model Boundaries	11
3.1.6	Model Validation	11
4	ASSESSMENT OF MODEL PERFORMANCE	12
5	DESIGN EVENTS	13
6	SUMMARY AND CONCLUSIONS	14
7	RECOMMENDATIONS	15
8	REFERENCES	16

APPENDICES

APPENDIX A	Yaamba Maps
APPENDIX B	South Yaamba Maps

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1 INTRODUCTION

The State of Queensland acting through Queensland Reconstruction Authority (QLDRA) is undertaking a program to implement the Queensland Flood Commission of Inquiry recommendations which are: (1) Collation, repository and display of flood information across the state; and (2) Flood investigations and flood hazard mapping. As part of this program, QLDRA is responsible for delivery of the following:

- Queensland Flood Studies Information Database;
- Flood Investigations resulting in flood hazard maps for Land Use Planning and Emergency Management Purposes;
- Queensland Flood Portal; and
- Flood Information Reports.

The Queensland Reconstruction Authority via Bureau of Meteorology (BOM) has identified major flood prone townships which were grouped into 14 bundles. Each bundle requires a comprehensive study for flood hazard mapping. The purpose of this flood hazard modelling is to develop a more reliable detailed floodplain toolkit that supports the Queensland Flood Commission of Inquiry (QFCoI) recommendations. The flood study defines the nature of the flood risk by providing flood information on the extent, flood level, velocity of the floodwaters and the distribution of floodwaters across the sections of the floodplains adjacent to the townships.

Accordingly, QLDRA has contracted DHI Water and Environment Pty Ltd (DHI) to develop Flood Hazard Mapping (FHM) for Bundles 9 and 10 comprising 13 townships including Yaamba and South Yaamba. The townships of Yaamba and South Yaamba are under the Local Government Area of Rockhampton Regional Council.

This report describes the methodology, available data, development and validation of 2D hydraulic modelling to produce depth, velocity and flood hazard maps for historical and design event simulations for the townships of Yaamba and South Yaamba. The report ends with concluding remarks and recommendations to further improve the model accuracy.

2 METHODOLOGY & DELIVERABLES

The investigation was divided into a number of phases, with the following methodology applied for flood hazard mapping.

- Stage 1: Data Compilation and Review
- Stage 2: Model Setup and Validation
- Stage 3: Design Event Simulation and Mapping
- Stage 4: Deliverables

2.1 Stage 1-Data Compilation and Review

The available GIS layers were collected and compiled into an ArcGIS geodatabase which includes:

- Aerial Photography
- 1m LiDAR data
- Cadastral data
- Road and rail network
- Historical flood information especially flood marks levels and flood extents
- Flood frequency analysis results
- A Point of Interest GIS layer
- A Planning Schemes GIS layer
- Flood town extent

Once the geodatabase was established, the flood model extent was determined by overlaying the flood town extents, LiDAR data, roads and railway lines and aerial photography in GIS. Suitable model boundary conditions were established in a way that the area of interest was fully covered and that influences from model boundaries were minimised. Once the model extent was determined the 1m LiDAR grid was processed and used as the basis for model development.

2.1.1 Topographical Data

The topographical data provided by Queensland Reconstruction Authority (QLDRA) is based on Airborne Laser Scanning (ALS). The ALS was carried out to capture the ground level spot heights that were used to generate Digital Terrain Model (DTM) for the study area. The supplied ALS data contains multiple tiles in raster format. The raster tiles were merged in order to create a 1m resolution DEM covering the entire study area (see the details in Section 3.1.1).

2.1.2 Historical Flood Information and Flood Frequency Analysis

Available recorded historical flood levels were supplied by QLDRA, together with water level measurements at the designated BOM and/or NRM gauging stations in the area.

The 1991 event was recorded as a major historical flood event for the townships of Yaamba and South Yaamba. BoM Gauge #33076 recorded a peak water level of 17.95m AHD during this event. The corresponding peak flow at the gauge was estimated to 14,500m³/s, see Table 1. The recorded flood level and estimated discharge were used for model validation.

Table 1 Historical Flood Event Data

BoM Gauge	Flood Event	Flood Level (m AHD)	Discharge (m^3/s)
#33076	1991	17.95	14,500 (Estimated)

A flood frequency analysis (FFA) at NRM Gauge Station 130005A was provided by QLDRA for South Yaamba, see Table 2.

Table 2 South Yaamba Flood Frequency Analysis (QLDRA, 2012a)

AEP (%)	Peak Discharge (m^3/s)
10	7,600
5	11,000
2	16,000
1	20,000
0.5	25,000
0.2	31,000

2.2 Stage 2-Model Setup and Validation

DHI's MIKE21 Version 2012 rectangular grid modelling software was applied in this study. MIKE21 is a two dimensional, physically based hydrodynamic model for overland flow modelling. In MIKE21 the floodplain is divided up into a grid of square model cells, with information on the ground level, including channel invert, entered at each grid cell. A feature of MIKE21 is the ability to apply inflows directly at the model boundary and simulate surface water levels and velocities for both channel and floodplain. The detailed model setup is described in Section 3 of this report.

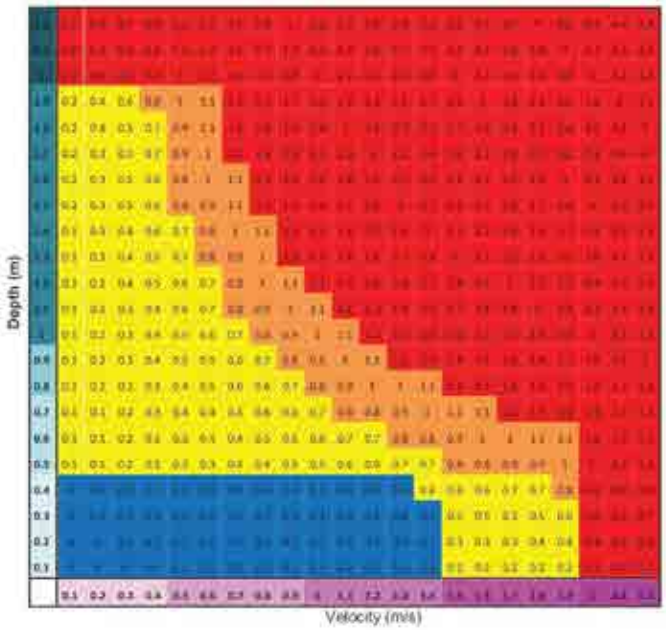
2.3 Stage 3-Completion of Modelling and Digital Mapping

2.3.1 Design Flood Modelling

Upon completion of the validation process, the simulation of specified AEP events was performed using design peak flow estimates. This was applied using a steady state boundary, since temporal data was not supplied. All simulations were carried out until either the peak flow had passed the downstream boundary, or a steady state condition was reached.

2.3.2 Flood Hazard Categorisation and Mapping

Flood hazard classification was estimated based on the velocity-depth matrix provided by QLDRA (see Figure 1). The 2D model results were post-processed to produce spatial grid outputs of maximum depth, level, speed and flood hazard. The hazard was computed at each time step, with the maximum hazard in each grid cell exported as a raster for mapping purposes.



	Low	Significant	High	Extreme
Depth	<0.5	<2	<2	2+
Velocity	<1.5	<2	<2	2+
DxV Product	<0.6	0.6 to <0.8	0.8 to <1.2	1.2 +

Figure 1 Flood Hazard Classification (Source: QLDRA)

The flood hazard criteria used in the flood hazard maps are based on Schedule 4 on page 45 in QLDRA's "Planning for stronger, more resilient floodplains" document (QLDRA, 2012b).

The flood hazard criteria *'have been prepared for use in preparing flood investigations (level 2), and planning evaluations based on latest available engineering guidance. In absence of other more appropriate flood hazard definitions, the criteria below may be used'*. The references used to develop the criteria are given in the guidelines.

The low hazard category was mainly based on the ARR Revision Project 10: Appropriate Safety Criteria for People (ARR, 2010) and Appropriate Safety Criteria for Vehicles (ARR, 2011). A proper understanding of what is meant by Low Hazard can be gained by reviewing these reports.

For example, it is noted in ARR (2010) that for the Low Hazard category stability is *'uncompromised for persons within laboratory test program at these flows (to maximum flow depth of 0.5 m for children and 1.2 m for adults and a maximum velocity of 3.0 m/s at shallow depths)'*.

It is further noted that *'loss of stability could occur in lower flows when adverse conditions are encountered including:*

- ***Bottom conditions:*** *uneven, slippery, obstacles;*
- ***Flow conditions:*** *floating debris, low temperature, poor visibility, unsteady and flow aeration;*
- ***Human subject:*** *standing or moving, experience and training, clothing and footwear, physical attributes additional to height and mass including muscular development and/or disability, psychological factors;*
- ***Others:*** *strong wind, poor lighting, definition of stability limit (i.e. felling unsafe or complete loss of footing).'*

There are also caveats on the criteria for stability of vehicles. It should be noted that the low flow criteria applies to large 4WD vehicles. Small passenger vehicles may not be safe in this category.

It should be noted that the QRA flood hazard criteria are only interim guidelines and local authorities may wish to use a different criteria based on local experience. One alternative is given in Appendix J of the "Floodplain Management in Australia: best practice principles and guidelines SCARM Report 73" (CSIRO, 2000).

2.4 Stage 4-Deliverables

2.4.1 Flood Maps

Mapping of the 2D model results was undertaken using ArcGIS 10.1, after establishing a geodatabase. The following maps were prepared for the validation and design events using the templates provided by QLDRA.

- A map showing the inundation extent for the validation and design events over the planning scheme.
- A four classification maximum hazard map over aerial photography.
- A five category map showing the maximum flood depth on aerial photography.
- A five category map showing the maximum velocity magnitude on aerial photography.

All maps are included in the appendix of this report, and printed separately as laminated A2 prints.

2.4.2 Geodatabase

A geodatabase was prepared with the following GIS layers, which were used to produce the maps:

- Raster representing flood depth for all the events
- Raster representing flood velocity for all the events
- Raster representing flood hazard for all the events
- Points of interest
- Roads
- Railway
- Ortho-Imagery (if it exists)

All geodatabases developed during this study were delivered back to QLDRA on the same digital media which contained the source data provided by QLDRA.

2.4.3 *Flood Animations*

Flood animations in AVI format were generated for validation and design events. These animations were also delivered back to QLDRA on the same digital media which contained the source data provided by QLDRA. In the case where steady state flows were applied, dynamic elements of the animation result from the model warm-up period over which the steady state peak flow is established.

3 HYDRODYNAMIC MODEL DEVELOPMENT

The following section documents the specific issues encountered during the development and validation of the flood model.

3.1 Model Domain and Setup

The 2D model domain for Yaamba and South Yaamba townships extends approximately 16.3 km upstream of the confluence of Alligator Creek and Fitzroy River (along Fitzroy River) to approximately 7.4 km downstream of the confluence along the Fitzroy River, as shown in Figure 2. The model domain is based on the available LiDAR data supplied as well as the flood town extents.

Figure 2 Yaamba and South Yaamba Model Setup

3.1.1 Bathymetry Development

The MIKE21 model incorporates a detailed elevation model (bathymetry) of the ground surface. A DEM for use in the model was created using the LiDAR data provided by QLDRA. The surface DEM was developed on a 10m grid resolution, using an automated GIS based technique to collate and manipulate the available ground survey data. A 10m grid was developed covering an area as far upstream and as far downstream of the township as possible based on the source LiDAR extents.

Specifically, the steps as described below were followed to prepare the model bathymetry:

- Combine the tiles of 1m grid files (raster) to a single grid file (raster) using ArcCatalog.
- The 1m fine DEM was "clipped" to the model extent.
- The clipped DEM was interpolated to a grid at the model resolution of 10m as specified in the brief.
- Flow path connectivity was enforced by removing bridge and culvert obstructions where appropriate.
- The grid was converted to MIKE 21 format.

Flow path connectivity was checked for free flow at major waterway crossings like bridges, while smaller flow structures such as culverts and those crossings on secondary flow paths were implemented as they were represented in the source LiDAR data. This implies that most small culverts and structures were assumed to be 100% blocked during a flood, thus producing a conservative estimate of the flood extent.

All other features of the floodplain likely to influence the flow of floodwaters over the specified range of design floods were included in the 2D model. These include appropriate discretisation of elevated embankments, dam walls, roads and railways in a form that ensures correct representation of the features both for smaller floods, where the influence on flow behaviour has been observed, and for more extreme events, where the feature may be overwhelmed. Correct and appropriate representation of these features is paramount for the model to correctly extrapolate flood behaviour for extreme events.

The crest levels of the roads and railway embankments were incorporated into the model using the following steps:

- Digitise polylines along the crown of road and railway embankments;
- Convert the polylines to points with 1m spacing;
- Extract the elevation at each point from the 1m DEM;
- Create a 10m raster from the points; and
- Update the 'base' bathymetry or DEM with this raster.

3.1.2 Model Roughness

MIKE21 models require the specification of hydraulic roughness to be applied in each cell, either as a constant value or in the form of a map (grid) of roughness values. A spatially distributed roughness map for the model domain was created based on the land use classes verified in the Planning Scheme and vegetation coverage identified from the aerial photography provided by QLDRA. Five distinct land use classes were identified within the study area.

The adopted hydraulic roughness values (Manning's 'n') for each class are shown in Table 3. These values were based on DHI's extensive previous experience in Queensland, and are considered appropriate and representative for the land use classes defined. The roughness map is presented in Figure 3.

Table 3 Land Use Classes & Adopted Roughness Values

Land use	Manning's 'n'
Floodplain	0.040
Roads & Railway	0.025
Developed Areas	0.050
Dense Vegetation	0.066
River Bed	0.033

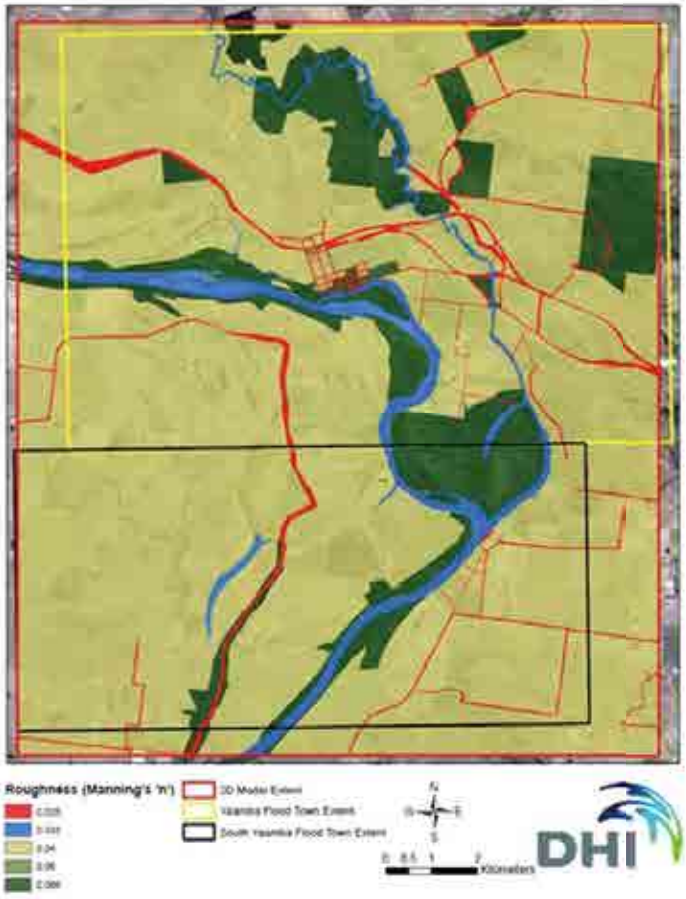


Figure 3 Yaamba and South Yaamba Roughness Map

3.1.3 Flooding and Drying Depths

Within Version 2012 of the MIKE21 software there is an option to utilise an optimised flooding and drying solution that has the beneficial effect of enabling a 10m resolution model with undulating and steep terrain to be run at time step of 1 second. An appropriate flooding depth of 0.002m and drying depth of 0.01m was used in this study.

3.1.4 Eddy Viscosity

A constant velocity based eddy viscosity value of 1.0 m^2/s was adopted for the developed model. This value is consistent with the model resolution (10m) and based on DHI's extensive previous experience with selections of secondary model parameters.

3.1.5 Model Boundaries

Open model boundaries were specified at the inflow point to the model and at the downstream exit point. A steady state flow for validation and design events was applied to the 2D model at the inflow boundary. The inflow peak flows were all supplied by QLDRA, or agreed with QLDRA as part of the model validation process. The downstream open model boundary was specified as a constant water level of 8m for the validation event and all design events. The downstream model boundary was positioned as far downstream of the area of interest as possible to minimise backwater effects from assumptions made at the boundary location.

3.1.6 Model Validation

The hydraulic model was validated against a peak flood mark level for the 1991 event. The maximum flood level estimated from the simulation was compared against historical flood level data acquired from the BoM Gauge. Extensive consultation with QLDRA occurred throughout the model validation process, to ensure that all methodologies applied were approved by QLDRA and that any resulting uncertainty was well understood and documented.

According to QLDRA's recommendation, attempts were made to achieve a target accuracy of +/-0.5m difference between simulated flood levels and observed/recorded levels.

4 ASSESSMENT OF MODEL PERFORMANCE

The Yaamba and South Yaamba model was validated for the 1991 flood event. An inflow of 14,500m^3/s was applied at the inflow boundary, and after iterations an almost perfect match was achieved between the simulated and recorded level at the BoM Gauge. The validation plot is graphically shown in Figure 4.

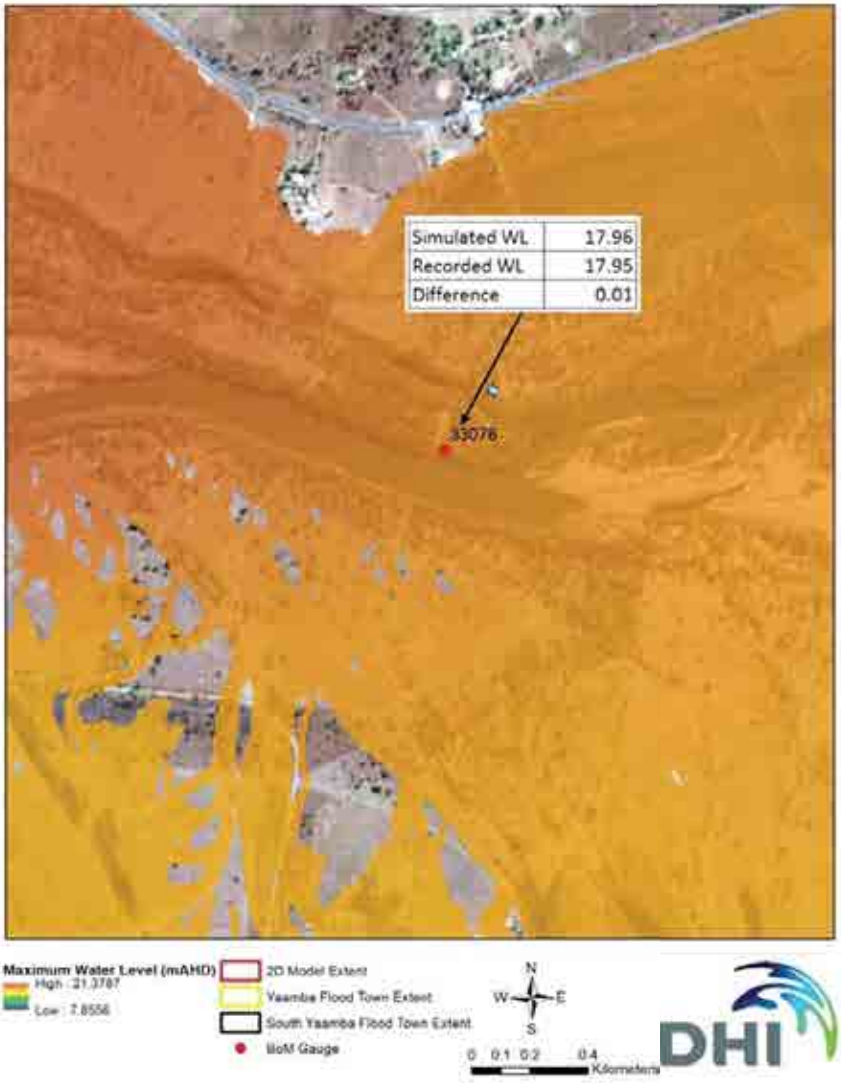


Figure 4 Comparison of Peak Water Levels for the 1991 Validation Event

5 DESIGN EVENTS

Based on the results from the validation event, the initial design flows provided by QLDRA were considered adequate (refer to Table 4). To match design event consistency, the 2%, 1% and 0.2% AEP events were run. The results were processed to produce peak flood depth, velocity and hazard maps, with mapping presented in Appendix A and Appendix B.

Table 4 Yaamba and South Yaamba Design Floods

AEP (%)	Peak Discharge (m^3/s)
2	16,000
1	20,000
0.2	31,000

6 SUMMARY AND CONCLUSIONS

Two dimensional hydraulic modelling of Yaamba and South Yaamba was undertaken for validation and design floods supplied by QLDRA. A 2D MIKE21 model was developed with a 10m grid resolution and domain extended as far upstream and downstream as possible based on available LiDAR data. The model was validated for a selected historical event for which flood level and discharge data was available from a BoM Gauge located within the model extent. The validation results were demonstrated graphically and the predicted levels were well within the required accuracy of +/-0.5m.

The model validation result is summarised below:

- Peak water level and discharge information was available for validation from BoM Gauge #33076 located in Yaamba. The model achieved a very good match for the 1991 flood level that was recorded at the BoM Gauge. The validation event verified that the initial design event peak flows were acceptable for the design event modelling. To be consistent with QLDRA's design event mapping, the 2%, 1% and 0.2% AEP events were modelled.

Comprehensive mapping is included in Appendices A and B of this report. Digital mapping, GIS geodatabases and model data files were also delivered as part of the study.

7 RECOMMENDATIONS

The following recommendations should be considered to improve the accuracy of the model performance.

1. Detailed calibration for at least two historical flood events should be performed to improve the model accuracy. Additional historical flood levels should be surveyed if available, and structures added to the model if they are considered to have a hydraulic impact.

2. If necessary, the design event discharges should be adjusted in the event that additional model validation data becomes available.

3. Hydrological modelling (rainfall-runoff analysis) and/or Regional Flood Frequency Estimation (RFFE) based on the latest guidance provided by Institution of Engineers Australia (2012) should be considered to verify results from FFA.

4. Hydrological modelling (rainfall-runoff analysis) should also be performed to determine the contribution from ungauged tributaries and local catchments known to impact on flood levels.

5. Where LiDAR intersects with standing water, creek and river bed levels are not accurately represented. Channel cross-section data should be collected in these areas to supplement the LiDAR data and improve the channel conveyance in the 2D model.

6. Simulated inundation extent for the validation and calibration events should be verified against flood photos and anecdotal records if available.

7. Sensitivity analysis of the design event modelling should be undertaken for inflow, roughness, blockage of hydraulic structures, assumed downstream boundary levels and climate change.

8. Additional flood levels may exist for flood events different to the adopted validation flood event used in this assessment. Further analysis and calibration of the model using these additional flood levels should be considered in future investigations.

8 REFERENCES

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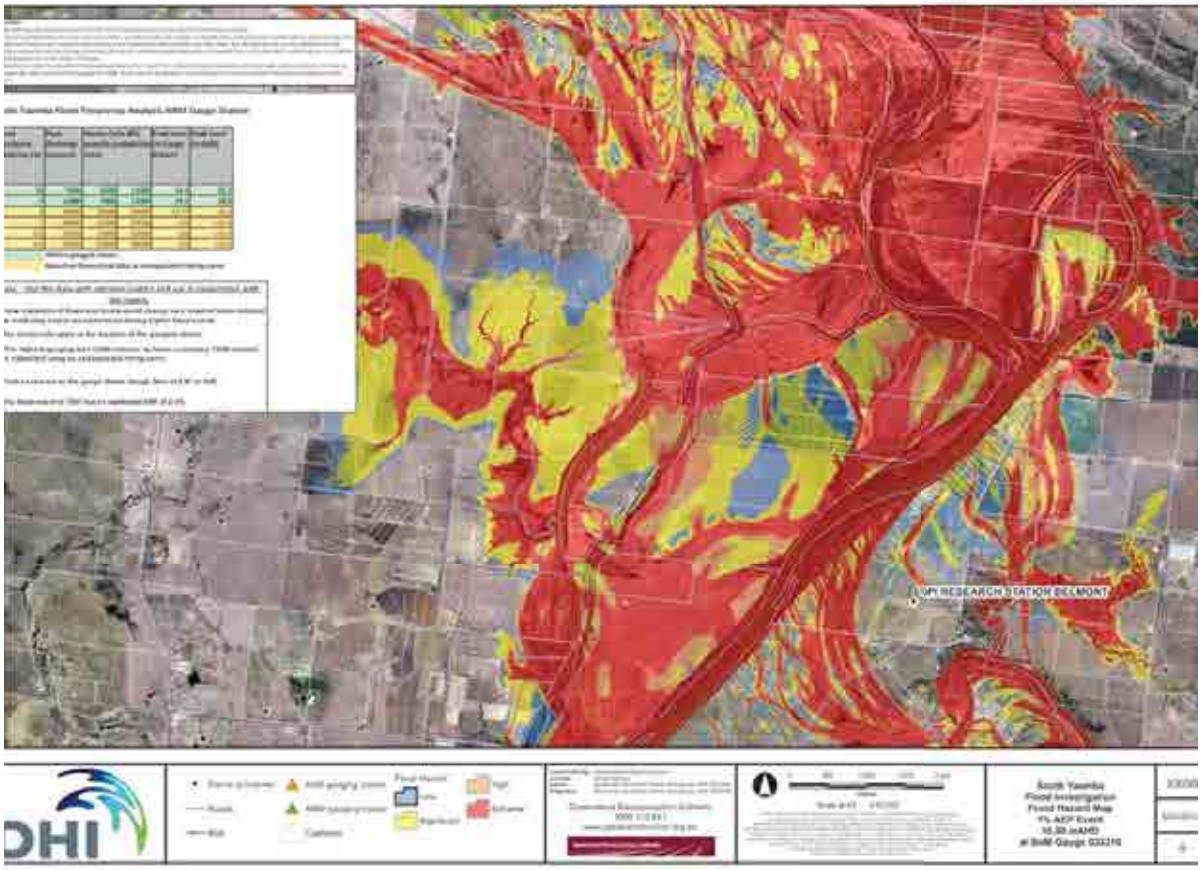
APPENDICES

APPENDIX A

Yaamba Maps

APPENDIX B

South Yaamba Maps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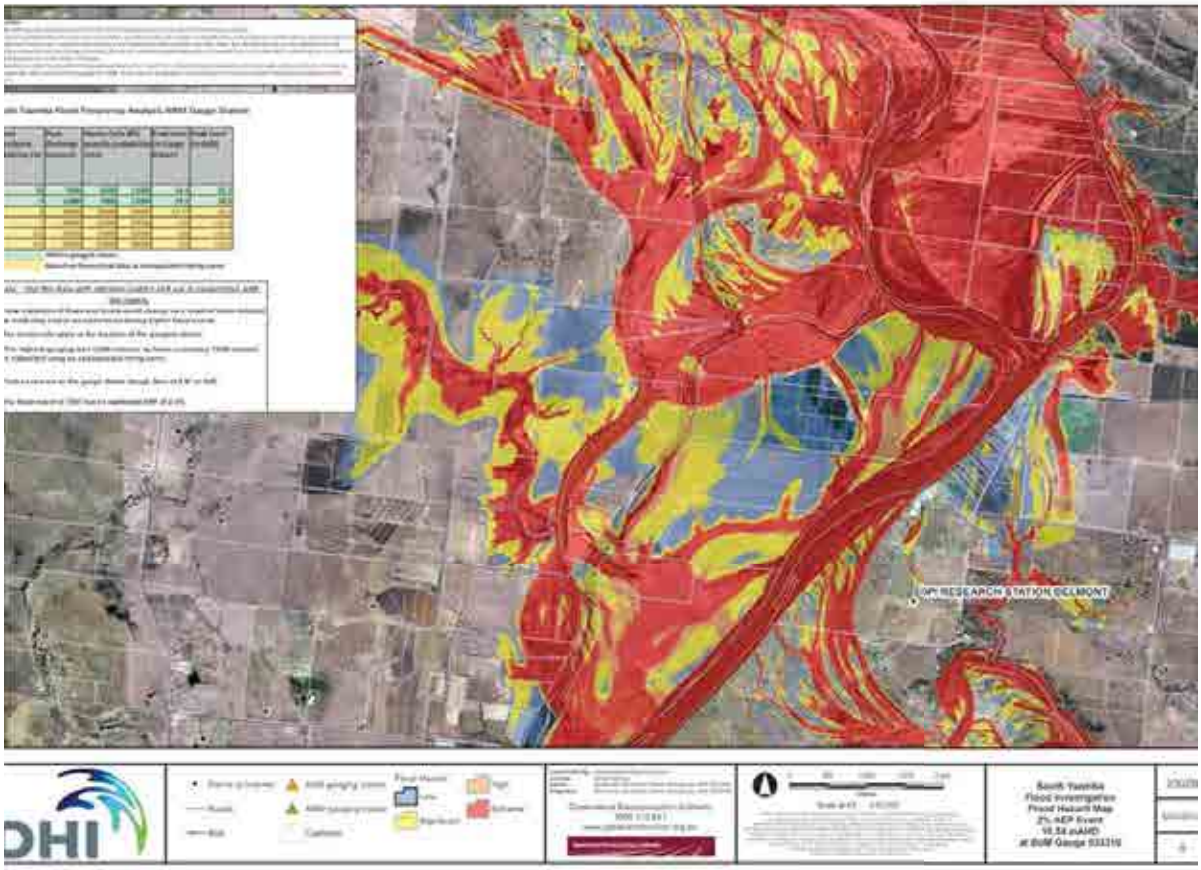
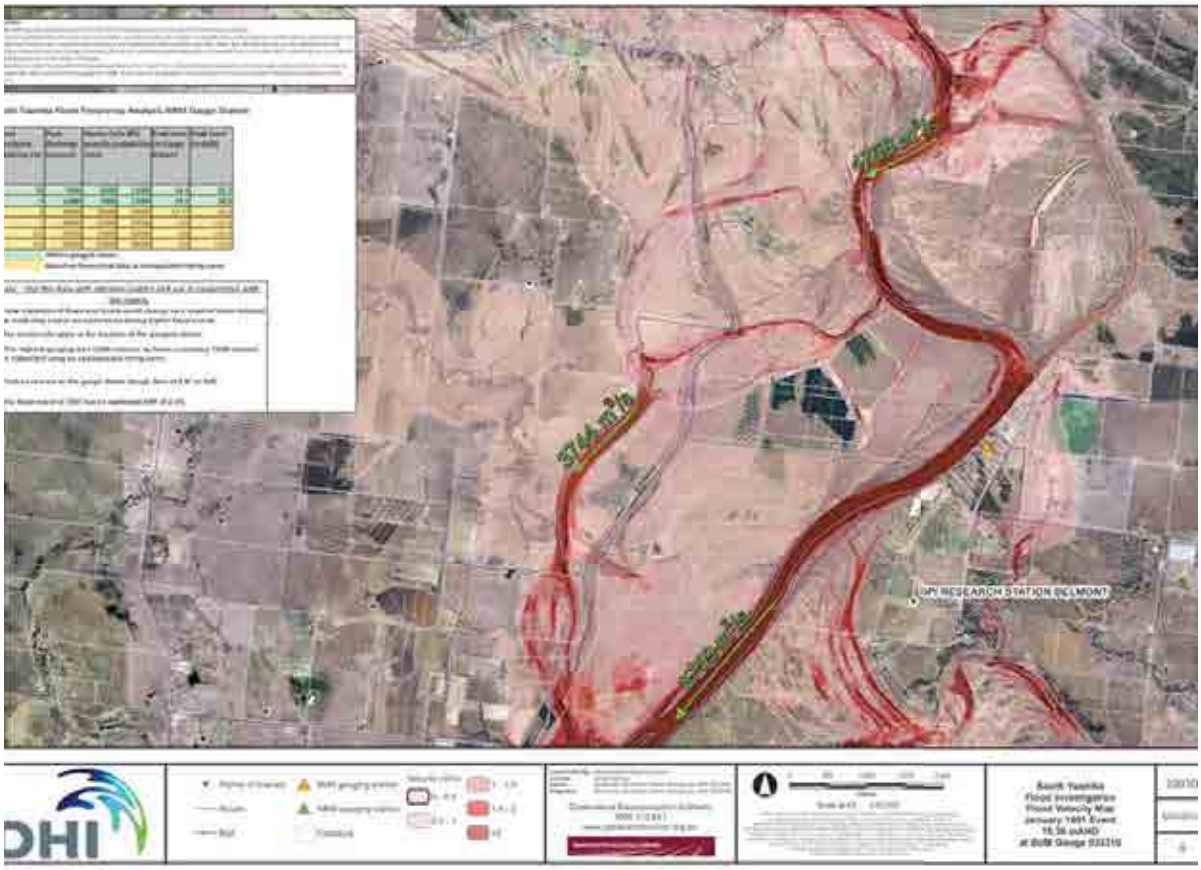

DHI
South Tweed
Flood Investigation
Flood Hazard Map
2% AEP Event
10.54 mAHD
at BoM Gauge 533310


DPI RESEARCH STATION BELMONT
DHI

Attachment 3

Registered Groundwater Bore Logs

12/11/2015
1810.610.002

DATE 29/10/2015

GROUNDWATER DATABASE

Page 1 of 4

BORE REPORT

REG NUMBER 111540

REGISTRATION DETAILS

	BASIN 1300	LATITUDE 23-12-30	MAP SCALE 253
OFFICE Rockhampton	SUB-AREA	LONGITUDE 150-23-48	MAP SERIES M
ATE LOG RECD	SHIRE 4530-LIVINGSTONE SHIR	EASTING 233481	MAP NO 8951-12
D/O FILE NO. 5150300885	LOT 3	NORTHING 7431020	MAP NAME
R/O FILE NO.	PLAN RP601653	ZONE 56	PROG SECTION
H/O FILE NO.	ORIGINAL DESCRIPTION	ACCURACY	PRES EQUIPMENT
		GPS ACC	
GIS LAT -23.2364 19005	PARISH NAME 1892-FITZROY		ORIGINAL BORE NO
GIS LNG 150.392759169	COUNTY LIVINGSTONE		BORE LINE -
CHECKED Y			
			POLYGON
			RN OF BORE REPLACED
FACILITY TYPE Sub-Artesian Facility	DATE DRILLED 24/01/2002		DATA OWNER
STATUS Abandoned but Still Usable	DRILLERS NAME JOHN BEASLEY		
ROLES WS	DRILL COMPANY HILLGROVE DRILLING		
	METHOD OF CONST. ROTARY		

CASING DETAILS

PIP E	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	24/01/2002	1	Polyvinyl Chloride	9.900	WT	140	0.00	18.20
A	24/01/2002	2	Screen	0.310	AP	140	18.20	19.20

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
1	0.00	10.70	TOPSOIL-CLAYS
2	10.70	19.50	LAYERS SANDY CLAYS WITH GRAVEL LAYERS

STRATIGRAPHY DETAILS

**** NO RECORDS FOUND ****

AQUIFER DETAILS

CTR

DATE 29/10/2015

GROUNDWATER DATABASE

BORE REPORT

REG NUMBER 111645

REC	TOP BED(M)	BOTTOM BED(M)	BED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	10.70	19.30	GRAV	24/01/2002	-11.00	N	COND 11890	1.26	Y	PS	FITZROY RIVER ALLUVIUM

PUMP TEST DETAILS PART 1

**** NO RECORDS FOUND ****

PUMP TEST DETAILS PART 2

**** NO RECORDS FOUND ****

BORE CONDITION

**** NO RECORDS FOUND ****

ELEVATION DETAILS

**** NO RECORDS FOUND ****

WATER ANALYSIS PART1

PIPE	DATE	RD	ANALYST	QAN	DEPTH (m)	RMK	SRC	COND (uS/cm)	pH	Si (mg/L)	TOTAL IONS (mg/L)	TOTAL SOLIDS (mg/L)	HARD	ALK	FIG. OF MERIT	SAR	RAH
A	20/02/2002	1	UCQ	202282	19.30	PU	GB	11890	6.9		7411.81	6859.80	2439	891	0.6	15.9	

WATER ANALYSIS PART 2

PIPE	DATE	RD	Na	K	Ca	Mg	Mn	HCO3	Fe	CO3	Cl	F	NO3	SO4	Zn	Al	B	Cu
A	20/02/2002	1	1800.0	5.7	350.0	380.0	0.08	1086.0	0.03		3750.0			40.0				

WATER LEVEL DETAILS

**** NO RECORDS FOUND ****

WIRE LINE LOG DETAILS

**** NO RECORDS FOUND ****

FIELD MEASUREMENTS

**** NO RECORDS FOUND ****

DATE 29/10/2015 **GROUNDWATER DATABASE** Page 3 of 4

BORE REPORT

REG NUMBER 111645

SPECIAL WATER ANALYSIS

**** NO RECORDS FOUND ****

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DATE 18/06/2015

GROUNDWATER DATABASE

Page 1 of 4

BORE REPORT

REG NUMBER 95289

REGISTRATION DETAILS

	BASIN	1300	LATITUDE	23-12-49	MAP SCALE 253
OFFICE Rockhampton	SUB-AREA		LONGITUDE	150-22-58	MAP SERIES M
ATE LOG RECD	SHIRE	4530-LIVINGSTONE SHIR	EASTING	232107	MAP NO 8951-12
D/O FILE NO 5150/300685	LOT	19	NORTHING	7433461	MAP NAME
R/O FILE NO 39-0699	PLAN	SP162291	ZONE	56	PROG SECTION
H/O FILE NO	ORIGINAL DESCRIPTION	52 P1409	ACCURACY	5KET	PRES EQUIPMENT
			GPS ACC		
GIS LAT -23.213180485	PARISH NAME	1892-FITZROY			ORIGINAL BORE NO OFFICE LICENCE ONLY
GIS LNG 150.382733052	COUNTY	LIVINGSTONE			BORE LINE -
CHECKED Y					
					POLYGON
					RN OF BORE REPLACED
FACILITY TYPE Sub-Artesian Facility	DATE DRILLED	26/09/1984			DATA OWNER
STATUS Existing	DRILLERS NAME				
ROLES WS	DRILL COMPANY				
	METHOD OF CONST.	ROTARY			

CASING DETAILS

PIP E	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	26/09/1984	1	Steel Casing		WT	220	0.00	19.40
A	26/09/1984	2	Screen	2.540	AP	205	19.20	22.20
A	15/06/2011	3	Polyvinyl Chloride	8.300	WT	160	0.00	19.70
A	15/06/2011	4	Centraliser				3.00	22.20
A	15/06/2011	5	Screen			154	19.07	22.20
A	15/06/2011	7	Gravel Pack	5.000	GR	160	5.00	22.20
A	15/06/2011	8	Grout			160	0.00	6.00

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
1	0.00	6.00	SANDY CLAYS
2	6.00	12.00	CLAY & SANDS

DATE 18/09/2015 **GROUNDWATER DATABASE** Page 2 of 4

BORE REPORT

REG NUMBER 66289

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
3	12.00	20.00	LAYERS OF CLAY & SAND
4	20.00	26.00	CLAYBOUND SAND & GRAVEL
5	26.00	30.00	CLAYS & BASALT
902			SWL 2/10/84 - 11.83 M
903			AIR TESTED AT 19 L/S
910			WRC COND - 1300 MICROSIOM

STRATIGRAPHY DETAILS

SOURCE	RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
DNR	1	0.00	20.00	FITZROY RIVER ALLUVIUM

AQUIFER DETAILS

REC	TOP RSCN(M)	BOTTOM RSCN(M)	SED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	10.28	22.80	SAND GRAV	02/10/1984	-11.83	N	COND 1300	18.88	Y	UC	FITZROY RIVER ALLUVIUM

PUMP TEST DETAILS PART 1

PIPE	DATE	REC NO	RN OF PUMP-BORE	TOP (m)	BOTTOM (m)	DIST METH	TEST TYPES	PUMP TYPE	SUCTION SET (m)	Q PRIOR TO TEST (l/s)	DUR OF Q PR (min)	PRES ON ARRIV (m)	Q ON ARRIV (l/s)
A	02/10/1984	1	66289	10.28	22.28	PUM	SD						

PUMP TEST DETAILS PART 2

PIPE	DATE	REC	TEST DUR (mins)	SWL (m)	RECOV TIME (mins)	RESID DD (m)	MAX DD or P RED (m)	Q at MAX DD (l/s)	TIME TO MAX DD (mins)	Max Q (l/s)	CALC STAT HD (m)	DESIGN YIELD (l/s)	DESIGN BP (m)	SUCT. SET (m)	TMSY (m2/DAY)	STOR
A	02/10/1984	1	1440	-11.83			2.00	21.20	1440			50.79	19.20		2130	

BORE CONDITION

**** NO RECORDS FOUND ****

DATE 18/09/2015 **GROUNDWATER DATABASE** Page 3 of 4

BORE REPORT

REG NUMBER 66289

ELEVATION DETAILS

**** NO RECORDS FOUND ****

WATER ANALYSIS PART1

PIPE	DATE	RD	ANALYST	QAN	DEPTH (m)	RWK	SRC	COND (uS/cm)	pH	SI (mg/L)	TOTAL IONS (mg/L)	TOTAL SOLIDS (mg/L)	HARD	ALK	FIG. OF MERIT	SAR	RAH
A	03/10/1984		T.GILL	106179	23.00	PU	DB	1300	7.3	67	766.32	701.47	341	181	1.3	2.8	

WATER ANALYSIS PART 2

PIPE	DATE	RD	Na	K	Ca	Mg	Mn	HCO3	Fe	CO3	Cl	F	NO3	SO4	Zn	Al	B	Cu
A	03/10/1984	1	125.0	1.9	45.0	55.0		220.0		0.0	290.0	0.10	3.0	30.0				

WATER LEVEL DETAILS

**** NO RECORDS FOUND ****

WIRE LINE LOG DETAILS

**** NO RECORDS FOUND ****

FIELD MEASUREMENTS

**** NO RECORDS FOUND ****

SPECIAL WATER ANALYSIS

**** NO RECORDS FOUND ****

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DATE 18/09/2015

GROUNDWATER DATABASE

Page 1 of 4

BORE REPORT

REG NUMBER 181494

REGISTRATION DETAILS

	BASIN 1300	LATITUDE 23-12-32	MAP SCALE 104
OFFICE Rockhampton	SUB-AREA	LONGITUDE 150-23-02	MAP SERIES M
ATE LOG RECD 03-JUN-11	SHIRE 4530-LIVINGSTONE SHIR	EASTING 232252	MAP NO 8951
D/O FILE NO. 5150300885	LOT 19	NORTHING 7433382	MAP NAME RIDGELANDS
R/O FILE NO.	PLAN SP163291	ZONE 56	PROG SECTION 12
H/O FILE NO.	ORIGINAL DESCRIPTION	ACCURACY	PRES EQUIPMENT
		GPS ACC	
GIS LAT -23.21442032	PARISH NAME 1882-FITZROY		ORIGINAL BORE NO
GIS LNG 150.3839889	COUNTY LIVINGSTONE		BORE LINE -
CHECKED Y			POLYGON
			RN OF BORE REPLACED 88289
FACILITY TYPE Sub-Artesian Facility	DATE DRILLED 03/06/2011		DATA OWNER
STATUS Existing	DRILLERS NAME SAWSBURY, RICHARD BRUCE		
ROLES WS	DRILL COMPANY R&G DRILLING		
	METHOD OF CONST. CABLE TOOL		

CASING DETAILS

PIPE	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	03/06/2011	1	Polyvinyl Chloride	8.000	WT	280	0.00	19.11
A	03/06/2011	2	Stainless Steel	2.000	WT	280	0.00	19.89
A	03/06/2011	3	Screen	0.050	AP	256	19.11	22.11
A	03/06/2011	4	Gravel Pack	5.000	GR	340	5.00	14.60
A	03/06/2011	5	Grout			340	0.00	5.00

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
1	0.00	0.60	BLACK SOIL
2	0.60	2.40	BROWN SANDY LOAM
3	2.40	7.30	BROWN CLAY
4	7.30	8.50	FINE SAND

DATE 18/09/2015 **GROUNDWATER DATABASE** Page 2 of 4

BORE REPORT

REG NUMBER 151494

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
5	8.50	14.60	BROWN CLAY
6	14.60	22.25	FINE TO COARSE SAND & GRAVEL
7	22.25	22.35	CLAY
8	22.35	22.86	FINE TO COARSE SAND & CLAY-BOUND GRAVEL

STRATIGRAPHY DETAILS

**** NO RECORDS FOUND ****

AQUIFER DETAILS

REC	TOP BED(M)	BOTTOM BED(M)	BED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	14.60	22.11	SAGR	03/06/2011	-10.40	N	670 MS/CM	31.06	Y	UC	FITZROY RIVER ALLUVIUM

PUMP TEST DETAILS PART 1

PIPE	DATE	REC NO.	RN OF PUMP-BORE	TOP (m)	BOTTOM (m)	DIST METH (m)	TEST TYPES	PUMP TYPE	SUCTION SET (m)	Q PRIOR TO TEST (l/s)	DUR OF Q PR (min)	PRES ON ARRIV (m)	Q ON ARRIV (l/s)
A	01/06/2011	1	151494			PUM	CQ RT	TURBINE	19.00	0.00	0		0.00

PUMP TEST DETAILS PART 2

PIPE	DATE	REC	TEST DUR (mins)	SWL (m)	RECOV. TIME (mins)	RESID. DD (m)	MAX DD or P RED (m)	Q at MAX DD (l/s)	TIME TO MAX DD (mins)	Max Q (l/s)	CALC STAT HD (m)	DESIGN YIELD (l/s)	DESIGN BP (m)	SUCT. SET (m)	TMSY (m2/DAY)	STOR
A	01/06/2011	1	1440	-10.40	150	0.20	8.70	31.06	1110	0.04				19.00		

BORE CONDITION

**** NO RECORDS FOUND ****

ELEVATION DETAILS

**** NO RECORDS FOUND ****

WATER ANALYSIS PART1

DATE 18/09/2015 **GROUNDWATER DATABASE** Page 3 of 4

BORE REPORT

REG NUMBER 101494

**** NO RECORDS FOUND ****

WATER ANALYSIS PART 2

**** NO RECORDS FOUND ****

WATER LEVEL DETAILS

**** NO RECORDS FOUND ****

WIRE LINE LOG DETAILS

**** NO RECORDS FOUND ****

FIELD MEASUREMENTS

**** NO RECORDS FOUND ****

SPECIAL WATER ANALYSIS

**** NO RECORDS FOUND ****

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DATE 18/09/2015

GROUNDWATER DATABASE

Page 1 of 4

BORE REPORT

REG NUMBER 101501

REGISTRATION DETAILS

	BASIN 1300	LATITUDE 23-13-29	MAP SCALE 254
OFFICE Rockhampton	SUB-AREA	LONGITUDE 150-22-58	MAP SERIES
ATE LOG RECD	SHIRE 4530-LIVINGSTONE SHIR	EASTING 232106	MAP NO 8951-12
D/O FILE NO. 5150300885	LOT 5	NORTHING 7425284	MAP NAME
R/O FILE NO.	PLAN RP601653	ZONE 56	PROG SECTION
H/O FILE NO.	ORIGINAL DESCRIPTION	ACCURACY	PRES EQUIPMENT
		GPS ACC	
GIS LAT -23.22480002	PARISH NAME 1892-FITZROY		ORIGINAL BORE NO
GIS LNG 150.38080	COUNTY LIVINGSTONE		BORE LINE -
CHECKED Y			POLYGON
			RN OF BORE REPLACED 88290
FACILITY TYPE Sub-Artesian Facility	DATE DRILLED 11/06/2011		DATA OWNER DNR
STATUS Existing	DRILLERS NAME SAINSBURY, RICHARD BRUCE		
ROLES	DRILL COMPANY R&G DRILLING		
	METHOD OF CONST. CABLE TOOL		

CASING DETAILS

PIPE	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	11/06/2011	1	Polyvinyl Chloride	8.300	WT	160	0.00	29.00
A	11/06/2011	2	Centraliser				3.00	21.00
A	11/06/2011	3	Centraliser				9.00	27.00
A	11/06/2011	4	Centraliser				15.00	33.00
A	11/06/2011	5	Screen	0.040	AP	150	27.00	30.50
A	11/06/2011	6	Gravel Pack	5.000	GR	160	5.00	10.00
A	11/06/2011	7	Grout			160	0.00	5.00

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
1	0.00	4.50	LOAM, SANDY
2	4.50	9.10	SAND, CLAYEY

DATE 18/09/2015 **GROUNDWATER DATABASE** Page 2 of 4

BORE REPORT

REG NUMBER 151501

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
3	9.10	9.70	CLAY, BROWN
4	9.70	11.60	SAND, FINE TO CORSE AND GRAVEL, FINE
5	11.60	18.30	CLAY, BROWN
6	18.30	18.60	SAND, FINE TO CORSE AND GRAVEL
7	18.60	21.00	CLAY, BROWN
8	21.00	29.90	SAND, FINE TO CORSE AND GRAVEL
9	29.90	30.50	SAND, FINE TO CORSE, BLUE IN COLOUR AND GRAVEL

STRATIGRAPHY DETAILS

**** NO RECORDS FOUND ****

AQUIFER DETAILS

REC	TOP BED(M)	BOTTOM BED(M)	BED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	21.00	30.50	SAGR	11/06/2011	-10.40	N	POTABLE	3.30	Y	UC	FITZROY RIVER ALLUVIUM

PUMP TEST DETAILS PART 1

PIPE	DATE	REC NO.	RN OF PUMP-BORE	TOP (m)	BOTTOM (m)	DIST METH (m)	TEST TYPES	PUMP TYPE	SUCTION SET (m)	Q PRIOR TO TEST (l/s)	DUR OF Q PR (min)	PRES ON ARRIV (m)	Q ON ARRIV (l/s)
A	11/06/2011	1	151501	9.70	11.60	PUM			29.00				

PUMP TEST DETAILS PART 2

PIPE	DATE	REC	TEST DUR (mins)	SWL (m)	RECOV. TIME (mins)	RESID. DD (m)	MAX DD or P RED (m)	Q at MAX DD (l/s)	TIME TO MAX DD (mins)	Max Q (l/s)	CALC STAT HD (m)	DESIGN YIELD (l/s)	DESIGN BP (m)	SUCT. SET (m)	TMSY (m2/DAY)	STOR
A	11/06/2011	1	240	-10.40			12.80			3.30				29.00		

BORE CONDITION

**** NO RECORDS FOUND ****

ELEVATION DETAILS

DATE 18/09/2015

GROUNDWATER DATABASE

BORE REPORT

REG NUMBER 151501

**** NO RECORDS FOUND ****

WATER ANALYSIS PART1

**** NO RECORDS FOUND ****

WATER ANALYSIS PART 2

**** NO RECORDS FOUND ****

WATER LEVEL DETAILS

**** NO RECORDS FOUND ****

WIRE LINE LOG DETAILS

**** NO RECORDS FOUND ****

FIELD MEASUREMENTS

PIPE	DATE	DEPTH (m)	COND (uS/cm)	pH	TEMP (C)	NO3 (mg/L)	DO (mg/L)	Eh (mV)	ALK (mEq)	METH	SOURCE
A	11/06/2011		365							PU	GB

SPECIAL WATER ANALYSIS

**** NO RECORDS FOUND ****

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12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Road Section Plan

Meeting Date: 17 July 2018

Attachment No: 8

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The State Government of Queensland (Dept. of Natural Resources and Mines) 2018.
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0.4 0.2 0.6 km 1:36,112 at A3

ArcGIS Web Map

Map Created by: Web AppBuilder for ArcGIS

Road Section Plan N
D-174-2015
1 July 2018

Livingstone Shire Council

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12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

State Response

Meeting Date: 17 July 2018

Attachment No: 9

Queensland Government

Department of Infrastructure, Local Government and Planning

Our reference: SDA-0815-023415
Your reference: D/174-2015

18 January 2016

The Chief Executive Officer
Livingstone Shire Council
enquiries@livingstone.qld.gov.au

Attention: Jane Witham

Dear Sir

Concurrence agency response—with conditions
887 Etna Creek Road, Etna Creek
(Given under section 285 of the *Sustainable Planning Act 2009*)

The referral agency material for the development application described below was received by the Department of Infrastructure, Local Government and Planning under section 272 of the *Sustainable Planning Act 2009* on 19 August 2015.

Applicant details

Applicant name:	Belmont Sands Pty Ltd (c/- Groundwork Plus)
Applicant contact details:	PO Box 1779 smalkin@groundwork.com.au

Site details

Street address:	887 Etna Creek road, Etna Creek
Lot on plan:	Lots 5 RP601603, Lot 8 RP601603, Lot 10 SP142291, Lot 3 RP601603, Lot 6 RP601603
Local government area:	Livingstone Shire Council

Application details

Proposed development:	Development permit for a material change of use of premises for an Extractive Industry (and associated activities) and Development permit for material change of use of premises for an Environmentally relevant activity

Referral triggers

Fitzroy/Central Regional Office
Level 2, 209 Bolsover Street
PO Box 113
Rockhampton QLD 4700

SDA-0815-023415

The development application was referred to the department under the following provisions of the *Sustainable Planning Regulation 2009*:

Referral trigger	Schedule 7, Table 2, Item 1—Environmentally relevant activity Schedule 7, Table 3, Item 21A—Land in or near a wetland Schedule 7, Table 3, Item 2—Development impacting on State transport infrastructure

Conditions

Under section 287(1)(a) of the *Sustainable Planning Act 2009*, the conditions set out in Attachment 1 must be attached to any development approval.

Reasons for decision to impose conditions

Under section 289(1) of the *Sustainable Planning Act 2009*, the department must set out the reasons for the decision to impose conditions. These reasons are set out in Attachment 2.

Approved plans and specifications

The department requires that the following plans and specifications set out below and in Attachment 3 must be attached to any development approval.

Drawing/Report Title	Prepared by	Date	Reference no.	Version/Issue
Aspect of development: material change of use of premises				
Conceptual Site Layout Plan	Groundwork Plus	17 July 2015	1810.026A	9
Part 4.6 Weed Management Plan	Groundwork Plus	2/11/2015	1810.610.001	1

A copy of this response has been sent to the applicant for their information.

For further information, please contact Maaret Sinkko, Senior Planning Officer, SARA Fitzroy & Central on 4924 2918, or email RockhamptonSARA@dilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Don Cook

Don Cook
Manager Planning
Fitzroy and Central

cc: Belmont Sands Pty Ltd (c/- Groundwork Plus), smalkin@groundwork.com.au; Your ref: 1810
enc: Attachment 1—Conditions to be imposed
Attachment 2—Reasons for decision to impose conditions
Attachment 3—Approved Plans and Specifications

Our reference: SDA-0815-023415
Your reference: D/174-2015

Attachment 1—Conditions to be imposed

No.	Conditions	Condition timing
Material change of use of premises		
7.2.1 Environmentally relevant activity—Pursuant to section 255D of the *Sustainable Planning Act 2009*, the chief executive administering the Act nominates the Director-General of Department of Environment and Heritage to be the assessing authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
1.	The development must be carried out generally in accordance with the following plans: • Conceptual Site Layout Plan, prepared by Groundwork Plus, 17 July 2015, 1810.026A, version 9. • Part 4.6 Weed Management Plan, prepared by Groundwork Plus, 1810.610.001 rev 1, 2/11/15	At all times
2.	Storage areas for hazardous contaminants must be located above the Q50 flood level.	At all times
3.	The facility for the activity must include: (a) a storage area for hazardous contaminants that has secondary containment system to prevent any release of contaminants from the system, or containers within the system, to land, groundwater, or surface waters; and (b) containers for hazardous contaminants are secured to prevent movement during any flood event.	At all times
7.3.21A Land in or near a wetland—Pursuant to section 255D of the *Sustainable Planning Act 2009*, the chief executive administering the Act nominates the Director-General Department of Environment and Heritage to be the assessing authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
4.	Develop and implement a site-based pest management plan that includes, but is not limited to, the following: (a) A pre-works inspection of the property to locate, map and identify existing pest flora and fauna species. (b) Training of site personnel in the identification of local pest species likely to occur at the site. (c) Measures to minimise spread/dispersal of weeds (d) Weeds management practices that provide for the long-term integrity of wetlands	At all times during construction works
7.3.2 Development impacting on State transport infrastructure —Pursuant to section 255D of the *Sustainable Planning Act 2009*, the chief executive administering the Act nominates the Director-General Department of Transport and Main Roads to be the assessing authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
5.	(a) Pay an annual monetary contribution to the Department of Transport and Main Roads (Fitzroy District / Central Queensland Region), towards protecting or maintaining the safety or efficiency of the State-controlled road network under section 666 (2) of the *Sustainable Planning Act 2009*:	(a) and (b): At all times

SDA-0815-023415

<table>
<tr><th>No.</th><th>Conditions</th><th>Condition timing</th></tr>
<tr><td></td><td>
<table>
<tr><th>Amount extracted per financial year</th><th>Contribution</th></tr>
<tr><td>0 to 200,000 tonnes</td><td>0 cents per tonne</td></tr>
<tr><td>200,000 to 250,000 tonnes</td><td>2.12 cents per tonne</td></tr>
<tr><td>250,000 to 500,000 tonnes</td><td>2.39 cents per tonne</td></tr>
<tr><td>500,000 to 600,000 tonnes</td><td>3.71 cents per tonne</td></tr>
<tr><td>600,000+ tonnes</td><td>4.72 cents per tonne</td></tr>
</table>
(b) This monetary contribution shall be indexed based on the Road and Bridge Construction Index, Queensland – Class 3101, published quarterly by the Australian bureau of Statistics (ABS Cat No. 6427, Series ID A2333727L) to the date of payment.</td><td></td></tr>
<tr><td>6.</td><td>Heavy vehicles as defined in the Transport Operations (Road Use Management) Act 1995 associated with the proposed development are permitted only to use the Bruce Highway from Etna Creek Road to Knight Street as the haul route.</td><td>At all times</td></tr>
<tr><td>7.</td><td>(a) The proponent must notify the Department of Transport and Main Roads (Fitzroy District / Central Queensland Region on FitzroyDistrict@tmr.qld.gov.au) upon the commencement of operations.
(b) Records which document the quantity of product that is transported by road must be kept by the applicant for no less than five years, and produced upon request.</td><td>(a):
Upon the commencement of operations

(b):
At all times</td></tr>
</table>

Our reference: SDA-0815-023415
Your reference: D/174-2015

Attachment 2—Reasons for decision to impose conditions

The reasons for this decision are:

- To ensure the development is carried out generally in accordance with the plans of development submitted with the application.
- To prevent the risk of hazardous contaminates being released into the surrounding environment during a flood event.
- To ensure that the risk of hazardous contaminates being released into the surrounding environment either as a result of spillages, leaks or during a flood event is managed.
- To manage impacts from non-native plants and animals.
- To offset the impacts of development on the safety and efficiency of the state-controlled road.
- To ensure the development does not compromise the safe and efficient management or operation of state-controlled roads.

Our reference: SDA-0815-023415
Your reference: D/174-2015

Attachment 3—Approved plans and specifications

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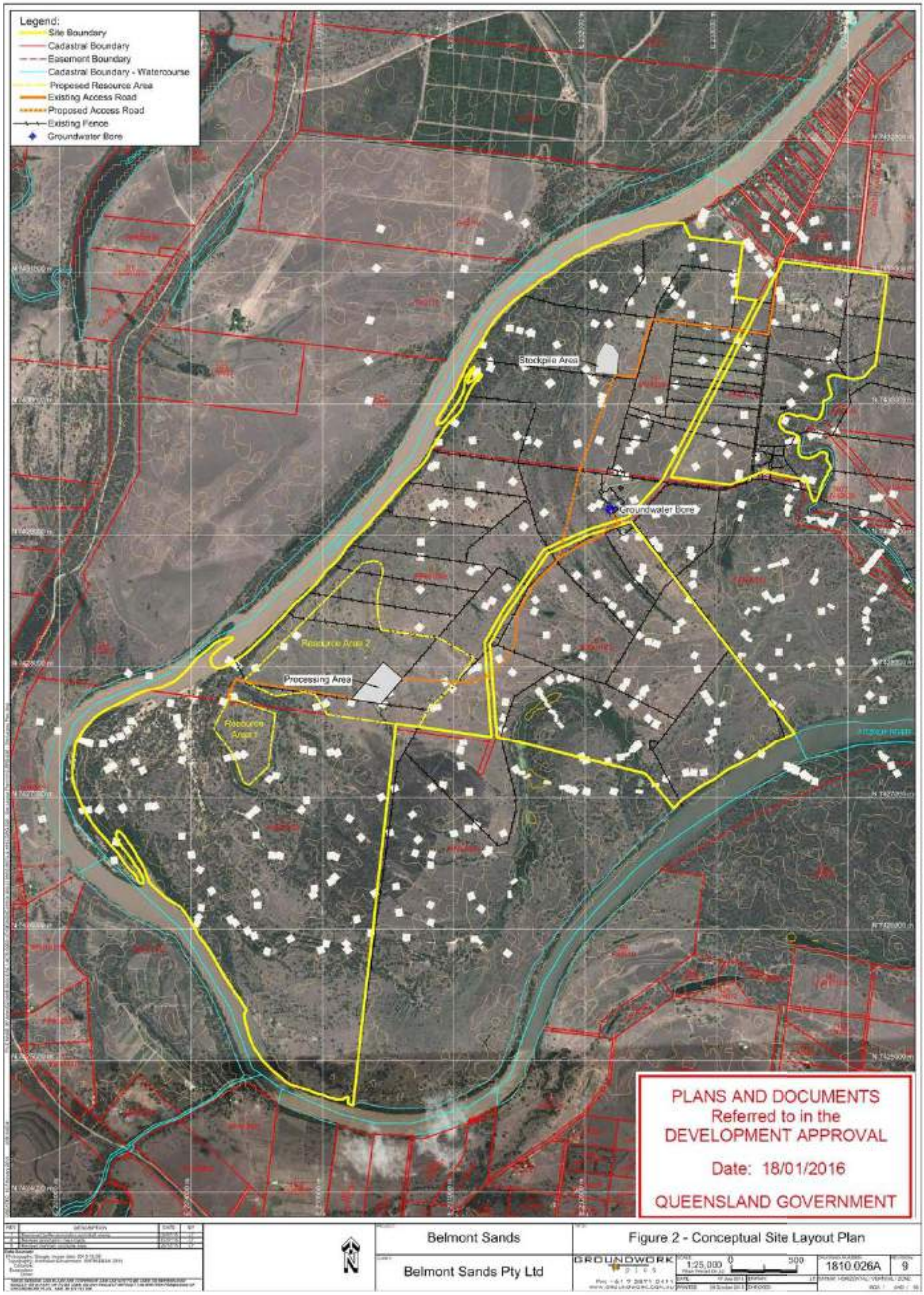

Legend:
Site Boundary
Cadastral Boundary
Easement Boundary
Cadastral Boundary - Watercourse
Proposed Resource Area
Existing Access Road
Proposed Access Road
Existing Fence
Groundwater Bore
Stockpile Area
Groundwater Bore
Resource Area 2
Processing Area
Resource Area 1
PLANS AND DOCUMENTS
Referred to in the
DEVELOPMENT APPROVAL
Date: 18/01/2016
QUEENSLAND GOVERNMENT
Belmont Sands
Belmont Sands Pty Ltd
Figure 2 - Conceptual Site Layout Plan
GROUNDWORK
1:25,000
0
500
1810.026A
9

4.6 Weed Management Plan

Purpose	This Weed Management Plan has been developed to ensure adequate control measures are implemented to control the spread and infestations of weeds and declared plant species within the site. A 'weed' is a plant which, because of its characteristics and location, may result in economic, ecological, physical or aesthetic problems. Weeds can alter ecosystem functionality, reduce primary productivity and profitability, and limit long term sustainability of natural and agricultural resources if not appropriately controlled. Weed impacts that may occur due to the extractive industry operations include: • areas of exposed earth available for weed colonisation including topsoil stockpiles. • spread of existing weed infestations due to disturbance and vehicle traffic. • unsuccessful or weed-infested revegetated areas. The primary legislation governing the management of weeds in Queensland is the *Land Protection (Pest and Stock Route Management) Act 2002* (LP Act). The LP Act declares plants considered to be serious or potentially serious and imposes a legal responsibility for control of these plants by all landowners or land under management. Three classes of declared plants exist and are targeted for control because they have, or could have serious economic, environmental or social impacts: • **Class 1** has the potential to become a serious pest and is subject to eradication from the State. • **Class 2** has already spread over Queensland and gaining control is considered to be very important. • **Class 3** is commonly found in Queensland and prevention of the sale of Class 3 declared plants is expected to reduce their spread, especially if land is adjacent to an environmentally significant area. Landowners are not expected to try to control them.
Performance Targets	Prevent the spread of weeds on the site.
Relevant Conditions	Refer to EA once issued.
Strategies/mitigation measures	Specific control measures to be implemented may include, but not necessarily be limited to the following strategies.

PLANS AND DOCUMENTS
Referred to in the
DEVELOPMENT APPROVAL
Date: 18/01/2016

4.6 Weed Management Plan

General

- Weed infestations are to be controlled as soon as possible to prevent further spread of weeds.
- Maintain groundcover for as long as possible by minimising land disturbance at any one time, where practicable.
- Annual weed spraying campaigns should be implemented at the site, with additional spraying campaigns (e.g. spot spray, bi-annual sprays, etc) undertaken if necessary.
- Weeds indentified on-site will be prioritised for weed management according to the class of weeds identify, and the cause of the weed establishment will be determined to prevent or minimise further introduction and spread.
- Weed plant materials and seed should be disposed of at a Council refuse station, or buried at an appropriate depth on-site, whenever possible.
- Employees should be trained appropriately to recognise existing and potential weeds present on-site and within the surrounding area to ensure they are not inadvertently brought onto the site via items contaminated by seed (e.g. vehicles, machinery, hand tools, soil, mulch or livestock).
- If areas containing weeds are encountered, clean all equipment, vehicles and machinery prior to leaving the area.

Access Roads/Hardstand areas

- All access routes and hard stand areas will be maintained in a weed-free or weed-reduced state to lessen the spread of weed seed by vehicle movements.
- Established roads and tracks should be used wherever possible and weed-infested areas / sites are to be avoided.

Topsoil Management

- Visual surveys will be undertaken prior to all topsoil stripping operations and, if necessary, control mechanisms will be undertaken to reduce the risk of the contamination of topsoil stockpiles with seed and vegetative weed material.
- Weed control mechanisms may include separate stockpiling, herbicide spraying of stripped soils, or disposal as fill of soil materials infested with weeds.
- Weed control mechanism strategies will be implemented to control weed infestation if required, both before and after use of top-dressing material in the rehabilitation program.
- All topsoil stockpiles will be regularly monitored and managed for weed infestation.

Rehabilitation

- Implement progressive rehabilitation as soon as practical as areas become available.
- Avoid importing topsoil onto the site where possible.
- Prior to the establishment of vegetation:
  - a spraying campaign may be required to prevent migration or establishment of weed species into the area under rehabilitation.
  - alternative methods for controlling both grasses and weeds may be used, including manual weeding, burning, slashing, weed matting and mulching, where practicable.

PLANS AND DOCUMENTS
Referred to in the
DEVELOPMENT APPROVAL
Date: 18/01/2016
QUEENSLAND GOVERNMENT

4.6 Weed Management Plan

Weed Control Methods

As a guide to assist in planning weed control, a summary of weed control options that may be implemented are presented in **Table 3 – General Weed Control Options**.

- Department of Agriculture, Fisheries and Forestry (DAFF) provides an A to Z listing of weeds including plants declared under the LP Act. This listing can be found at: http://www.dpi.qld.gov.au. Detailed information on controlling individual species is also provided in the A-Z listing along with fact sheets and information sheets.

Monitoring

All employees on-site shall carry out general daily visual surveillance for weeds within the quarry and ensure that vehicles leaving site are free of soil and vegetation.

The Site Manager shall:

- Conduct weekly inspections of all access routes on-site to ensure they are maintained weed free or in a reduced state to lessen the spread of weed seed by vehicle movements.
- Conduct inspection of any area/s and treat any weed infestations prior to topsoil removal.
- Carry out at least four thorough inspections per year of the quarry to identify:
  - effectiveness of weed control measures implemented and whether an amendment is required
  - new areas where weed control is required
  - infestations of new weed species
  - areas where rehabilitation should be carried out.

Note: The frequency of site inspections will vary depending on the identified weed species on-site and what management requirements are necessary for those species.

Table 3 – General Weed Control Options

Infestation Level	Biological	Chemical	Mechanical	Physical
Low (Canopy cover between 1% and 10%)	Not suitable.	Spot-spraying by hand with a registered herbicide.	Not suitable.	Hand grubbing (remove roots and burn plant).
Medium (Canopy cover between 11% and 50%)	Release of biological control agents.	Spot-spraying by hand with a registered herbicide.	Chaining, rolling, raking or back-ploughing, then burning.	Follow up control of seedlings – could include physical removal.
High (Over 50% canopy cover)	Inspect infestation to see if, and what, bio-control agents are already present. If necessary, release biological control agents and monitor their progress.	Aerial spraying with a registered herbicide.	Attach with chaining, rolling or raking. Use fire to kill any regrowth and break seed dormancy.	Follow up control of seedlings – could include physical removal.

PLANS AND DOCUMENTS
Referred to in the
DEVELOPMENT APPROVAL
Date: 18/04/2016

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Environmental Authority Permit

Meeting Date: 17 July 2018

Attachment No: 10

Queensland Government

Department of
Environment and Heritage Protection

07-JAN-2016

To: Belmont Sands Pty Ltd
GPO Box 3013
BRISBANE QLD 4001

Email: info@fqr.com.au

Your reference: EPPR03407715
Our reference: 427623

Application details

I refer to the application that was received by the administering authority on 19-AUG-2015.

Land description: 887 Etna Creek Road, Etna Creek Lot 8 Plan RP601603, Lot 6 Plan RP601603, Lot 10 Plan SP142291, Lot 5 Plan RP601603, Lot 3 Plan RP601603.

Decision

Your application has been approved and your environmental authority (reference EPPR03407715) is attached.

Additional comments or advice

You are advised that if you are not the owner of the land to which the environmental authority relates, you have 10 business days from receipt of this environmental authority to give each owner of the land, written notice that you have been issued this environmental authority.

This permit only provides an approval under the Environmental Protection Act 1994. In order to lawfully operate you may also require permits / approvals from your local government authority and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Natural Resources and Mines (to clear vegetation), and the Department of Agriculture Forestry and Fisheries (to clear marine plants or to obtain a quarry material allocation).

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the Mining and Quarrying Safety and Health Act 1999. For more information on your obligations under this legislation contact Mine Safety and Health at www.dnrm.qld.gov.au, or phone 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

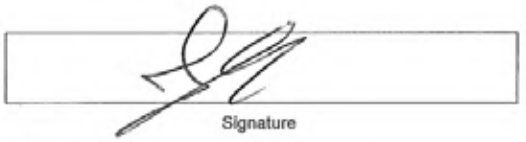
Development Approval
This permit is not a development approval under the *Sustainable Planning Act 2009*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval.

Lisa Fritz
ES - Reg Serv - Western - Twba - EPA
PO Box 731
TOOWOOMBA QLD 4350
Phone: (07) 4699 4229
Fax: (07) 4699 4388
Email: lisa.fritz@ehp.qld.gov.au
Website **www.ehp.qld.gov.au**
ABN 46 640 294 485

If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Heritage Protection to ensure that you have the most current version of the environmental authority relating to this site.

Should you have any further enquiries, please contact Lisa Fritz on telephone (07) 4699 4329.

Yours sincerely



Signature

7/1/2016

Date

Tariq Khan
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enclosed

Permit - environmental authority (reference EPPR03407715)

Department of Environment and Heritage Protection

Permit[1]

Environmental Protection Act 1994

Environmental authority

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Permit[1] number: EPPR03407715

Environmental authority takes effect when your related development application takes effect.

The first annual fee is payable within 20 business days of the effective date.

The anniversary date of this environmental authority is the same day each year as the effective date. An annual return and the payment of the annual fee will be due each year on this day.

Environmental authority holder(s)

Name	Registered address
Belmont Sands Pty Ltd	Level 4, 247 Adelaide Street BRISBANE QLD 4001

Environmentally relevant activity and location details

Environmentally relevant activity(ies)	Location(s)
16-(2b) Extracting, other than by dredging, in a year, more than 100,000t but not more than 1,000,000t of material 16-(3b) Screening, in a year, more than 100,000t but not more than 1,000,000t of material	887 Etna Creek Road, Etna Creek - Lot 8 Plan RP601603, Lot 6 Plan RP601603, Lot 10 Plan SP142291, Lot 5 Plan RP601603 and Lot 3 Plan RP601603

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

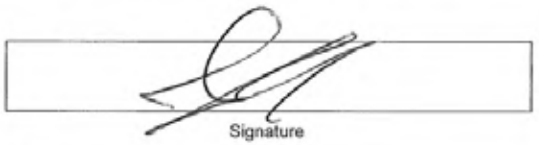
A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of land give written notice to the chief executive if they become aware of the following:

- a notifiable activity (as defined in Schedule 3) that is being, or has been, carried out on the land (notice must be given within 20 business days)
- an event involving a hazardous contaminant on the land, or a change in the condition of the contaminated land, that is causing, or is reasonably likely to cause, serious or material environmental harm (notice must be given within 24 hours).

For further information, including the form for giving written notice, refer to the Queensland Government website http://www.qld.gov.au/ (using the search term 'managing contaminated land').



Signature

7/1/2016

Date

Tariq Khan
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Department of Environment and Heritage Protection
GPO Box 2454
BRISBANE QLD 4001
Phone: 1300 130 372
Fax: 07 3330 6037
palm@ehp.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of environmental authority

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G1	Activities conducted under this environmental authority must be conducted in accordance with the following limitation: a) Notwithstanding condition G10, disturbance is limited to resource areas, the stockpile area, and access roads identified in Figure 1 – Conceptual Erosion and Sediment Control Plan, produced by Groundwork Plus, and dated 4 November 2015.
G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of environmental harm being caused.
G3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of **you** becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
G5	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
G7	All analyses required under this environmental authority must be carried out by a laboratory that has **NATA** certification, or an equivalent certification, for such analyses. The only exception to this condition is for *in situ* monitoring pH, Turbidity and Dissolved Oxygen.

G8	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of environmental nuisance arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
G9	The **activity** must be undertaken in accordance with written procedures that: a) identify potential risks to the environment from the **activity** during routine operations, closure and an emergency b) establish and maintain control **measures** that minimise the potential for environmental harm c) ensure plant, equipment and **measures** are maintained in a proper and effective condition d) ensure plant, equipment and **measures** are operated in a proper and effective manner e) ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994* f) ensure that reviews of environmental performance are undertaken at least annually.
G10	A minimum buffer distance of 50m must be maintained between **resource areas** and the high banks of any **watercourse**.
G11	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
Agency interest: Air	
Condition number	**Condition**
A1	Odours or airborne contaminants which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
WT1	The stormwater runoff from disturbed areas, generated by (up to and including) a **24 hour storm event with an average recurrence interval of 1 in 5 years** must be retained on site or managed to remove contaminants before release.

<table>
<tr><td>WT2</td><td>The only contaminants to be released to surface waters are treated stormwater runoff waters in accordance with Table 1—Surface water release limits and the associated monitoring requirements.

Table 1—Surface water release limits
<table><tr><th>Quality characteristic (units)</th><th>Limit</th><th>Limit Type</th><th>Minimum Monitoring Frequency</th></tr><tr><td>Dissolved Oxygen (%)</td><td>85-110</td><td>Range</td><td rowspan="4">Prior to release and weekly thereafter whilst releasing</td></tr><tr><td>Turbidity (NTU)</td><td>50</td><td>Maximum</td></tr><tr><td>Total Suspended Solids (mg/L)</td><td>85</td><td>Maximum</td></tr><tr><td>pH (pH units)</td><td>6.5-8.5</td><td>Range</td></tr></table>Associated monitoring requirements
a) Release points must be in accordance with those identified in Schedule 1 Figure 1 Conceptual Erosion and Sediment Control Plan, produced by Groundwork Plus, and dated 4 November 2015
b) Monitoring must be in accordance with the methods prescribed in the current edition of the Department of Environment and Heritage Protection Water Quality Sampling Manual.
c) Samples must be taken using representative samples.
d) Samples must be taken at the point of release.
e) All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic.
f) Monitoring must be undertaken prior to release and during a release as per the frequency stated.
g) All monitoring devices must be correctly calibrated and maintained.</td></tr>
<tr><td>WT3</td><td>Monitoring of contaminant releases to waters must be undertaken in accordance with condition WT2 and records of the results must be kept.</td></tr>
<tr><td>WT4</td><td>In addition to WT2, the release to waters must not:
a) have any other properties at a concentration that is capable of causing environmental harm
b) produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter.</td></tr>
<tr><td>WT5</td><td>Erosion and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.</td></tr>
</table>

Agency interest: Noise

Condition number	Condition
N1	Noise from the **activity** must not exceed the levels identified in *Table 2—Noise limits* when measured in accordance with the associated monitoring requirements. **Table 2—Noise limits** **Associated monitoring requirements** 1) All monitoring devices must be correctly calibrated and maintained. 2) Any monitoring must be in accordance with the most recent version of the **administering authority's** Noise Measurement Manual. 3) Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in operation.
N2	When required by the **administering authority**, noise monitoring must be undertaken in accordance with the associated monitoring requirements of *Table 2—Noise Limits*, and the results notified within 14 days to the **administering authority**. Monitoring must include: a) $L_{Aeq, adj, T}$ b) **Background** noise (Background) as $L_{A\ 90, adj, T}$ c) $MaxL_{pA,T}$ d) the level and frequency of occurrence of any impulsive or tonal noise e) atmospheric conditions including wind speed and direction f) effects due to extraneous factors such as traffic noise g) location, date and time of recording.
N3	**Blasting** or the generation of **substantial low frequency noise** is not permitted.

Noise level dB(A) measured as	Monday to Sunday including public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am
	Noise measured at a sensitive place		
$LA_{eq\ adj, T}$	45	35	30

Agency interest: Land

Condition number	Condition
L1	Land that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: a) suitable species of vegetation for the location are established and sustained for earthen surfaces b) potential for erosion is minimised c) the quality of water, including seepage, released from the site does not cause environmental harm d) potential for environmental nuisance caused by dust is minimised e) the water quality of any residual water body does not have potential to cause environmental harm f) the final landform is stable and protects public safety.
L2	Rehabilitation of disturbed areas required under condition L1, must take place progressively as works are staged and new areas of extraction are commenced.

Agency interest: Waste	
Condition number	**Condition**
WS1	All waste generated in carrying out the **activity** must be reused, recycled or removed to a facility that can lawfully accept the waste.

Definitions

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Administering authority means the Department of Environment and Heritage Protection or its successors or predecessors.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills and experience relevant to the EA requirement and can give authoritative assessment, advice and analysis in relation to the EA requirement using the relevant protocols, standards, methods or literature.

Background means noise, measured in the absence of the noise under investigation, as $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90% of the time period of not less than 15 minutes, using Fast response.

Blasting is the use of explosives to fracture:
Commercial place means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

Disturbed areas includes areas:
1. that are susceptible to erosion;
2. that are contaminated by the activity; and/or
3. upon which stockpiles of soil or other materials are located.

Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

$L_{Aeq\ adj,T}$ means the adjusted A weighted equivalent continuous sound pressure level measures on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the **activity** is causing a steady state noise, and no shorter than one hour when the approved **activity** is causing an intermittent noise.

Land does not include **waters**.

$MaxL_{pA,T}$ means the maximum A-weighted sound pressure level measured over a time period T of not less than 15 minutes, using Fast response.

Measures have the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

NATA means National Association of Testing Authorities.

Noxious means harmful or injurious to health or physical well-being.

Offensive means causing offence or displeasure, is unreasonably disagreeable to the sense, disgusting, nauseous or repulsive.

Records include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

Resource areas means the proposed resource areas identified in Figure 1 – Conceptual Erosion and Sediment Control Plan, produced by Groundwork Plus, and dated 4 November 2015

Secondary containment system means a system designed, installed and operated to prevent any release of contaminants from the system, or containers within the system, to land, groundwater, or surface waters.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

1. a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
2. a motel, hotel or hostel; or
3. a kindergarten, school, university or other educational institution; or
4. a medical centre or hospital; or
5. a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
6. a public park or garden; or
7. for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

Substantial low frequency noise means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurements, with a predominant component within the frequency range 10 to 200 Hz. It includes any noise emission likely to cause an overall sound pressure level at a noise sensitive place exceeding 55 dB(Z).

Watercourse means a watercourse as defined under Schedule 4 of the *Environmental Protection Act 1994*, and which aligns with a watercourse on the vegetation management watercourse and drainage features map prescribed under the *Vegetation Management Act 1999*.

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

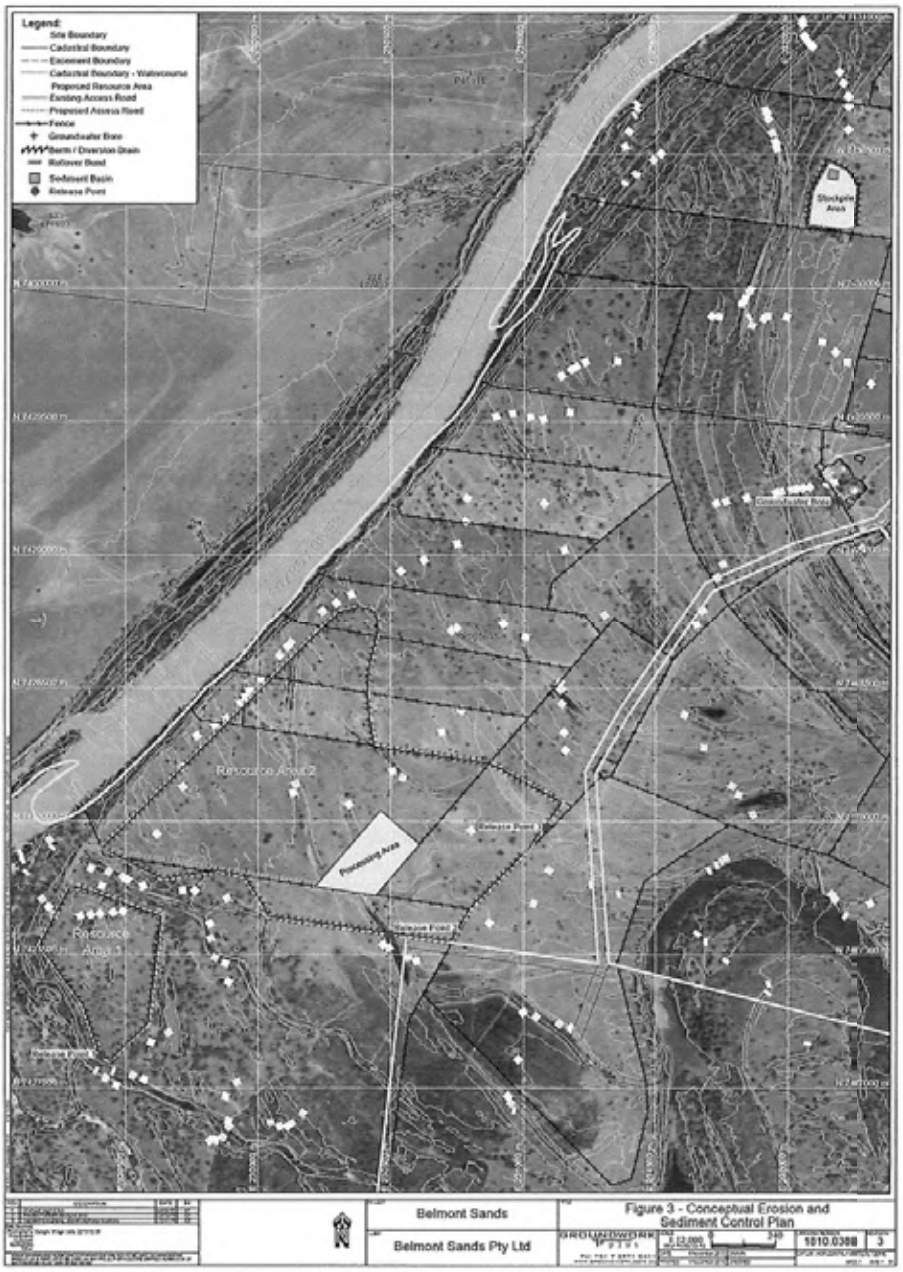
You means the holder of the environmental authority.

24 hour storm event with an average recurrence interval of 1 in 5 years means the maximum rainfall depth from a 24-hour duration precipitation event with an average recurrence interval of once in 5 years. For example, an Intensity–Frequency–Duration table for a 24-hour duration event with an average recurrence interval of 1 in 5 years, identifies a rainfall intensity of 8.2mm/hour. The rainfall depth for this event is therefore 24 hour x 8.2mm/hour = 196.8mm.

Schedules

Schedule 1—Approved plans

Figure 1 – Conceptual Erosion and Sediment Control Plan, produced by Groundwork Plus, and dated 4 November 2015.



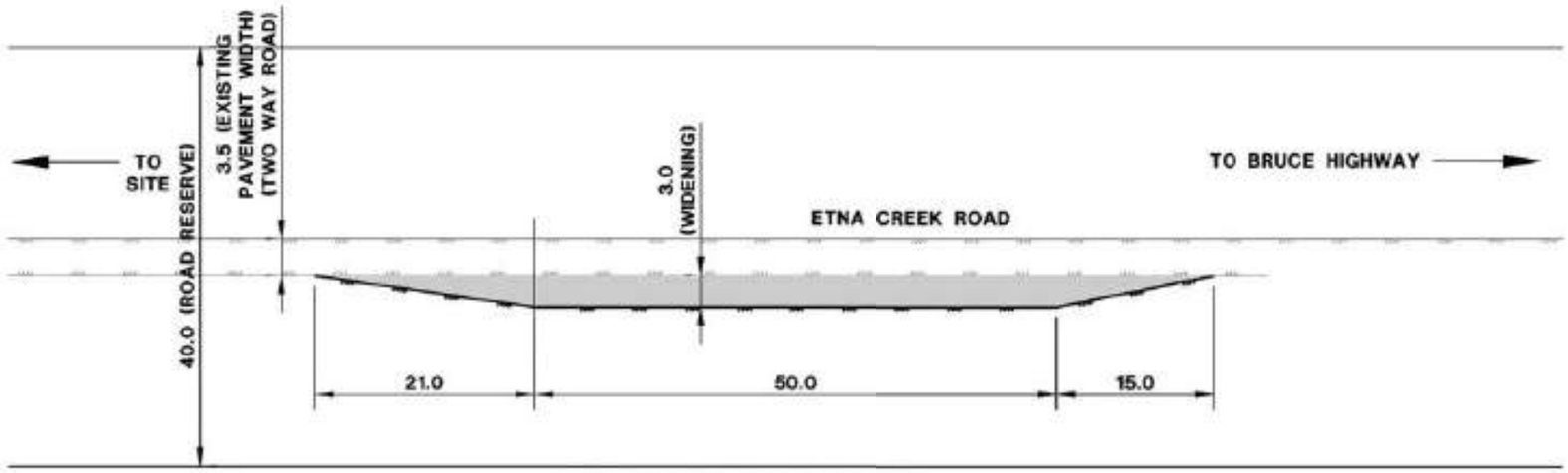
END OF PERMIT

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Passing Bay Proposal Plan

Meeting Date: 17 July 2018

Attachment No: 11



TYPICAL PASSING BAY DETAIL
(AT 500m INTERVALS)

NTS

200 100 0 200 400 600 800m 1:10,000

Full Size A3

5604-61.DWG

MRCagney

PASSING BAY LOCATIONS

BELMONT SANDS QUARRY
ETNA CREEK

AT-1 | 9 FEB 2017

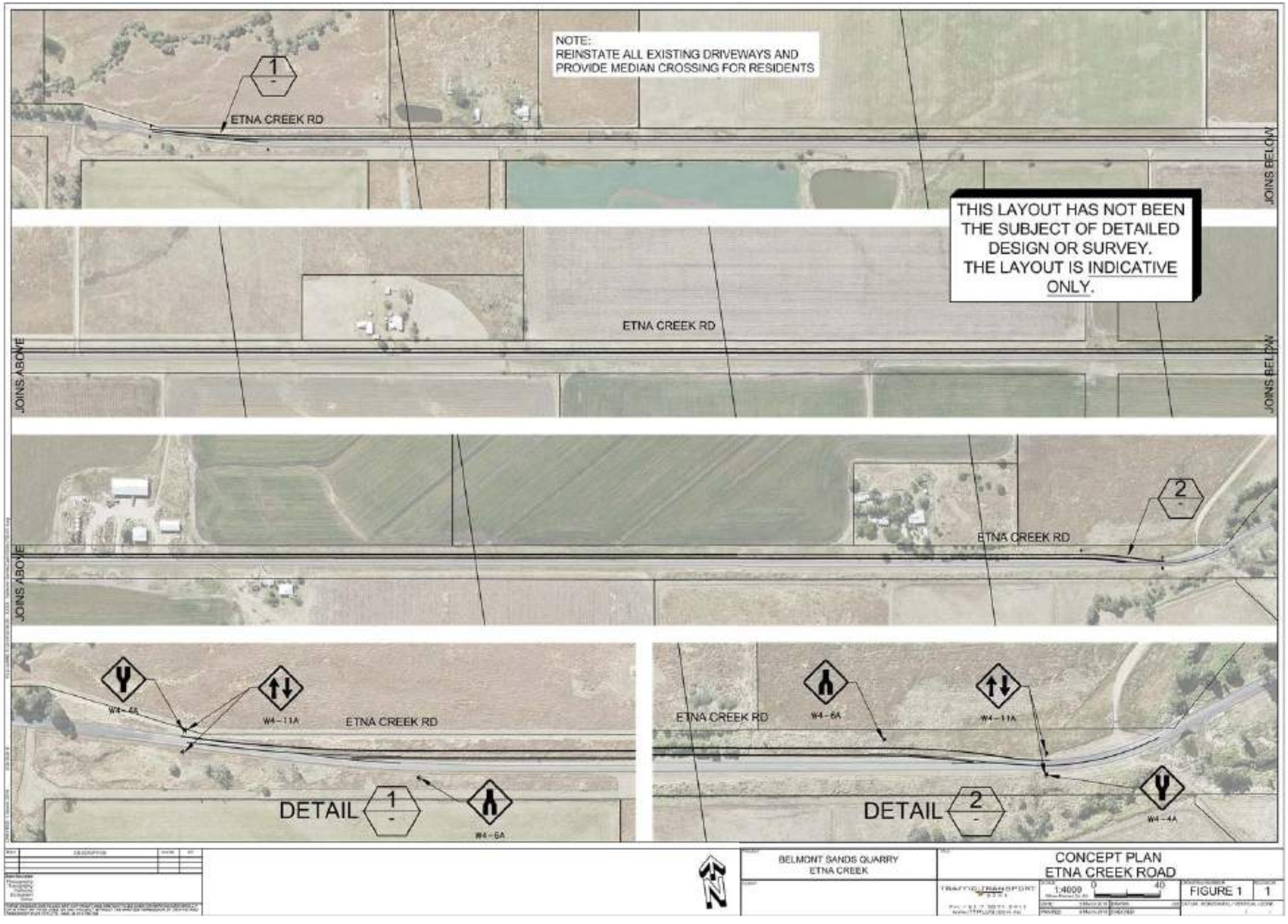
FIGURE 1

12.13 - DECISION ASSESSMENT FOR A DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR AN EXTRACTIVE INDUSTRY FOR SAND AND GRAVEL AND ASSOCIATED ACTIVITIES AND MAKING A MATERIAL CHANGE OF USE OF PREMISES FOR CONCURRENCE ENVIRONMENTALLY RELEVANT ACTIVITY AT LOT 5, LOT 6, LOT 8, AND LOT 10 MELDRUM ROAD AND 887 ETNA CREEK ROAD, ETNA CREEK

Second Carriageway Proposal Plan

Meeting Date: 17 July 2018

Attachment No: 12


NOTE:
REINSTATE ALL EXISTING DRIVEWAYS AND
PROVIDE MEDIAN CROSSING FOR RESIDENTS
THIS LAYOUT HAS NOT BEEN THE SUBJECT OF DETAILED DESIGN OR SURVEY.
THE LAYOUT IS INDICATIVE ONLY.
ETNA CREEK RD
JOINS ABOVE
JOINS BELOW
DETAIL 1
DETAIL 2
W4-4A
W4-6A
W4-11A
BELMONT SANDS QUARRY
ETNA CREEK
CONCEPT PLAN
ETNA CREEK ROAD
FIGURE 1

12.14 MONTHLY FINANCIAL REPORT FOR THE PERIOD ENDING 30 JUNE 2018

File No: FM12.14.1
Attachments: 1. Monthly Financial Report - June 2018⇩

Responsible Officer: Andrea Ellis - Chief Financial Officer
Author: Damien Cross - Coordinator Accounting Services

SUMMARY

Presentation of the Livingstone Shire Council Monthly Financial Report for the period ending 30 June 2018 by the Chief Financial Officer.

OFFICER'S RECOMMENDATION

THAT the Livingstone Shire Council Monthly Financial Report for the period ending 30 June 2018 be received.

BACKGROUND

The attached Financial Report has been compiled from information within Council's Finance One and Pathway systems. The report presented includes:

1. Key Strategic Financial Indicators
2. Summary of Financial Results
3. Detailed Statements

The attached financial results present a provisional indication of Council's financial performance for the 2017-18 financial year. Council should note that various year-end accounting entries still remain to be completed which will affect these financial results. These entries are planned to be finalised throughout July and August 2018. Commitments are excluded from the reported operating & capital costs.

All variances are reported against the 2017-18 Q2 revised budget. All operating budgets have been developed on a monthly basis; therefore there may be timing variances between actual position and adopted budget. In these instances, the variance will be identified as a timing variance in the commentary. The attached reports show the business units segregated Revenue and Expenditure Statements and Balance Sheets.

COMMENTARY

The Financial Report compares actual performance to date with Council's 18Q2 revised budget for 2017-18 and identifies, for Councillors' information, significant variances or areas of concern. It also provides information about additional areas of financial interest to Council and reinforces sound financial management practices throughout the organisation. This information is provided through the attached monthly financial report.

In addition to the presentation of actuals compared to the original Budget, there is comparison against the Q2 adopted revised budget. This is particularly relevant for capital projects being undertaken or completed this financial year.

Financial Performance

The operating performance for the year to 30 June 2018 shows an operating surplus of $1.5M at the end of June (Refer to Table A in attachment 1). The Financial Performance Summary below compares provisional year end surplus to the budgeted deficit of $3.6M.

Financial Performance Summary to 30 June 2018					
	YTD 18Q2 Budget ($m)	YTD Actual ($m)	Variance ($m)	Variance YTD %	Status
Operating Revenue	$86.1	$86.3	$0.2	(0%)	✓
Operating Expense	($89.7)	($84.8)	$4.9	(5%)	✓
Operating Deficit/Surplus	*($3.6)*	*$1.5*	*$5.1*	*(143%)*	✓
Capital Income	$49.9	$50.0	$0.1	(0%)	✓
Capital Expenditure	($88.0)	($79.6)	$8.4	(10%)	✓

Note: Actual results exclude purchase order commitments.

Status Legend:

- Above budgeted revenue or under budgeted expenditure ✓
- Below budgeted revenue or over budgeted expenditure <10% ■
- Below budgeted revenue or over budgeted expenditure >10% ×

Operating Revenue

The year to date operating revenue has a favorable variance of $0.2M above budget. This variance is mostly due to higher than expected fourth quarter water consumption charges. Table A.1 in the Monthly Financial Report (Attachment 1) shows operating revenue by major category of actuals to budget variances by line item.

Operating Expenses

The year to date operating expenditure as at 30 June 2018 is below budget by $4.9M which excludes $4.3M in committals. Table A.1 in the Monthly Financial Report (Attachment 1) reports operating expenditure by major category of actuals to budget variances by line item. Total operating expenses are under budget mostly due to an underspend of $2.4M in employee benefits and $2.5M in materials & services. It should be noted that accrued expenditure in relation to both employee expenses and materials & services are to be processed throughout July 2018 which is expected to move total operational expenditure closer towards the 18Q2 Budget position.

Capital Income

Total capital income is ahead of budget by approximately $91,000. Overall the claims process and receipt of grants and subsidies has tracked well during the year. Infrastructure charges at $2.2M finished the 2017-18 year below the 18Q2 Revised Budget of $2.8M and this will be closely monitored during the 2018-19 budget process to assess the impact on capital project funding.

Capital Expenditure

Capital expenditure incurred as at 30 June 2018 is summarized in Table D.1 and D.2 in Attachment 1. The 18Q2 revised budget total capital expenditure is $97.4M with actuals at $79.6M with a further $27M in committed expenditure. Accrued expenditure is anticipated to increase the total capital expenditure incurred in 2017-18 closer towards the 18Q2 budget.

Table D.3 highlights the significant capital works projects with an adopted budget greater than $1M and includes the 18Q2 revised budget and YTD actuals and project life-to-date costs and budget.

Statement of Financial Position as at 30 June 2018

A detailed balance sheet is provided in Table B.1 in Attachment 1 as at 30 June 2018.

The balance sheet shows a low level of liabilities consisting predominantly of trade and other payables and indicates that Council is currently in a sound financial position.

Council's total loan balances are $85.3M with all quarterly financial year repayments having been made to the Queensland Treasury Corporation (QTC). Council drew down $10M in loans from the QTC on 27 June 2018. Interest on long term borrowings range from 3.123% to 5.554%, with the average cost of capital being 4.54%.

Statement of Cash Flows

The statement of cash flows provided in Table C in Attachment 1 shows Council's expected cash flows for the financial year and the actual cash flows to 30 June 2018. The cash position is reported as ahead of budget with cash totaling $43.2M at 30 June 2018 against a budgeted 30 June 2018 closing cash position of $34.3M.

The interim cash flow statement shows a strong surplus from operating activities, primarily from the $78.7M in rates & utility charges revenue received to 30 June 2018. The surplus from operating activities is being utilised to fund Council's investment activities, predominantly for investment into Council's assets.

Available cash is either invested with the Queensland Treasury Corporation (QTC) Capital Guaranteed Cash Fund or held in fixed term deposits with financial institutions. The annual effective interest rate for the QTC Capital Guaranteed Cash Fund at 30 June 2018 was 2.26% p.a. Interest rates for Council's two term deposits are 2.83% and 2.60% p.a and reflect the fixed interest rate for the term of the investment.

Interest earned on cash and investments for the month of June was $60K.

A graph of the total cash available Actual and projected to 30 June 2018 is presented below.

Outstanding Debtors

At 30 June 2018, outstanding debtors stand at $1,887,842. This balance comprises a current portion of debtors and that balance is $1,228,426 or 65% of this balance. There are 30 accounts which are over 60 days and are valued at $407,808 which represents 22% of the total outstanding debtors.

Outstanding and Overdue Rates and Charges

The total rates debtor balance at 30 June 2018 stands at $3,719,929, which is 5.27% as a percentage of rates revenue (in May 2018 this was 6.4%). There is $2,927,136 in pre-paid rates at the 30 June, with net rates outstanding being $792,793 at 30 June. The portion of the current levy unpaid is $2,349,171 which represents 63.2% of the balance outstanding.

The KPI target for Rates debtors is to bring the rates as a percentage of total rates revenue generated to below 3.75% by June 30. Whilst the collection process is proceeding, total rates debtors at 30 June 2018 at 5.27% of rates revenue is similar to that of last financial year (30 June 2017 outstanding rates were 5.28% of rates revenue).

The following table analyses this overdue amount by age of debt.

Aging Period	Arrears balance (before deducting prepaid rates)	% of total eligible for collection
Current	$2,349,171	63.15%
1 year	$762,620	20.50%
2 years	$317,980	8.55%
3 years	$189,464	5.09%
4 years	$78,780	2.12%
5 years	$21,914	0.59%
TOTAL	$3,719,929	100%

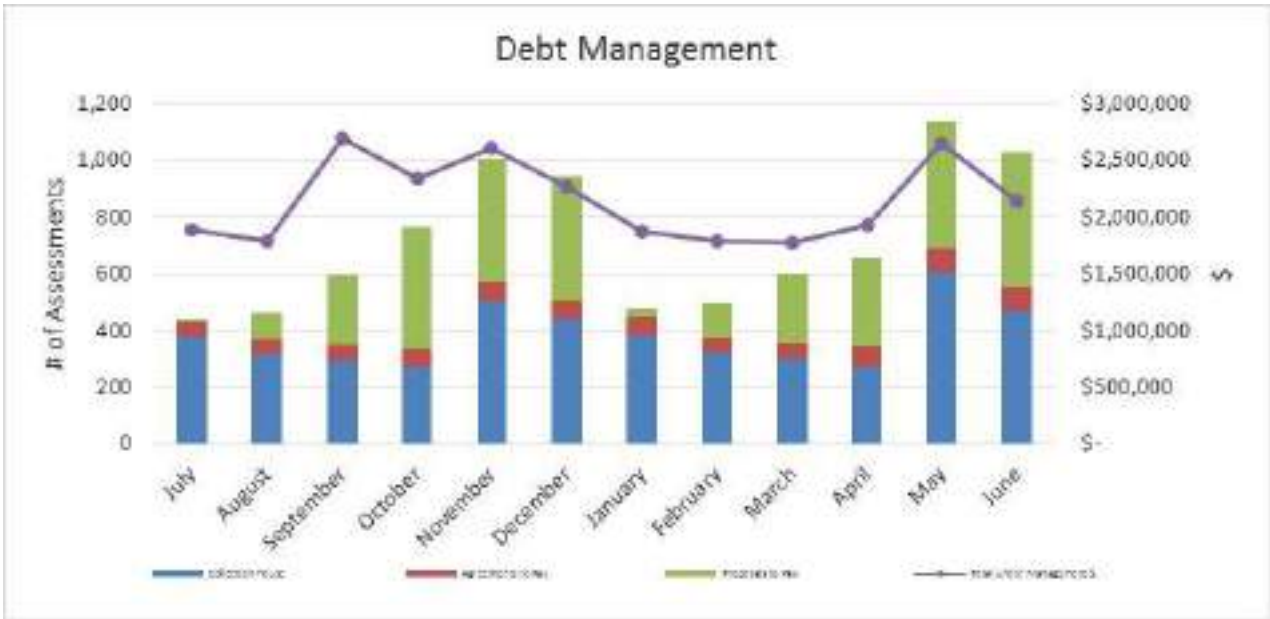
Council offers a direct debit facility with 2,099 direct debits totaling $166,716 processed in June.

Debt Management – Ratepayers always have the option to enter into formal payment arrangements, which prevents legal action being progressed by Council's debt collection agency. Interest is applied at a rate of 11% per annum, compounding monthly, on all overdue balances, including those under a formal payment arrangement.

In total 41% of the overdue balances are under management, this reflects 470 assessments out of 17,472 rateable assessments (2.69%).

June saw an increase of 34 ratepayers entering into proposals to pay (476 in total), representing a total of $338,842. Proposals to pay require all current arrears to be paid in full prior to the next rates issue; all arrangements to pay up to December are now revisited at the end of the March discount period. There are 86 (May: 86) assessments under long term arrangements (agreements to pay) with a total of $287,843 with varying settlement periods.

A total of 470 (May: 607) assessments, representing $1,510,307 (May: $1,878,757 are currently being managed by Council's debt collection agency.



Procurement Activities

Council strongly supports locally-owned and operated businesses, including those with an office or branch in our region. Council is able to report on direct local spend for both operational and capital expenditure in addition to employee salaries & wages. The data provided is only reflective of the payments made through Accounts Payable and via corporate purchase cards and does not make any consideration for other economic impacts.

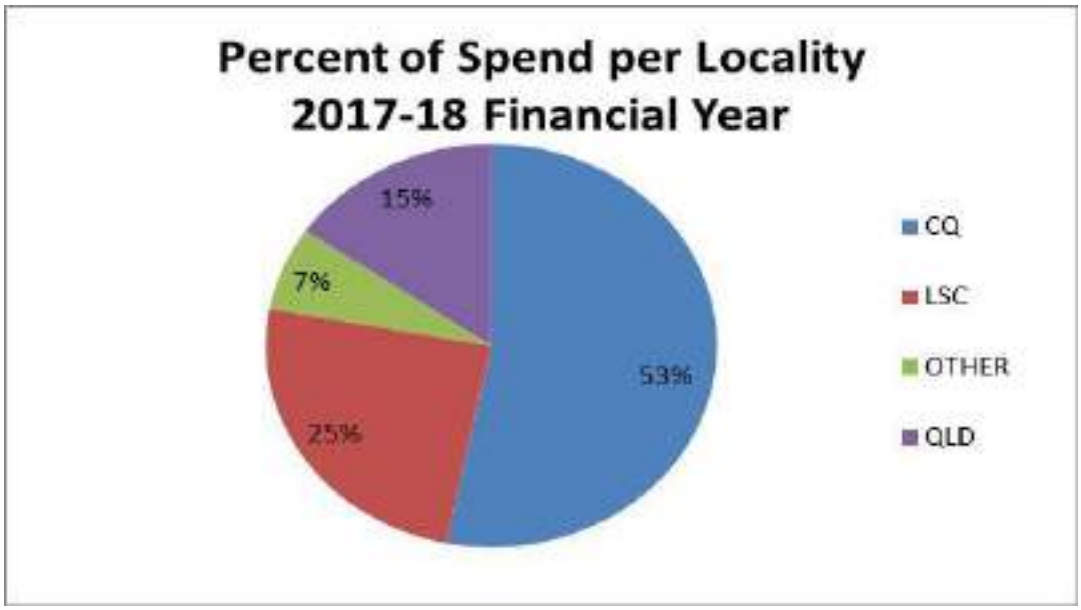
LSC = Businesses located within the shire boundaries.

CQ = Business completely set up and run outside of LSC boundaries but within the Central Queensland.

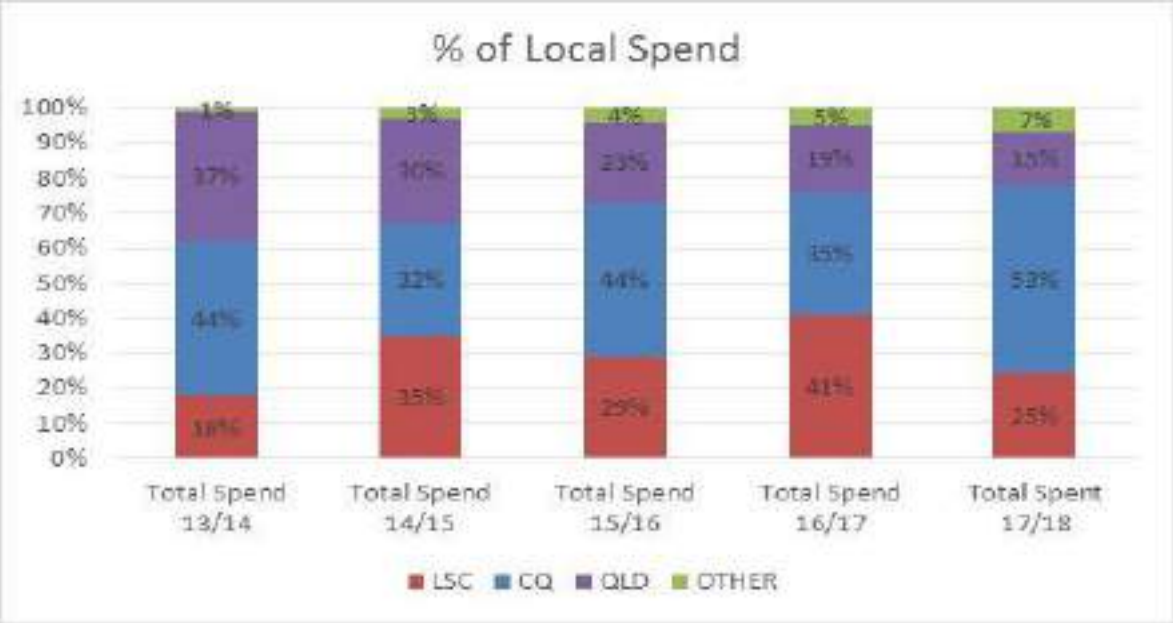
QLD = Business based outside of Central Queensland but within Queensland

OTHER = Business based outside of Queensland.

The following pie chart illustrates the total dollars spent this financial year by geographical categories. Of the $61.4M spent in CQ, $37.7M of this represents payments made to three principal contractors delivering major projects.



The total spend on businesses located within the Shire boundaries was 25% or $28.6M. The bar graph below summarizes the allocation by local spend categories per financial year since 2013-14.



PREVIOUS DECISIONS

Council adopted the 2017-18 Budget on 27 June 2017 and the 18Q2 revision was adopted on the 20 March 2018.

BUDGET IMPLICATIONS

The monthly Financial Report shows Council's financial position in relation to the 18Q2 Revised Budget.

LEGISLATIVE CONTEXT

In accordance with Section 204 of the *Local Government Regulation 2012*, a Financial Report is to be presented to Council on at least a monthly basis.

LEGAL IMPLICATIONS

Not applicable.

STAFFING IMPLICATIONS

Not applicable

RISK ASSESSMENT

Regular robust reporting of Council's financial results assists in creating a framework of financial responsibility within the Council and providing sound long term financial management of Council's operations.

CORPORATE/OPERATIONAL PLAN

Corporate Plan Reference: **Strategy GO3: Pursue financial sustainability through effective use of the Council's resources and assets and prudent management of risk.**

CONCLUSION

The Financial Report provides information about Council's financial performance and position for the month ending 30 June 2018. The attached financial results present a

provisional indication of Council's financial performance for the 2017-18 financial year. Council should note that various year-end accounting entries still remain to be completed which will affect these financial results.

12.14 - MONTHLY FINANCIAL REPORT FOR THE PERIOD ENDING 30 JUNE 2018

Monthly Financial Report - June 2018

Meeting Date: 17 July 2018

Attachment No: 1

Livingstone
SHIRE COUNCIL

Monthly Financial Report for period ending 30/06/2018

Contents

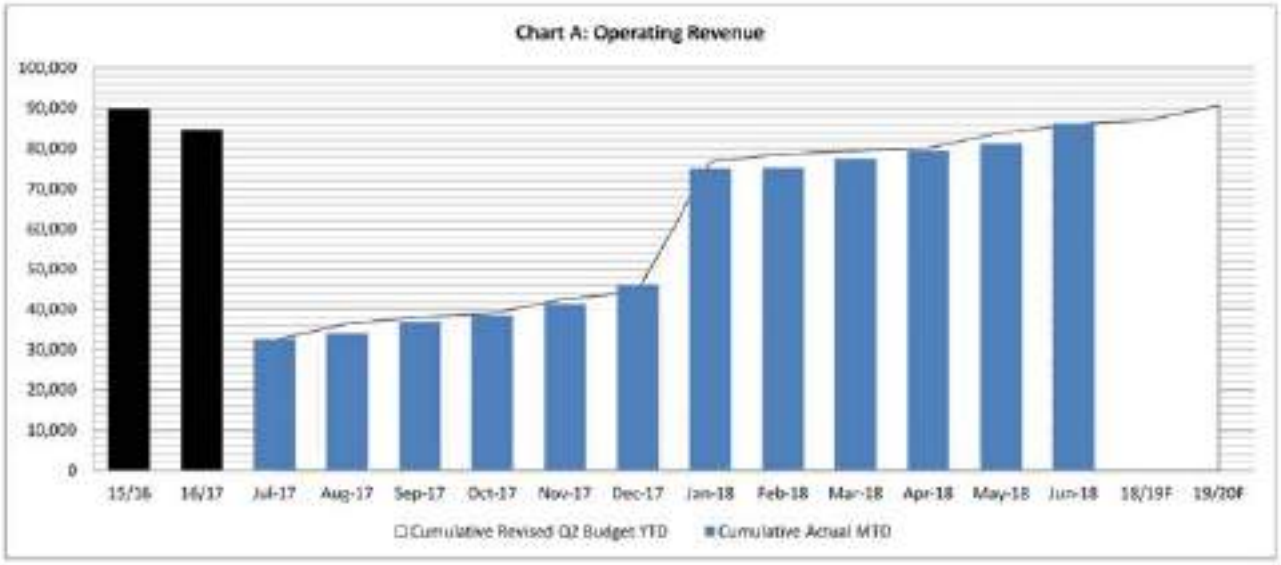
Financial Health Indicators

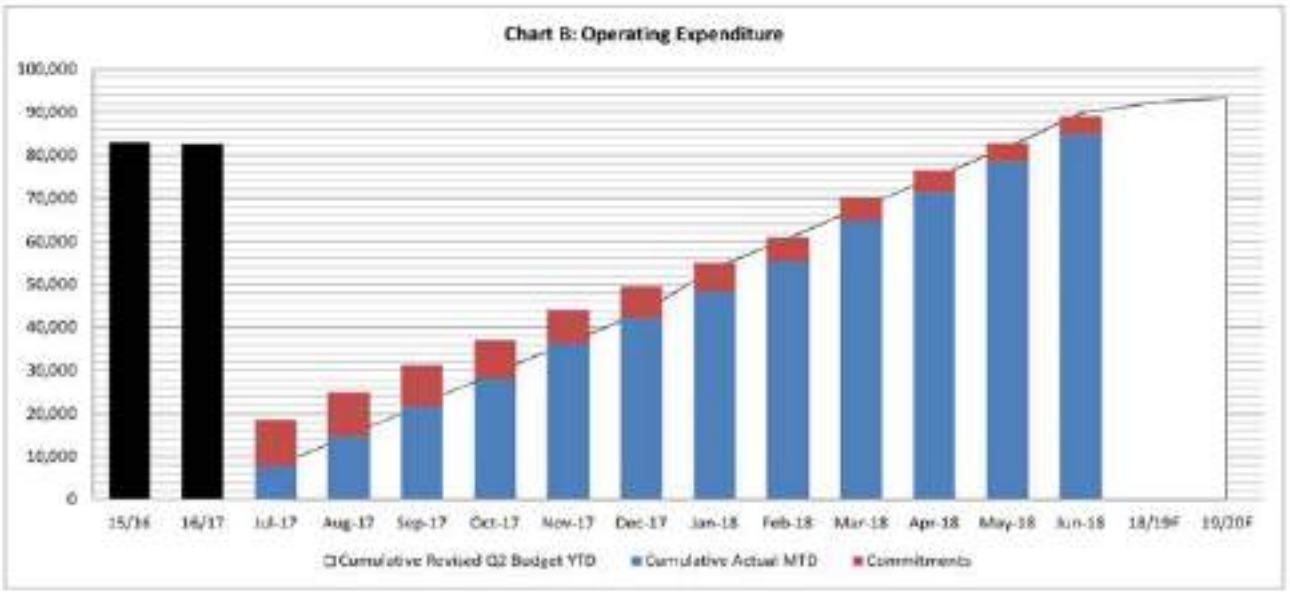
- Key strategic financial indicators
- Summary financial statements

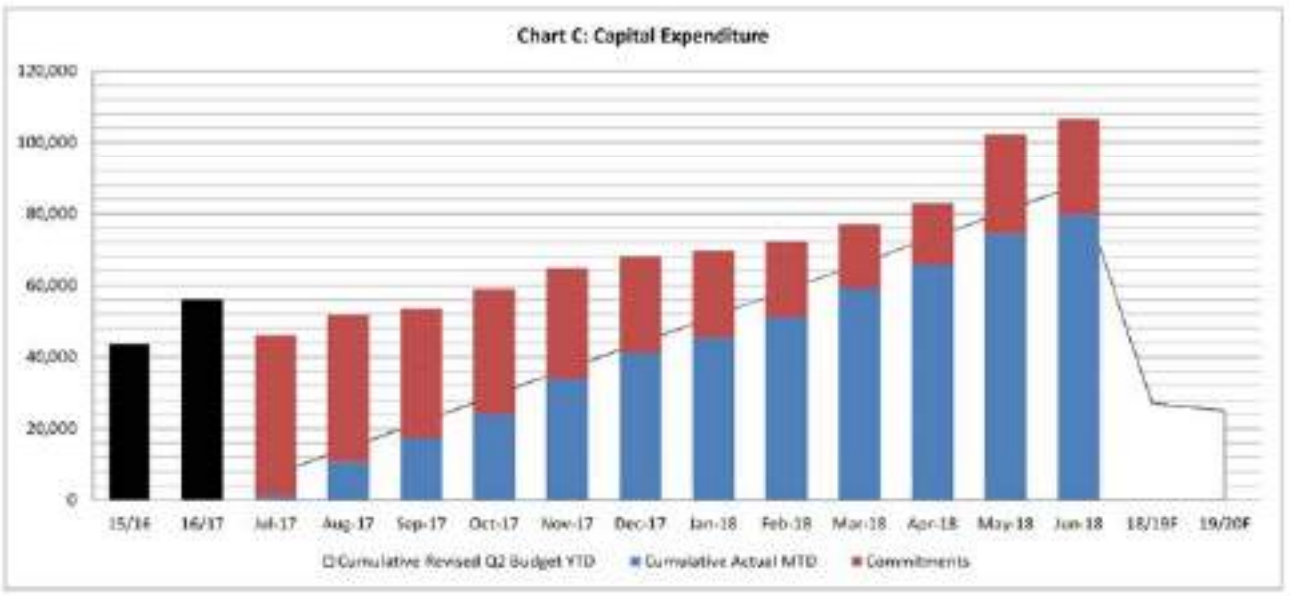
Attachments: Detailed financial statements

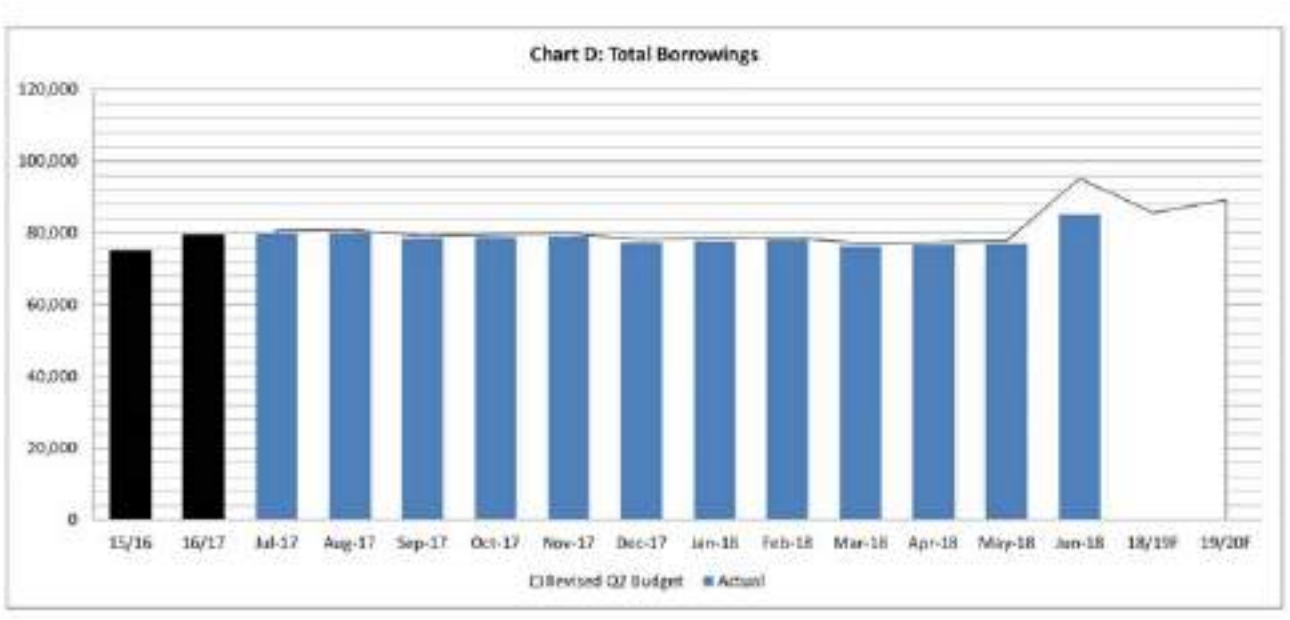
Financial Health Indicators

Key strategic financial indicators: trend analysis









Summary financial statements for the year to date ending
30/06/2018

A. Summary of financial results

A. Income Statements

	Year-to-date Budget	Year-to-date Actual	Variance $	Variance %	Status	Comments
	($m)	($m)	$	%		
Own-source Revenues	74.44	76.56	2.12	2.8%	✓	Own-source revenue is reported as ahead of budget following the second bi-annual issue of General Rates in January and the accural of Quarter 4 2017-18 water consumption notices. Total Operational Revenue is in close proximity to the annual budget. Employee expenses are under budget primarily due to leave reduction strategies and the tightening of recruitment processes for vacant roles throughout the 2017-18 financial year. Overall operating expenses are under budget by approximately $4.9M of which the vast majority is due to an underspend of $2.4M in employee benefits and $2.5M in materials & services. It should be noted that accrued expenditure in relation to both employee expenses and materials & services are to be processed throughout July 2018 which is expected to move total expenditure closer towards budget.
Total Revenues	86.09	86.33	0.24	0%	✓	
Employee Expenses	(32.69)	(30.26)	2.44	-7%	✓	
Total Expenses	(89.70)	(84.77)	4.93	-5%	✓	
Operating Result	**(3.61)**	**1.56**	**5.17**	**-143%**		

B. Balance Sheet

	Year-to-date Budget	Year-to-date Actual	Variance $	Variance %	Status	Comments
	($m)	($m)	$	%		
Cash and Cash Equiv	34.33	43.20	8.87	26%	✓	Total current assets are well above budget due in part to the underspend in employee expenses and materials & services expenditure outlined above. Council also drew down $10M in loan funding on 27 June immediately before the end of the financial year which is reflected in Council's cash balance at 30 June 2018. Total liabilities are reported as below budget however wages and creditor expenditure accurals are expected to move total current liabilities closer towards the budgeted end of financial year position. Borrowings are below budget as Council drew down $10M in loan funding apposed to the previously budgeted $20M.
Current Assets	36.45	54.31	15.86	41%	✓	
Current Liabilities	18.64	12.92	(5.72)	-31%	✓	
Non-Current assets	997.11	954.56	(42.55)	-4%	■	
Borrowings	95.27	85.28	(9.99)	-10%	✓	
Non-Current Liabilities	96.57	91.88	(6.69)	-7%	✓	
Net Assets	**918.35**	**904.07**	**(14.27)**	**-2%**		

C. Cash flows

	Year-to-date Budget	Year-to-date Actual	Variance $	Variance %	Status	Comments
	($m)	($m)	$	%		
Net Operating	12.37	20.70	8.33	67%	✓	In line with total cash & cash equivalents being above budget, net operating cash flows are above budget, due mostly to the savings outlined above in relation to employee benefits and materials & services. The variance in net investing cash flows is mostly due to an underspend on Council capital works program during 2017-18.
Net Investing	(37.64)	(27.32)	10.52	-28%	✓	
Net Financing	15.81	5.82	(9.99)	-63%	✓	
Closing Cash Balance	**34.33**	**43.20**	**8.87**	**26%**		

D. Capital program

	Year-to-date Budget	Year-to-date Actual	Variance $	Variance %	Status	Comments
	($m)	($m)	$	%		
Renewal	10.96	5.99	(4.97)	-45%	✓	Re-prioritisation of capital projects due to the requirement to meet funding expenditure deadlines has resulted in an increase in expenditure on new/upgrade capital projects. Council currently has $106.6M either spent ($79.6M) or commited ($27M) towards the Q2 2017-18 Capital Expenditure budget of $97.4M (including land development).
New/Upgrade	77.09	73.63	(3.45)	-4%	✓	
Total Capital Program	**88.04**	**79.63**	**(8.42)**	**-10%**		

Status Legend:

Above budgeted revenue or under budgeted expenditure	✓
Below budgeted revenue or over budgeted expenditure <10%	■
Below budgeted revenue or over budgeted expenditure >10%	×

Key strategic financial indicators as at: 30/06/2018

Operating performance

	Target Benchmark	Revised Q2 Budget	YTD Actual		Commentary
Operating surplus ratio					Both ratios are below the target benchmark however they are reported as ahead of the Q2 2017-18 budgeted ratios. This is mostly due to the prepayment of the first 2 quarters of the 2018-19 Financial Assistance Grant in June 2018 and the underspend in expenditure on employee costs and materials & services. As outlined in last months report, these ratios have moved back towards the Q2 2017-18 Revised Budget ratios during June and are expected to move closer again towards the Q2 ratios following the finalisation of 2017-18 accrued expenditure in July 2018.
Operating surplus/operating revenue	10%	-4.3%	1.8%	✓	
Operating efficiency ratio					
Operating revenue/operating expense	110%	96%	102%	✓	

Fiscal flexibility

	Target Benchmark	Revised Q2 Budget	YTD Actual		Commentary
Net financial liabilities ratio					The Net Financial Liabilities ratio is reported as below the target benchmark of 60%. The drawdown of Council's loan borrowings from the Queensland Treasury Corporation has increased total liabilities and the finalisation of accrued expenditure in July will put pressure on this ratio to stay within the target benchmark of 60%. The own-source operating revenue ratio is well ahead of the target benchmark as General Rates & Utility Charges and Fees & Charges are when viewed together are in ahead of budget and together they represent the vast majority of total operating revenue. The interest cover ratio at 4.8% is within the target benchmark range.
Total liabilities - current assets /operating revenue	<60%	79%	58%	✓	
Own-source operating revenue ratio					
Own source/operating revenue	>60%	80.5%	89%	✓	
Interest cover ratio					
Net Interest Expense / Total Operating Revenue	0% - 5%	4.9%	4.8%	✓	

Liquidity

	Target Benchmark	Revised Q2 Budget	YTD Actual		Commentary
Cash balances - Cash capacity in months					This ratio indicates that Council has sufficient cash to meet current cash operating expenses for approximately 9.1 months. This favourable ratio is due to the underspend in employee costs and materials & services outlined above and the fact that $10M in loan funding was drawn down by Council on 27 June 2018. The current ratio is well above the target benchmark of 2.0, again due to the sam reasoning as immediately above.
Cash at bank/cash operating expense	3.0	3.0	9.1	✓	
Ability to pay our bills - Current Ratio (times)					
Current assets/current liabilities	2.0	2.9	4.2	✓	

Asset sustainability

	Target Benchmark	Revised Q2 Budget	YTD Actual		Commentary
Asset Sustainability Ratio					The Asset sustainability ratio will remain lower than the target benchmark due to the large proportion of new assets not requiring renewal at this stage. Capital renewal projects are progressing as per the capital works schedule with 54.7% of the 18Q2 capital expenditure renewal budget spent prior to the finalisation of accrued expenditure in July.
Renewal expenditure/depreciation	90%	46%	25%	✗	

Stauts Legend			
KPI target (budget) achieved or exceeded	✓	KPI target (budget) not achieved	✗

Attachments

A.1: Monthly Summary revenue and expenditure report (by line item) YTD 100%

	This period				Year-to-date				Full year		
	Revised Q2 Budget	Actual	Variance	Variance	Revised Q2 Budget	Actual	Variance	Variance	Adopted Budget	Revised Q2 Budget	%YTD (Incl Committals) of Revised Q2 Budget
	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%	($'000)	($'000)	%
Revenues											
Rates & Utility Charges	0	2,354	2,354	0%	69,463	71,196	1,733	2%	68,903	68,624	104%
User fees & charges	305	309	4	1%	4,216	4,423	207	5%	4,197	4,216	105%
Operating grants	603	1,980	1,377	228%	6,280	6,748	468	7%	4,798	6,280	107%
Interest	94	59	(35)	-37%	1,120	904	(216)	-19%	1,010	1,120	81%
Sales revenue	1,208	307	(901)	-75%	4,251	2,116	(2,135)	-50%	6,287	4,251	50%
Other	66	99	33	50%	764	942	178	23%	551	710	133%
Total operating revenues	***2,276***	***5,107***	***2,831***	***124%***	***86,094***	***86,330***	***236***	***0%***	***85,856***	***85,201***	***101%***
Expenses											
Employee benefits	(2,750)	(2,260)	490	-18%	(32,695)	(30,258)	2,437	-7%	(33,807)	(32,695)	-93%
Materials & Services	(2,777)	(1,677)	1,100	-40%	(27,906)	(21,451)	6,454	-23%	(26,557)	(27,867)	-94%
Depreciation	(1,728)	(1,964)	(236)	14%	(23,568)	(23,680)	(112)	0%	(23,452)	(23,568)	-100%
Interest	(345)	(329)	17	-5%	(4,127)	(4,136)	(11)	0%	(4,243)	(4,127)	-100%
Other	(117)	(28)	89	-76%	(1,406)	(5,243)	(3,837)	273%	(1,400)	(1,406)	378%
Less: Total operating expenses	***(7,718)***	***(6,258)***	***1,460***	***-19%***	***(89,702)***	***(84,770)***	***4,931***	***-5%***	***(89,459)***	***(88,663)***	***-100%***
Net operating result	***(5,442)***	***(1,151)***	***4,291***		***(3,608)***	***1,559***	***5,168***	***-143%***	***(3,602)***	***(3,461)***	***72%***
Capital Income											
Capital Grants	3,919	7,381	3,462	88%	47,031	44,923	(2,108)	-4%	40,202	47,031	5%
Infrastructure Charges	238	365	128	54%	2,852	2,264	(588)	-21%	4,500	2,852	0%
Other capital income	17	0	(17)	-100%	200	2,846	2,646	1323%	200	200	0%
Less: capital expenses	(12)	0	12	-100%	(140)	0	140	-100%	(140)	(140)	0%
Net Capital Income	***4,162***	***7,747***	***3,585***	***86%***	***49,943***	***50,034***	***91***	***0%***	***44,762***	***49,943***	***106%***
Total comprehensive income	***(1,280)***	***6,596***	***7,876***		***46,335***	***51,593***	***5,259***		***41,160***	***46,282***	***102%***

A.2: Monthly Summary revenue and expenditure report (by program) YTD 100%

	This period				Year-to-date				Full year		
	Revised Q2 Budget	Actual	Variance	Variance	Revised Q2 Budget	Actual	Variance	Variance	Adopted Budget	Revised Q2 Budget	%YTD (Incl Committals) of Revised Q2 Budget
	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%	($'000)	($'000)	%
Office of the CEO											
Revenue	65	2	(63)	-97%	438	251	(187)	-43%	453	438	57%
Expenses	(1,655)	(588)	1,067	-64%	(13,990)	(8,953)	5,037	-36%	(13,358)	(13,990)	69%
Infrastructure											
Revenue	4,631	1,966	(2,665)	-58%	37,247	36,635	(612)	-2%	35,328	37,247	-98%
Expenses	(4,739)	(4,477)	262	-6%	(59,588)	(56,349)	3,239	-5%	(58,870)	(59,588)	99%
Liveability and Wellbeing											
Revenue	234	325	91	39%	3,342	4,630	1,288	39%	3,104	3,342	139%
Expenses	(1,595)	(1,349)	246	-15%	(19,043)	(19,007)	36	0%	(18,999)	(19,043)	104%
Central Funds											
Revenue	898	2,814	1,916	213%	45,013	44,813	(200)	0%	46,972	45,013	100%
Expenses	270	156	(114)	-42%	2,919	(461)	(3,380)	-116%	1,788	2,919	22%

B: Monthly summary of assets and liabilities report — YTD 100%

	Year-to-date				Full year		
	Revised Q2 Budget	Actual	Variance	Variance	Adopted Budget	Revised Q2 Budget	%YTD (Incl Committals) of Revised Q2 Budget
	($'000)	($'000)	($'000)	%	($'000)	($'000)	%
Assets							
Cash and cash equivalents	32,330	42,198	9,867	31%	13,337	32,330	131%
Investments	2,000	1,000	(1,000)	-50%	2,000	2,000	50%
Inventory	1,255	391	(864)	-69%	1,350	1,255	31%
Receivables:	-					-	0%
Rates	-	3,553	3,553	0%	7,405	7,503	47%
Other	-	-	0	0%	-	-	0%
Land - for resale	14,473	9,560	(4,913)	-34%	6,495	14,473	66%
Infrastructure:	-					-	
PPE	984,123	832,107	(152,016)	-15%	992,547	984,123	85%
Capital WIP	-	115,756	115,756	0%	-	-	0%
Other assets	1,374	4,302	2,928	213%	2,281	1,374	313%
Total Assets	**1,035,555**	**1,006,868**	**(26,688)**	**-3%**	**1,025,415**	**1,043,858**	**97%**
Liabilities							
Employee benefits	5,004	8,184	3,180	64%	5,025	5,004	164%
Trade creditors and accruals	8,522	857	(7,665)	-90%	8,921	8,522	10%
Borrowings:	-					-	
Short-term	5,117	4,752	(365)	-7%	5,026	5,117	93%
Long-term	90,151	80,529	(9,622)	-11%	90,418	90,151	89%
Other liabilities	8,414	10,473	2,059	24%	10,199	10,978	95%
Total Liabilities	**117,208**	**104,795**	**(12,413)**	**-11%**	**119,589**	**119,772**	**87%**
Current assets	*38,446*	*54,306*	*15,860*	*41%*	*29,254*	*52,237*	*104%*
Current liabilities	*18,643*	*12,919*	*(5,724)*	*-31%*	*17,059*	*17,811*	*73%*
Non-current assets	*997,109*	*954,562*	*(42,547)*	*-4%*	*996,161*	*990,821*	*90%*
Non-current liabilities	*98,565*	*91,876*	*(6,689)*	*-7%*	*102,529*	*102,161*	*90%*
Net community assets	***918,347***	***904,072***	***(14,275)***	***-2%***	***905,826***	***923,286***	***98%***

C: Monthly summary cash flow report — YTD 100%

	This period				Year-to-date				Full year		
	Revised Q2 Budget	Actual	Variance	Variance	Revised Q2 Budget	Actual	Variance	Variance	Adopted Budget	Revised Q2 Budget	%YTD (Incl Committals) of Revised Q2 Budget
	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%	($'000)	($'000)	%
Cash inflows from operations -											
Rates & utility charges	3,534	3,038	(497)	-14%	72,707	78,755	6,048	8%	68,903	72,707	108%
User fees and charges	720	641	(79)	-11%	7,924	6,859	(1,065)	-13%	7,777	7,924	87%
Operating grants	603	1,980	1,377	228%	6,270	6,610	341	5%	4,798	6,270	105%
Interest	94	59	(35)	-37%	1,120	904	(216)	-19%	1,010	1,120	81%
Other	877	(1,148)	(2,025)	-231%	1,253	(1,999)	(3,252)	-260%	7,889	1,253	-160%
Total operating cash inflows	***5,828***	***4,569***	***(1,259)***	***-22%***	***89,274***	***91,129***	***1,855***	***2%***	***90,377***	***89,274***	***102%***
Cash outflows from operations -											
Employee entitlements	(2,750)	(2,260)	490	-18%	(32,698)	(30,184)	2,514	-8%	(33,807)	(32,698)	92%
Payments to suppliers	(3,902)	(1,924)	1,978	-51%	(38,737)	(30,878)	7,858	-20%	(26,557)	(38,737)	80%
Interest	(330)	(329)	1	0%	(3,960)	(4,138)	(178)	5%	(4,243)	(3,960)	105%
Other	(117)	(300)	(183)	157%	(1,509)	(5,228)	(3,719)	246%	(3,241)	(1,509)	346%
Total operating cash outflows	***(7,099)***	***(4,813)***	***2,286***	***-32%***	***(76,904)***	***(70,429)***	***6,475***	***-8%***	***(67,848)***	***(76,904)***	***92%***
Net cash flows from operations	***(1,271)***	***(244)***	***1,028***	***-81%***	***12,371***	***20,701***	***8,330***	***67%***	***22,530***	***12,371***	***167%***
Investing cash flows -											
Proceeds on disposal of assets	317	0	(317)	-100%	317	1,466	1,149	362%	300	317	462%
Capital grants & Infrastructure Charges	2,014	7,747	5,733	285%	49,884	46,016	(3,868)	-8%	44,702	49,884	92%
Net tfr from cash investments	0	0	0	0%	0	1,000	1,000	0%	0	0	0%
Acquisition of assets	(7,336)	(4,120)	3,216	-44%	(88,043)	(75,799)	12,244	-14%	(95,112)	(88,043)	86%
Net investing cash flows	***(5,005)***	***3,627***	***8,632***	***-172%***	***(37,842)***	***(27,318)***	***10,524***	***-28%***	***(50,110)***	***(37,842)***	***72%***
Financing cash flows											
New borrowings	20,000	10,000	(10,000)	-50%	20,000	10,000	(10,000)	-50%	20,000	20,000	50%
Repayment of borrowings	(1,796)	(1,719)	77	-4%	(4,190)	(4,177)	13	0%	(4,098)	(4,190)	100%
Net financing cash flows	**18,204**	**8,281**	**(9,923)**	**-55%**	**15,810**	**5,823**	**(9,987)**	**-63%**	**15,902**	**15,810**	**37%**
Net combined cash flows	***11,928***	***11,665***	***(263)***	***-2%***	***(9,662)***	***(794)***	***8,867***	***-92%***	***(11,678)***	***(9,662)***	***8%***
Add: Opening cash balance	***22,403***	***31,533***	***9,131***	***41%***	***43,992***	***43,992***	***9,131***	***21%***	***27,017***	***43,992***	***100%***
Closing cash balance	*34,330*	*43,198*	*8,867*	*26%*	*34,330*	*43,198*	*8,867*	*26%*	*15,339*	*34,330*	*126%*

D.1: Monthly summary capital revenue and expenditure report by category (all projects) YTD 100%

	This period				Year-to-date				Full year		
	Revised Q2 Budget	Actual	Variance	Variance	Revised Q2 Budget	Actual	Variance	Variance	Adopted Budget	Revised Q2 Budget	%YTD (Incl Committals) of Revised Q2 Budget
	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%	($'000)	($'000)	%
Renewal of existing assets -											
Capital grants and contributions	0	0	0	0%	-	(1,079)	(1,079)	0%	-	-	0%
Renewal expenditure	913	494	(419)	-46%	10,958	5,992	(4,966)	-45%	14,156	10,958	65%
New assets/Upgrade of existing assets									-		
Capital grants and contributions	(4,157)	(7,747)	(3,590)	86%	(49,884)	(48,955)	929	-2%	(40,202)	(49,884)	98%
New/upgrade expenditure	6,424	4,741	(1,682)	-26%	77,085	73,630	(3,452)	-4%	83,272	77,085	129%
Total											
Capital grants and contributions	***(4,157)***	***(7,747)***	***(3,590)***	***86%***	***(49,884)***	***(50,034)***	***(150)***	***0%***	***(40,202)***	***(49,884)***	***100%***
Renewal, upgrade and acquisition	***7,337***	***5,236***	***(2,101)***	***-29%***	***88,043***	***79,626***	***(8,417)***	***-10%***	***97,428***	***88,043***	***121%***

D.2: Monthly summary capital revenue and expenditure report by asset class (all projects) YTD 100%

	This period				Year-to-date				Full year		
	Revised Q2 Budget	Actual	Variance	Variance	Revised Q2 Budget	Actual	Variance	Variance	Adopted Budget	Revised Q2 Budget	%YTD (Incl Committals) of Revised Q2 Budget
	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%	($'000)	($'000)	%
Land											
Capital grants and contributions	-	-	-	0%	-	(768)	(768)	0%	-	-	0%
Renewal, upgrade and acquisition	4	4	(0)	-8%	50	36	(14)	-28%	150	50	91%
Buildings											
Capital grants and contributions	(245)	0	245	-100%	(2,939)	(7,386)	(4,447)	151%	(1,006)	(2,939)	251%
Renewal, upgrade and acquisition	551	108	(443)	-80%	6,613	6,708	95	1%	5,290	6,613	104%
Plant & Equipment											
Capital grants and contributions	-	(15)	(15)	0%	-	(780)	(780)	0%	-	-	0%
Renewal, upgrade and acquisition	251	374	123	49%	3,016	2,208	(808)	-27%	2,276	3,016	83%
Roads & Drainage											
Capital grants and contributions	(1,565)	(6,515)	(4,950)	316%	(18,781)	(21,335)	(2,554)	14%	(13,496)	(18,781)	114%
Renewal, upgrade and acquisition	2,759	2,837	78	3%	33,112	25,114	(7,998)	-24%	26,650	33,112	109%
Water											
Capital grants and contributions	(74)	(106)	(32)	43%	(887)	(713)	174	-20%	-	(887)	80%
Renewal, upgrade and acquisition	315	143	(172)	-55%	3,778	2,833	(945)	-25%	3,735	3,778	82%
Sewerage											
Capital grants and contributions	(210)	(57)	153	-73%	(2,520)	(247)	2,273	-90%	(3,000)	(2,520)	10%
Renewal, upgrade and acquisition	397	601	204	51%	4,768	2,146	(2,622)	-55%	16,260	4,768	325%
Site Improvements											
Capital grants and contributions	(1,808)	(1,054)	754	-42%	(21,695)	(16,143)	5,552	-26%	(21,500)	(21,695)	74%
Renewal, upgrade and acquisition	3,059	521	(2,538)	-83%	36,705	34,707	(1,998)	-5%	40,767	36,705	100%
Land Development											
Capital grants and contributions	(255)	0	255	-100%	(3,063)	(2,662)	401	-13%	(1,200)	(3,063)	87%
Renewal, upgrade and acquisition	577	648	71	12%	6,922	5,873	(1,049)	-15%	2,300	6,922	88%

D.3: Summary capital expenditure report by project (>$1 million)

			Project Dates		Project Costs YTD FY17/18					Budget FY17/18			Project Life Costs	
		% Project Complete	Planned Start Date*	Planned Completion Date*	WIP B/F FY 16/17	Actual	Commitments	Total Project Costs	Project EOFY Forecast Cost*	Adopted Budget	Revised Budget*	Variance	Project LTD Costs Exc Cap	Approved Project Life Budget
Major projects (>$1m)					($'000)	($'000)	($'000)	($'000)	($'000)	($'000)	($'000)	($'000)	($'000)	($'000)
	Scenic Hwy Reconstruction at Statue Bay													
1050897	(U) UEC-RC-Scenic Hwy - Statue Bay Downslope	97%	27/09/16	14/03/18	2,307	5,205	2,914	8,119	7,400	6,450	7,400	950	10,426	0
1068232	(U)-UC-RC-Scenic Hwy at Statue Bay-Clayt	97%	3/07/17	17/07/18	1,669	194	58	252	1,630	800	1,630	830	1,912	16,500
1103745	(N)-UC-NC-Scenic Hwy - Statue Bay Upslope	97%	26/03/17	14/03/18	382	4,358	2,493	6,851	7,350	6,190	7,350	1,160	7,233	0
1108725	(U)-UC-NC-Scenic Hwy-Statue Bay Construction	97%	14/03/18	17/07/18	0	4,471	2,065	6,536						
	Subtotal of Scenic Hwy Reconstruction at Statue Bay				*4,348*	*14,228*	*7,530*	*21,758*	*16,380*	*13,440*	*16,380*	*2,940*	*19,571*	*16,500*
	Panorama Drive													
1025985	(U) REC-NC-Panorama Drv Segment 1A T-43	100%	-	22/12/17	0	13	0	13	0	0	0	0	4,037	9,690
1067045	(N) REC-NC-Panorama Drv project management T-39 T-43 T-13	100%	-	22/12/17	6,635	66	6	72	75	0	75	75	6,707	6,810
1067046	(N) REC-NC-Panorama Drv Segment 2 design T-43 T-13	100%	-	22/12/17	777	0	0	0	0	0	2,300	2,300	777	0
1067047	(N) REC-NC-Panorama Drv Segment 2 civil	99%	-	17/05/18	16,254	2,133	95	2,229	2,300	1,251	1,251	0	18,483	11,500
1067048	(U) REC-RC-Panorama Drv Segment 1B Limestone Creek Rd T-39	0%	-	-	76	1	0	1	8	220	8	(212)	77	0
	Subtotal of Panorama Drive				*23,743*	*2,213*	*101*	*2,314*	*2,383*	*1,471*	*3,634*	*2,163*	*30,451*	*30,000*
	Yeppoon Foreshore Redevelopment													
976018	(N) Foreshore Design & Project Managemen	100%	-	30/06/18	2,762	1,607	0	1,607	1,612	1,173	1,612	440	4,369	1,500
1074103	(N) Foreshore Multi-Deck Carpark and Ten	100%	-	31/07/16	615	160	0	160	161	210	161	(50)	10,871	12,000
1074104	(N) Foreshore Service Road, Paths to Wat	100%	-	15/12/17	1,779	1,395	0	1,395	1,345	1,175	1,345	170	3,174	2,000
1074106	(N) Foreshore Water Park Precinct (pool,	100%	-	30/05/18	820	20,346	0	20,346	19,886	17,623	19,887	2,275	21,166	13,000
1074107	(U) Foreshore Anzac Parade Shared Zone a	100%	3/07/17	30/06/18	225	4,022	0	4,022	4,567	3,916	4,567	651	4,247	8,250
1074108	(U) Foreshore Revetment Wall, Timber Boardwalk and Wharf	100%	-	30/11/17	42	53	0	53	53	1,713	53	(1,660)	95	4,000
1074109	(N) Foreshore Contingency and Management Reserve	100%	-	30/11/17	281	31	0	31	25	245	25	(220)	313	3,500
1074111	(U) Foreshore Road Realignment (Appleton	100%	15/05/17	15/12/17	1,738	1,885	0	1,885	1,859	1,664	1,859	194	3,823	3,000
	Subtotal of Yeppoon Foreshore Redevelopment				*8,263*	*29,500*	*0*	*29,500*	*29,507*	*27,719*	*29,519*	*1,800*	*47,858*	*47,250*
	Gateway Land Development													
1051624	(N) Gateway Stg1 Land Development	100%	-	30/06/18	0	136	0	136	158	0	158	158	136	0
1063754	(N) Gateway General	95%	-	30/06/18	0	170	5	175	140	0	100	100	175	0
1067294	(N) Gateway Stg2 Land Development	95%	-	30/06/18	0	683	17	700	760	0	760	760	2,673	1,800
1067296	(N) Gateway Stg3 Land Development	0%			0	0	0	0	0	0	0	0	552	0
	Subtotal of Gateway Land Development				*0*	*988*	*22*	*1,011*	*1,058*	*0*	*1,018*	*1,018*	*3,536*	*1,800*
	Homemaker Centre													
1067267	(N) PED Homemaker Centre Demolition & Site Fencing	95%	-	31/05/18	0	240	11	251	300	0	300	300	451	200
1067268	(N) PED Homemaker Centre General	75%	-	31/08/18	0	69	33	102	100	0	100	100	120	0
1067269	(N) Homemaker Centre Land Development	60%	6/09/17	31/05/18	0	860	31	891	2,300	1,100	2,124	1,024	1,304	3,000
1108266	(N) Homemaker Centre Service Relocation	98%	6/09/17	30/06/18	0	1,061	72	1,134	450	0	450	450	1,134	0
1108267	(R) Homemaker Centre SPS replacement	95%	6/09/17	31/05/18	0	182	37	220	200	0	200	200	220	0
1108268	(N) Homemaker Centre Earthworks	98%	6/09/17	31/05/18	0	2,209	76	2,285	2,741	0	2,741	2,741	2,285	0
1108269	(N) Homemaker Centre SRM 300mm trunk sewer rising main	80%	6/09/17	31/05/18	0	53	3	56	50	0	50	50	56	0
	Subtotal of Homemaker Centre Land Development				*0*	*4,675*	*264*	*4,938*	*6,141*	*1,100*	*2,524*	*1,424*	*5,569*	*3,200*
0971753	(R)-REC-GR-Gravel Resheet Program A	99%	3/07/17	28/05/18	0	960	27	987	779	1,131	779	(352)	987	779
1105686	(U)-RC-RC-Cooowonga Road-26km	99%	8/11/17	31/05/18	0	844	185	1,029	1,400	1,500	1,400	0	1,029	1,500
1105687	(U)-RC-RC-St Christopher Chapel Rd	10%	8/01/18	2018/19	0	11	0	11	1,000	1,000	1,000	0	11	1,000
1100767	(N)-PED-Emu Park Village & Foreshore Revitalisation	20%	3/07/17	21/12/18	69	109	1,234	1,343	800	4,250	800	(3,450)	1,403	4,500
1100768	(N)-CC-Emu Park multi-sports Complex Stg2 & 3	100%	3/07/17	18/05/18	215	4,385	531	4,895	4,926	3,870	4,478	608	5,110	4,500
1074856	(N)-UC-SW-Taranganba Rd culverts at Ross	5%	1/08/17	2018/19	21	58	0	58	1,300	1,300	1,300	0	79	1,300
1100771	(N)-UC-Misc-Various Infrastructure Agree	0%	3/07/17	26/05/18	0	0	0	0	500	1,000	1,000	0	0	1,000
0963816	(R)-Fleet Renewal Program	100%	3/07/17	27/06/18	0	1,796	93	1,889	2,650	2,250	2,650	400	1,889	2,650
988058	(N) Capricorn Coast Cemetery Roadworks	80%	6/05/17	28/06/18	725	907	654	1,560	1,850	2,500	1,835	(665)	2,286	1,835
988173	(N) Capricorn Coast New Cemetery Internal	10%	2/03/18	21/05/18	0	90	185	275	1,000	1,500	1,000	0	275	1,000
1100027	(N) Local Disaster Coordination Centre	100%	2/01/17	28/05/18	451	5,783	0	5,783	5,774	5,015	5,774	760	6,234	6,220
1103892	(R)-WC-W-Main Replacement Relocation Glendale Rd	99%	9/01/18	31/05/18	0	428	29	457	860	1,000	860	0	457	860
959072	(N) SN STP YPN Augmentation SEW-33	30%	4/12/16	28/06/19	254	1,550	12,954	14,504	3,500	15,000	3,500	(11,500)	14,758	15,000

*18Q2 estimates

E.1: Business Unit summary revenue and expenditure report (by line item) YTD 100%

	Water				Sewer				Waste				Council				Consolidated			
	Revised Q2 Budget	YTD Actual	Variance	Variance	Revised Q2 Budget	YTD Actual	Variance	Variance	Revised Q2 Budget	YTD Actual	Variance	Variance	Revised Q2 Budget	YTD Actual	Variance	Variance	Revised Q2 Budget	Actual	Variance	Variance
	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%	($'000)	($'000)	($'000)	%
Rates & Utility Charges	15,102	16,052	950	6%	9,008	9,301	293	3%	5,641	5,746	105	2%	38,873	40,097	1,224	3%	68,625	71,196	2,572	4%
User fees & charges	340	328	(12)	-4%	118	155	37	31%	1,019	1,035	15	2%	2,738	2,906	167	6%	4,216	4,423	207	5%
Operating grants	0	0	0	0%	0	0	0	0%	0	0	0	0%	6,280	6,748	468	7%	6,280	6,748	468	7%
Interest	0	0	0	0%	0	0	0	0%	0	0	0	0%	1,120	904	(216)	-19%	1,120	904	(216)	-19%
Sales revenue	(200)	(78)	122	-61%	(60)	(64)	(4)	7%	0	0	0	0%	(3,991)	(1,976)	2,015	-50%	(4,251)	(2,118)	2,133	-50%
Other	414	168	(247)	-60%	386	132	(255)	-66%	46	72	26	56%	9,204	4,808	(4,396)	-48%	10,051	5,179	(4,872)	-48%
Total operating revenues	***15,657***	***16,470***	***813***	***5%***	***9,452***	***9,523***	***71***	***1%***	***6,707***	***6,853***	***146***	***2%***	***54,224***	***53,486***	***(738)***	***-1%***	***86,040***	***86,332***	***292***	***0%***
Expenses																				
Employee benefits	(2,072)	(1,814)	258	-12%	(1,776)	(1,452)	323	-18%	(405)	(368)	37	-9%	(28,442)	(26,624)	1,818	-6%	(32,695)	(30,258)	2,437	-7%
Materials & Services	(6,946)	(6,666)	279	-4%	(4,873)	(4,330)	544	-11%	(4,143)	(3,240)	902	-22%	(11,105)	(7,218)	3,887	-35%	(27,067)	(21,454)	5,622	-21%
Depreciation	(3,243)	(3,243)	0	0%	(4,551)	(4,551)	0	0%	(780)	(780)	0	0%	(14,994)	(15,106)	(112)	1%	(23,568)	(23,680)	(112)	0%
Interest	(661)	(414)	266	-39%	(343)	(610)	(267)	78%	(661)	(659)	2	0%	(2,443)	(2,455)	(12)	1%	(4,127)	(4,138)	(11)	0%
Other	0	0	0	0%	(0)	0	0	-100%	(10)	(8)	2	-24%	(2,235)	(5,235)	(3,000)	134%	(2,245)	(5,243)	(2,998)	134%
Less: Total operating expenses	***(12,942)***	***(12,138)***	***804***	***-6%***	***(11,543)***	***(10,943)***	***600***	***-5%***	***(5,997)***	***(5,054)***	***943***	***-16%***	***(59,219)***	***(56,638)***	***2,591***	***-4%***	***(89,702)***	***(84,773)***	***4,938***	***-6%***
Net operating result	***2,715***	***4,331***	***1,617***	***60%***	***(2,091)***	***(1,420)***	***671***	***-32%***	***710***	***1,799***	***1,089***	***153%***	***(4,995)***	***(3,152)***	***1,853***	***-37%***	***(3,661)***	***1,559***	***5,230***	***-143%***

E.2: Business Unit summary of assets and liabilities report YTD 87%

	Water	Sewerage	Waste	Council	Year-to-date				Full year		
					Budget	Actual	Variance	Variance	Adopted Budget	Revised Q2 Budget	%YTD (incl Commitals) of Adopted Budget
	($'000)	($'000)	($'000)	($'000)	($'000)	($'000)	($'000)	%	($'000)	($'000)	%
Assets											
Cash and cash equivalents	11,022	2,664	11,564	17,948	13,741	43,198	29,457	214%	15,337	34,330	126%
Inventory	0	0	0	391	1,255	391	(864)	-69%	1,350	1,255	31%
Receivables:	0	0	0	0	0	0	0	0%	0	0	0%
Rates	809	379	274	2,091	0	3,553	3,553	0%	7,405	7,503	47%
Land - for resale	0	0	0	9,560	14,473	9,560	(4,913)	-34%	6,495	14,473	66%
Infrastructure:	0	0	0	0	0	0	0	0%	0	0	-
PPE	190,475	118,673	9,634	514,235	984,123	832,107	(152,016)	-15%	992,547	984,123	85%
Capital WIP	3,366	2,624	181	109,586	0	115,756	115,756	0%	0	0	0%
Other assets	1,588	4	176	1,834	1,374	4,302	2,928	213%	2,281	1,374	313%
Total Assets	**207,260**	**124,343**	**21,829**	**655,435**	**1,014,966**	**1,008,868**	**(6,098)**	**-1%**	**1,025,415**	**1,043,058**	**97%**
Liabilities											
Employee benefits	675	653	62	6,789	5,004	8,184	3,180	64%	5,025	5,004	164%
Trade creditors and accruals	21	40	0	795	8,522	857	(7,665)	-90%	8,921	8,522	10%
Borrowings:	0	0	0	0	0	0	0	0%	-	-	0%
Short-term	692	795	735	2,531	5,117	4,752	(365)	-7%	5,026	5,117	93%
Long-term	10,147	16,138	10,505	43,739	90,151	80,529	(9,622)	-11%	90,418	90,151	89%
Other liabilities	0	0	9,736	743	8,414	10,473	2,059	24%	10,199	10,978	95%
Total Liabilities	**11,536**	**17,626**	**21,038**	**54,596**	**117,208**	**104,795**	**(12,413)**	**-11%**	**119,589**	**119,772**	**87%**
Current assets	*13,431*	*3,047*	*12,015*	*31,614*	*38,446*	*94,306*	*15,860*	*41%*	*29,254*	*52,237*	*104%*
Current liabilities	*1,350*	*1,449*	*790*	*10,114*	*18,643*	*12,919*	*(5,724)*	*-31%*	*17,059*	*17,611*	*73%*
Non-current assets	*193,829*	*121,297*	*9,814*	*623,821*	*997,109*	*954,562*	*(42,547)*	*-4%*	*996,161*	*990,821*	*96%*
Non-current liabilities	*10,185*	*16,176*	*20,248*	*44,482*	*96,565*	*91,876*	*(6,689)*	*-7%*	*102,529*	*102,161*	*90%*
Net community assets	**196,726**	**106,718**	**791**	**600,839**	**918,347**	**904,072**	**(14,275)**	**-2%**	**905,826**	**923,286**	**90%**

13 QUESTIONS/STATEMENT/MOTIONS ON NOTICE FROM COUNCILLORS

Nil

14 CLOSED SESSION

In accordance with the provisions of section 275 of the *Local Government Regulation 2012,* a local government may resolve to close a meeting to the public to discuss confidential items, such that its Councillors or members consider it necessary to close the meeting.

RECOMMENDATION

THAT the meeting be closed to the public to discuss the following items, which are considered confidential in accordance with section 275 of the *Local Government Regulation 2012,* for the reasons indicated.

15.1 Concealed Leak Rebate - 14 Wall Street, Cooee Bay

This report is considered confidential in accordance with section 275(1)(d), of the *Local Government Regulation 2012*, as it contains information relating to rating concessions.

15.2 Excessive water use with failed water meter - 6 - 8 Kristie Drive, Rockyview

This report is considered confidential in accordance with section 275(1)(d), of the *Local Government Regulation 2012*, as it contains information relating to rating concessions.

15.3 Distribution of Records

This report is considered confidential in accordance with section 275(1)(h), of the *Local Government Regulation 2012*, as it contains information relating to other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage .

15 CONFIDENTIAL REPORTS

15.1 CONCEALED LEAK REBATE - 14 WALL STREET, COOEE BAY

File No: **FM12.1.10**

Attachments: **Nil**

Responsible Officer: **Dan Toon - Executive Director Infrastructure**

Author: **Sean Fallis - Manager Water and Waste Operations**

This report is considered confidential in accordance with section 275(1)(d), of the *Local Government Regulation 2012*, as it contains information relating to rating concessions.

SUMMARY

Council is requested to consider the approval of a second concealed leak rebate to the property owner within a five (5) year period of the approval of a previous rebate.

15.2 EXCESSIVE WATER USE WITH FAILED WATER METER - 6 - 8 KRISTIE DRIVE, ROCKYVIEW

File No: **FM12.1.10**

Attachments: **Nil**

Responsible Officer: **Dan Toon - Executive Director Infrastructure**

Author: **Sean Fallis - Manager Water and Waste Operations**

This report is considered confidential in accordance with section 275(1)(d), of the *Local Government Regulation 2012*, as it contains information relating to rating concessions.

SUMMARY

Council is requested to consider a concession for water usage charges for the property owners of 6-8 Kristie Drive, Rockyview following a higher than normal reading which may have been affected by the subsequent failure of the meter.

15.3 DISTRIBUTION OF RECORDS

File No: **GV13.4.1**

Attachments: **Nil**

Responsible Officer: **Chris Murdoch - Chief Executive Officer**

Author: **Chris Murdoch - Chief Executive Officer**

This report is considered confidential in accordance with section 275(1)(h), of the *Local Government Regulation 2012*, as it contains information relating to other business for which a public discussion would be likely to prejudice the interests of the local government or someone else, or enable a person to gain a financial advantage .

SUMMARY

Council direction is sought regarding distribution of records detailed the report.

16 URGENT BUSINESS/QUESTIONS

Urgent Business is a provision in the Agenda for members to raise questions or matters of a genuinely urgent or emergent nature, that are not a change to Council Policy and can not be delayed until the next scheduled Council or Committee Meeting

17 CLOSURE OF MEETING